

**The City of Weldon Spring is planning to apply for the  
2021**

**MoDNR Comprehensive MS4 Permit**

**The following requirements will be part of the City's  
future Storm Water Management Plan.**

**For reference, the City of Weldon Spring, based on  
population, will be in GROUP A (<10,000) in the  
following document requirements.**

**For question, comments or input, please contact:**

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## **PART 1. DEFINITIONS**

The definitions in this section shall apply to this permit only, and do not supersede or replace the definitions contained in Section 644.016, RSMo, 10 CSR 20-2.010, and 10 CSR 20-6.200(1)(D), which are all incorporated herein by reference. To aid understanding of some key terms, explanations of several statutory and regulatory definitions are provided. However, in the event of any inconsistencies, the statutory and regulatory definitions are controlling.

**Adaptive management:** A repetitive or cyclical process of decision making that requires monitoring activities to adjust behavior, decisions, and actions and to incorporate new knowledge and actual changes. Adaptive management can involve testing multiple options at once in order to determine the best strategy, or selecting and implementing one option and monitoring to determine if adjustments are needed.

Adaptive management enables MS4 permittees to continually improve their stormwater control strategies and practices as they implement their programs and learn from experience to better control pollutant discharges. The process starts with the evaluation of a BMP with its designated measurable goal. If the BMP is found effective, then the MS4 Operator continues with this BMP until the next round of evaluation. If the BMP is found to be ineffective, then the MS4 Operator is required to conduct analysis to determine if what can be altered or modified.

**Best Management Practices (BMPs):** “Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state.” 10 CSR 20-6.200(1)(D)1

Includes structural items or non-structural practices or activities including schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, waste disposal, or drainage from raw material storage areas. BMPs can be temporary or permanent.

BMPs encompass both the enforceable terms and conditions of this permit as well as particular activities and practices selected by the permittee that will be undertaken to meet the permit requirements but that are not themselves enforceable.

**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).” 40 CFR 122.34(a)

Plain language to establish what is required by the MS4 permittee in order to achieve permit compliance.

**Common Plan of Development or Sale:** “The larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres.” 10 CSR 20-6.200(1)(D)28

An area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. This plan consists of many small construction projects that collectively add up to one or more acres of total disturbed land. For example, an original common plan of development of a residential subdivision might lay out the streets, house lots, and areas for parks, schools and commercial development that the developer plans to build or sell to others for development. All these areas would remain part of the common plan of development or sale until the intended construction is completed.

**Construction activities:** “Clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre.” 10 CSR 20-6.200(1)(D)28.

Construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) acre.

**Construction Site Operator:** The entity or entities with operational control over construction plans and specifications including the ability to make modifications to those plans and specifications; or has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWPPP) for the site or other permit conditions. Typically this is the owner of the site or the general contractor of the project.

**Control Measure:** Any BMP or other method used to prevent or reduce the discharge of pollutants to waters of the state.

**Conveyance:** Curbs, gutters, man-made channels, swales, ditches, drains, pipes, and other constructed features designed or used to transport stormwater runoff.

**Co-permittee:** “A permittee to a state operating permit that is responsible only for permit conditions relating to the discharge for which it is owner or operator, or both.” 10 CSR 20-6.200(1)(D)4.

An operator of a regulated municipal separate storm sewer system (MS4) that applies jointly with one or more other applicants for coverage under a municipal stormwater permit. Applicants within one (1) urbanized area, or within a common watershed, or in an area served in common by one (1) service provider may apply as co-applicants to share the administrative responsibilities of the application process and to become co-permittees under an issued permit.

A co-permittee must comply with the conditions of the permit relating to discharges from the MS4 the co-permittee owns or operates. Co-permittees will need to cooperate with each other to develop, implement, and report on their programs.

**Discharge:** “The causing or permitting of one or more water contaminants to enter the waters of the state.” 644.016.(6) RSMo

**Illicit Discharge:** “Any discharge to a municipal separate storm sewer that is not composed entirely of storm water, except discharges pursuant to a state operating permit, other than storm water discharge permits and discharges from fire fighting activities.” 10 CSR 20-6.200(1)(D)7.

**Infill:** The building of homes, businesses and public facilities on unused and underutilized lands within existing urban areas. Infill development is the use of land in established neighborhoods for new development or redevelopment.

**Infiltration:** The percolation of water from the land surface into the ground.

**Iterative process:** A documented process consisting of action items and analysis conducted by the MS4 Operator to ensure that BMPs are effective. Evaluating results and adjusting actions on the basis of what has been learned, as a part of adaptive management.

**Maximum Extent Practicable (MEP):** An adaptive management approach whereby the permittee will implement management measures, including structural and non-structural BMPs. MEP is a permittee-specific determination guided by the following factors: community financial capability and the need for reasonable rate/funding increases, weighing program-wide requirements against site-specific MS4 improvements, MS4 impacts to receiving waters, local priorities, watershed and/or integrated planning, MS4 size, climate, implementation schedules, hydrology, topography, geology, and MS4 capacity to perform operation and maintenance.

**Modification:** A revision to the Stormwater Management Program during the life of this comprehensive permit that does not require the enforceable permit conditions to be changed in any way, but rather offers an alternative means of complying with permit conditions.

Modifications may include the following:

- a. Addition of new components, controls, or requirements to the Stormwater Management Program;
- b. Replacing or modifying ineffective or unfeasible BMPs in accordance to the permittee’s adaptive management process;
- c. Replacing or modifying time schedules that are not explicitly required in this permit;
- d. Modifying the adaptive management procedures that are not explicitly required in this permit;
- e. The addition or removal of jurisdictional areas; and
- f. Contact names for the Stormwater Management Program.

**MS4 Operator:** “The owner, or an agent of the owner, of a separate storm sewer with responsibility for operating and maintaining the effectiveness of the system.” 10 CSR 20-6.200(1)(D)17.

**MS4:** “A municipal separate storm sewer system” 10 CSR 20-6.200(1)(D)11.

“Municipal separate storm sewer means a conveyance or system of conveyances including roads and highways with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, paved or unpaved channels, or storm drains designated and utilized for routing of storm water which—

- A. Does not include any waters of the state as defined in section 644.016, RSMo.
- B. Is owned and operated by the state, city, town, village, county, district, association, or other public body created by or pursuant to the laws of Missouri having jurisdiction over disposal of sewage, industrial waste, storm water, or other liquid wastes;
- C. Is not a part or portion of a combined sewer system;
- D. Is not a part of a publicly owned treatment works.” 10 CSR 20-6.200(1)(D)16.

**Non-Structural Control:** Pollution prevention practices that focus on management by limiting or eliminating pollutants before they end up in the stormwater. Non-structural controls may include but are not limited to; site and land use planning, vegetated filters, stream buffers, low impact development (LID), open space preservation, impervious cover restrictions.

**Non-Traditional MS4:** MS4 permittee which is not a municipality. This category includes counties, publicly owned Universities, federal properties, and other publicly-owned properties.

**Outfall:** “A point source as defined by 10 CSR 20-2.010 at the point where a municipal separate storm sewer discharges and does not include open conveyances connecting two (2) municipal separate storm sewers, pipes, tunnels, or other conveyances which connect segments of waters of the state and are used to convey waters of the state.” 10 CSR 20-6.200(1)(D)18.

An outfall is not where a stream or waters of the state leave the municipal boundary.

**Owner:** “A person who owns and controls the use, operation, and maintenance of a separate storm sewer.” 10 CSR 20-6.200(1)(D)20

A State Department, City, town, village or other public entity is the “person.”

**Permittee:** Refers to the MS4 Operator, or holder of this general permit.

**Representative Outfalls:** Representative outfalls are outfalls that discharge to the primary stem of principal watercourses in separate sub-regional watersheds and are representative of various land uses. Representative outfalls are listed in the permit as a subset of ALL of the MS4’s outfalls.

**Stormwater:** “Storm water runoff, snowmelt runoff and surface runoff, and drainage.” 10 CSR 20-6.200(1)(D)31.

**Stormwater Management Program:** A comprehensive and documented program to manage the quality of discharges from the MS4.

**Stormwater Management Plan (Management Plan):** A document used as the guide explaining the Stormwater Program. A comprehensive document that explains BMPs and explains the ongoing evaluation of the BMPs, tracking, methods of documentation and other procedures. The MS4 Operator must utilize the procedures and other supplemental documents contained to or referenced in the Management Plan during the activities performed to attain permit compliance.

In this comprehensive general permit, the Management Plan shall be considered a guidance document for the MS4 Operator, which details the specifics for the individual MS4 and community.

**Structural Control:** A pollution prevention practice that requires the construction, or use of a device, to capture or prevent pollution in stormwater runoff. Structural controls may include but are not limited to: extended detention basins, bio-retention, infiltration basins, stormwater wetlands, bio-swales, vegetative lined ditches, subsurface drains, permeable pavement or concrete, sand filter basins, stormwater planters, proprietary BMPs, storage tanks, and hydrodynamic separators.

**Traditional MS4:** MS4 permittee which is a municipality.

**Urbanized Area (UA):** An area of densely developed territory, that may include multiple MS4s, as defined and used by the U.S. Census Bureau. The Census Bureau delineates urban areas after each decennial census.

**Waters of the State:** “All waters within the jurisdiction of this state, including all rivers, streams, lakes and other bodies of surface and subsurface water lying within or forming part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased or otherwise controlled by a single person or two or more persons jointly or as tenants in common.” 644.016(27) RSMo.

## **PART 2. PERMIT COVERAGE AND RESTRICTIONS**

### **2.1 - Coverage under this Comprehensive General Permit for Phase II Municipal Separate Storm Sewer Systems**

#### **2.1.A Permit Area**

This Missouri State Operating Permit (permit) covers all areas served by a Municipal Separate Storm Sewer System (MS4), which are:

1. Also located in the Urbanized Area (UA) as defined by the most recent U.S. Census for which the applicant is identified as the Continuing Authority with a population of at least 1,000;
2. OR Inside the municipal corporate limits of a jurisdiction with a population of at least ten thousand (10,000) and a population density of one thousand (1,000) people per square mile or greater;
3. OR Inside the service area of a publically owned separate storm sewer system designated by the Department if it is determined that its discharges from the MS4 have caused, or have the potential to cause, an adverse impact on water quality.

The Permit Area may change based upon areas incorporated into or removed from the permittee's jurisdictional area during the term of this permit, or expansion of the UA. Areas added shall be covered under this permit.

#### **2.1.B Applicability**

This permit authorizes discharges of stormwater from regulated Small MS4s, as defined in 10 CSR 20-6.200(D)24. The permittee, or co-permittee, is authorized to discharge under the terms and conditions of this general permit if the permittee:

1. Owns or operates a regulated Small MS4 as defined in 10 CSR 20-6.200 (D)16;
2. Is located fully or partially within a UA as determined by the latest Decennial Census by the Bureau of Census or is designated for permit coverage as authorized by the Missouri Department of Natural Resources (Department); and
3. Submits a general permit application, and Stormwater Management Plan in accordance with Section 2 of this permit.

#### **2.1.C Categories of Regulated Small MS4s**

This permit categorizes MS4 Operators by the following categories, or Groups, based on the population served as determined by the most the recent Decennial Census at the time of permit issuance UA, the type of Regulated MS4, and the permit sharing situation.

Group A	Group B	Two-Step General Permit
Traditional Small MS4s that serve a population of 10,000 or less within a UA; and	Traditional Small MS4s that serve a population of at least 10,001 but less than 20,000; and	Traditional Small MS4s that serve a population of 20,001 or greater; or
Not in a co-permittee agreement	Not in a co-permittee agreement	Non-traditional Small MS4s; or
		Co-permit Small MS4s

This is the Comprehensive General Permit to cover Group A and Group B MS4s.

The population of a Small MS4 may change during the permit term. However, the Group designation of a regulated MS4 will not change during the permit term based on population fluctuation.

1. The Group designation of a regulated MS4 is based on most the recent Decennial Census at the time of permit issuance. Results of the national Census held during a permit term will not affect the Group of an MS4 until the next permit renewal.
2. For the purpose of this section “serve a population” means the residential population within the regulated portion of the Small MS4 based on the most recent Decennial Census.
3. MS4s in a co-permittee agreement, and non-traditional Small MS4s, such as counties, universities, and federal institutions must apply for coverage under the Two-Step General Permit or apply for site-specific coverage.
4. Any MS4 may apply for coverage under the two-step general permit or a site-specific permit.

**2.1.D** Authorized discharges

The following are types of discharges authorized by this permit:

1. *Stormwater discharges.* This permit authorizes stormwater discharges to waters of the state from the regulated MS4 except as excluded in Section 2.1.E of this permit.
2. *Authorized Non-Stormwater discharges.* The following non-stormwater sources may be discharged from the MS4, unless they are determined by the MS4 Operator or the Department to be significant contributors of pollutants to the permittee’s MS4, or they are otherwise prohibited by the MS4 Operator:
  - Landscape irrigation and lawn watering;
  - Rising groundwater and springs;
  - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(b)(20));
  - Uncontaminated pumped ground water;
  - Discharges from **dechlorinated** potable water sources;
  - Foundation or footing drains;
  - Air conditioning condensate;

- Uncontaminated water from crawl space pumps;
- Flows from riparian habitat and wetlands;
- Street and sidewalk wash water, water used to control dust, and routine external building wash-down that does not use detergents, solvents, and/or soaps (this does not include street sweeper waste water);
- Discharges or flows from emergency fire-fighting activities (fire-fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, hydrant pressure testing, and similar activities);
- Individual residential car washing; and
- Dechlorinated and uncontaminated residential swimming pool, spa and hot tub discharges.

#### **2.1.E** Limitations on coverage

1. The MS4 Operator, shall prohibit non-stormwater discharges and stormwater discharges that combine with sources of non-stormwater into the MS4, except where:
  - a) Non-stormwater discharges are in compliance with a separate NPDES permit; and
  - b) Authorized by Section 2.1.D of this permit.
2. This permit does not authorize discharges to the MS4.
3. This operating permit does not affect, remove, or replace any requirement of the Endangered Species Act; the National Historic Preservation Act; the Comprehensive Environmental Response, Compensation and Liability Act; or the Resource Conservation and Recovery Act. Determination of applicability to the above mentioned acts is the responsibility of the permittee.

#### **2.1.F** Discharge Limitations

1. The permittee shall implement, and continuously evaluate, Best Management Practices (BMPs) to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) into the MS4 for the goal of attainment with Missouri's Water Quality Standards. Specific requirements are listed in Parts 4, 5, and 6 of this operating permit.
2. Implementing BMPs consistent with the requirements of this permit constitutes compliance with the standard of reducing pollutants to the maximum extent practicable.
3. The permittee shall implement and enforce a Stormwater Management Program per the requirements listed in this operating permit in accordance with section 402(p)(3)(B)(iii) of the CWA, corresponding NPDES regulations, 40 CFR 122.34, 40 CFR 122.28(D)(2), and in accordance with the Missouri Clean Water Law (MCWL) and its implementing regulations under 10 CSR 20-6.200.
4. The permittee shall comply with all provisions and requirements contained in this permit and with their individual Stormwater Management Program including plans, ordinances, and schedules developed in fulfillment of this permit.

5. If the Department determines a regulated MS4 is causing or contributing to instream excursions of Missouri's Water Quality Standards, then the Department may require corrective action(s) or require an application for a site-specific permit to ensure that BMPs are being implemented and constantly evaluated, to reduce pollutants.
6. The Department may require the regulated MS4 to submit an application for an alternate or additional general permit. Such as if the MS4 Operator is conducting regulated activities that are not covered under this permit but are addressed in a separate Master General Permit.
7. Newly designated MS4s applying for coverage under this general permit and discharging to waterbodies or watersheds subject to an existing EPA approved or established TMDL may be denied coverage under this general permit and required to apply for and obtain a site-specific operating permit for stormwater discharges from their regulated MS4.

## **2.2 - Authorization to Discharge and Application Requirements**

**2.2.A** Authorization to discharge stormwater from a regulated MS4 requires each permittee (existing and recently designated regulated MS4 based on the latest decennial census) to submit a complete application for the MS4 general permit. The permittee shall submit their application on the latest version of the application form(s); Form K and M.

**2.2.B** The application shall be signed and dated by an authorized signatory.

1. All permit applications shall be signed and certified in accordance with 40 CFR 122.22 and 10 CSR 20-6.010(2) by either a principal executive officer or by an individual having overall responsibility for environmental matters for the permittee.
2. All reports required by this permit, and other information requested by the Department shall be signed by a person described in Section 2.2.B.1 of this permit, or by a duly authorized representative of that person. A person is a duly authorized representative only if the authorization is made in writing by a person designated in Section 2.2.B.1 of this permit.

**2.2.C** Existing regulated permittees seeking renewal of their MS4 permit shall submit a renewal application within 180 days prior to the expiration date of this operating permit unless the permittee has been notified by the Department that an earlier application is required in accordance with 10 CSR 20-6.200 (D) 24. B.

**2.2.D** Newly designated regulated MS4s based on the latest decennial census shall submit their permit application within 180 days following notification by the Department that permit coverage is required.

## **PART 3. STORMWATER MANAGEMENT PROGRAM AND PLAN**

### **3.1 - Stormwater Management Program**

**3.1.A** To the extent allowable under state and local law, a Stormwater Management Program must be developed, implemented, and enforced according to the requirements of this general permit.

This permit includes specific permit terms and conditions, which are the requirements needed to meet the MS4 regulatory requirements. The Stormwater Program must also be implemented and enforced in new MS4 areas added during the permit term. Implementation of appropriate BMPs for the new areas must occur.

**3.1.B** As part of the Stormwater Management Program, the permittee shall develop a document, with appropriate appendices and supplemental attachments, to use as the guide explaining the Stormwater Management Program. Permittees shall create and maintain a written Stormwater Management Plan (Management Plan) detailing schedules, procedures, contacts or other items listed under Part 4 of this permit.

1. The Management Plan shall be maintained by the MS4 Operator to ensure consistency with the implementation, continuity of the Stormwater Management Program, and iterative reviews of BMPs and procedures.
2. The Management Plan does not go through approval to be incorporated into this permit. It shall be used as a handbook or reference manual for the specific MS4.

**3.1.C** The MS4 Operator may add supplemental items to the Management Plan as a way to organize and manage the full Stormwater Management Program.

1. These items include but are not limited to:
  - Standard operating procedures
  - Inspection forms
  - Map(s)
  - Ordinances
  - Sample data
  - Stormwater Pollution Prevention Plans (SWPPPs)
  - Operations and Maintenance Manual
  - Minutes or meeting notes
  - Website or social media account tracking
  - Stream Team activity reports
  - Tracking and continuous evaluation documents
  - Documentation of agreements for cooperative agreements

### **3.2 - Sharing Responsibility**

**3.2.A** Other agency agreements

1. Implementation of one or more of the minimum measures or BMPs may be contracted out to another entity or organization, such as a non-profit organization. The MS4 Operator may grant responsibility for the MCM or BMP.
  - a) The agreement must be described in the Stormwater Management Plan detailing which BMPs are being assumed by the other entity or organization.
  - b) Written agreements between another entity or organization stipulating arrangements and responsibilities for meeting permit requirements shall be made available to the Department upon request.

### **3.3 - Reviewing and Updating the Stormwater Management Program**

**3.3.A** The MS4 Operator shall conduct an annual review of their Stormwater Management Program in conjunction with preparation of the MS4 Annual Report required under Section 5.3.

**3.3.B** In the event of a transfer of ownership, change in Continuing Authority, or change in responsibility for Stormwater Management Program implementation; the permittee shall implement the Stormwater Management Program on all new areas added to the permittee's portion of the MS4 (or for which the permittee becomes responsible for implementations of stormwater quality controls) as expeditiously as practicable, but not later than one (1) year from the addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately.

**PART 4. MINIMUM CONTROL MEASURES**

MS4 Operators seeking coverage under this general permit shall develop and implement a Stormwater Program that includes the following six (6) Minimum Control Measures (MCMs), as applicable. All six MCMs apply to all MS4s regulated under this permit. Specific program elements under each MCM shall be implemented by all MS4 Operators.

Tracking may be done electronically. Tracking documentation must be made available to the Department upon request.

**4.1 - MCM 1. Public Education, Outreach, and Involvement**

The MS4 Operator shall review, update and implement a comprehensive stormwater education, outreach and involvement program to educate residents, public employees, businesses, and the general public about the hazards associated with illegal discharges, improper disposal of waste and the impact of stormwater discharges on waterbodies as well as steps they can take to reduce pollutants in stormwater runoff.

The Stormwater Management Program must include education, outreach, and involvement efforts about stormwater pollution and provide specific actions they can follow to minimize the problem. The MS4 Operator shall develop and implement a public involvement program that provides opportunities for public involvement working as citizen volunteers.

This MCM can include programs such as; a stormwater control retro-fit program, stream buffer requirements, septic tank maintenance program, native landscaping (turf reduction) program, or a community wide clean-up day as a BMP where applicable.

**As part of the Stormwater Management Program, the Public Education, Outreach, and Involvement Program shall include the following Public Education, Outreach, and Involvement requirements at a minimum.**

<b>4.1.A</b> The MS4 Operator must:	
1.	Identify the specific target audiences who are likely to have significant stormwater impacts.
2.	Identify the specific pollutant(s) and sources that the permittee’s education program is designed to address.
3.	Develop and implement appropriate educational materials and/or activities to be used as BMPs in conjunction with the identified pollutants for the identified target audiences.
<b>Group A</b>	
<b>Group B</b>	
<b>4.1.A.1</b> Annually, the MS4 Operator shall target residents of the MS4 including households and individuals.	<b>4.1.A.1</b> Annually, the MS4 Operator shall target residents of the MS4 including households and individuals.

<p>In addition to residents, a minimum of two (2) of the following audiences within the MS4 service area to target:</p>	<p>In addition to residents, a minimum of three (3) of the following audiences within the MS4 service area to target:</p>
a.	Schools, educational organizations, or youth service and youth groups
b.	Businesses, including commercial facilities, home-base and mobile businesses
c.	Institutions or formal organizations such as churches, hospitals, service organizations
d.	Developers or construction site operators
e.	Homeowner or neighborhood associations
f.	Industrial facilities
g.	Other target group, written justification shall be on the Annual Report.
<p>The target audiences may remain the same for the entire permit cycle or may change if the tracking and adaptive management reviews show a new target may be better for the MS4. Any changes shall be stated and explained in the Annual Report.</p>	
<p><b>4.1.A.2</b> The MS4 Operator shall identify the specific pollutant(s) and sources related to the target audiences addressed in Part 4.1.A.1 of this permit.</p>	
a.	A minimum of two (2) pollutants per audience annually shall be addressed.
b.	<p>A minimum of one (1) pollutant annually shall focus on the reduction of nitrogen and phosphorus (nutrients) to stormwater runoff.  Some examples below are marked below with *.</p>
<p>Examples of pollutants/ sources include but is not limited to:</p> <ul style="list-style-type: none"> <li>• Swimming pool discharge, including salt water pools;</li> <li>• De-icing/ rock salt usage/ storage;</li> <li>• Illegal disposal of household hazardous waste;</li> <li>• Pet waste; *</li> <li>• Failing septic systems; *</li> <li>• Oil, grease, fluids from vehicles;</li> <li>• Unauthorized discharge of restaurant waste;</li> <li>• Power washing;</li> <li>• Litter, trash containment, balloon releases;</li> <li>• Dumping of solid waste;*</li> <li>• Sediment runoff from construction/land disturbance;*</li> <li>• Fertilizer &amp; pesticides;*</li> <li>• Grass clippings &amp; leaf litter; *</li> <li>• Unauthorized discharge of industrial waste;</li> <li>• Vehicle washing; and</li> </ul>	

<ul style="list-style-type: none"> <li>• Wash water/ grey water.</li> </ul>		
<p><b>4.1.A.3</b> The MS4 Operator must develop and implement appropriate educational resources to be used as BMPs (materials, events, activities, etc.) in conjunction with the selected pollutants for the selected target audiences. The message delivered by these BMPs needs to be appropriate to the target audience and relate to the target pollution. The distribution of the BMPs needs to be effective, and when possible associated with the target audience or pollutant (such as a swimming pool disposal flyer when applying for a swimming pool permit). BMPs which are ongoing throughout the year or permit cycle may be counted as one annual BMP.</p>		
a.	A minimum of one (1) BMP annually shall function to reduce trash or litter.	
b.	The MS4 Operator annually must develop and implement a minimum of one (1) education and outreach material or activity for each target audience and pollutant.	
c.	Tracking mechanisms shall be used for each BMP (material, event, activity, etc.), to ensure the minimum requirements of this Section 4.1.A of this permit are being met.	
d.	Using adaptive management, all MS4 Operators shall review their Management Plan and Public Education, Outreach, and Involvement Program, at minimum, annually and update implementation procedures and/or BMPs as necessary within the requirements of this permit. This may be conducted when preparing the annual report for submittal to the Department.	
<b>4.1.A.3.b BMPs:</b>	<b>4.1.A.3.c Measurable goals</b>	<b>4.1.A.3.d Tracking &amp; Adaptive Management</b>
Information on the MS4 Operator’s website;	Maintain a webpage with up to date information, working links, and valid information. All links shall be checked, and the page shall be updated as necessary at minimum quarterly.	Record the quarterly assessments and any changes. The number of hits shall be tracked. The MS4 Operator shall use this to see which messages get reactions, and if certain messages may need more education.
Social Media posts, social media campaign;	Post a minimum of once a month on a minimum of one social media platform. The messages shall address ways	The number of views, impressions, and other interactions shall be tracked. The MS4

	<p>attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. The messages shall be seasonally appropriate.</p>	<p>Operator shall use this to see which messages get reactions, and if certain messages may need more education.</p>
<p>Storm inlet markings with “No Dumping – Drains to Stream” or similar message;</p>	<p>Placard, stencil, or paint, a minimum of 10% per year, of all known stormwater inlets in the MS4 area.</p>	<p>Number of inlets, the location of the inlets and how they were marked shall be tracked. These areas shall be noted on MCM #3 dry weather screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from the markings.</p>
<p>Advertising campaign: Billboard; Bus shelter/ bench; radio/ television/ movie theatre/ areas of high visibility.</p>	<p>Develop topics that are group specific and address activities and or pollutants of concern. Advertisement must be active for a minimum of three months; OR must have an estimated exposure for the duration of the campaign shall be 10 times the most recent U.S. Census Bureau decennial population value for the permit area.</p>	<p>Evaluate the pollutant before the advertising campaign, and again after to see if there has been a change. The dates, time, and estimated media exposure for each spot broadcast shall be documented and kept on file along with the applicable U.S. Census population value. Consider including a mechanism to track active response such as a QR Code, following the social media account(s) or a website to visit.</p>

		Track those responses to determine if the advertisement was effective in reaching people.
Publish articles in local newsletter, may be electronic;	Develop topics that are group specific and address activities and or pollutants of concern at a seasonally appropriate time. A minimum of two articles annually shall be published or emailed.	Evaluate the pollutant before the article, and again after to see if there has been a change. Consider including a mechanism to track active response such as following the social media account or a website to visit. Track those responses to determine if the article was effective in reaching people.
Permeant Stormwater related signage;	Put the signage in a location where the message is relevant, and the signage will have a lot of visibility. Signage will count as an annual BMP for the year it was put in place and for each subsequent year of this permit cycle as long as each of those years tracking is taking place to message effectiveness and to ensure the signage is maintained.	Evaluate the pollutant before the signage, and again after to see if there has been a change. Consider including a mechanism to track active response such as following on social media, a QR Code, or a website to visit. Track those responses to determine if the signage was effective in reaching people.
Educational meetings, seminars, or trainings;	The events shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of	Attendance, and any distributed education materials shall be tracked. This shall we used to gauge interest in

	stormwater runoff. A minimum of two events shall be held annually.	the topic. Consider using a questionnaire or follow up survey to track if the attendees retained information or found the event beneficial.
Fact sheets/ brochures/ utility bill insert/ door hangers.	Number of all fact sheets, brochures, bill inserts, handouts, or e-mails distributed in one year shall be at minimum equal to the most recent U.S. Census Bureau decennial housing units value for the permit area.	The applicable U.S. Census housing units value shall be recorded, and the number of which material was distributed and how much of that material shall also be recorded. This may be a combination of materials, using a targeted approach to get the appropriate material to the applicable audience.
<p><b>4.1.B</b> The MS4 Operator must create opportunities, or support activities that are coordinated by citizen groups, for residents and others to become involved with the Stormwater Management Program. The activities, (BMPs) must have an effort to impact stormwater runoff by improving water quality.</p>		
<b>Group A</b>		<b>Group B</b>
<p><b>4.1.B.1.a</b> The MS4 Operator shall support or create a minimum of two (2) activities annually.</p>		<p><b>4.1.B.1.a</b> The MS4 Operator shall support or create a minimum of four (4) activities annually.</p>
b.	Tracking mechanisms shall be used for each BMP (material, event, activity, etc.), to ensure the minimum requirements of this Section 4.1.A of this permit are being met.	
c.	<p>Using adaptive management, all MS4 Operators shall review their Management Plan and Public Education, Outreach, and Involvement Program, at minimum, annually and update implementation procedures and/or BMPs as necessary within the requirements of this permit.</p> <p>This may be conducted when preparing the annual report for submittal to the Department.</p>	

d.	Attendance should be tracked for all activities to see if involvement grows, what activities people are interested in, but also can be used to identify individuals and groups willing to assist in future stormwater management program planning.	
<b>4.1.B.1.a</b> BMPs	<b>4.1.B.1.b</b> Measureable goals	<b>4.1.B.1.c</b> Tracking & Adaptive Management
Stream/lake or Watershed clean-up events; Litter clean-up events;	To be considered an event, the land area cleaned must be at minimum 2 acres, or 400 yards of stream/ streambank. These may be combined such as 1 acre of land and 200 yards of stream.	Track the area or distance cleaned, the amount of waste removed and the attendance. Use the waste measurements to determine if there are priority areas for litter entering stormwater, or areas for illegal dumping.
Habitat improvement; Tree planting; Invasive vegetation removal; Stream restoration.	To be considered an event, the project must be a minimum of .5 acres or 25 yards. These may be a combination. This may take place in streams, streamside parks, areas adjacent to public waterways, and/or other green infrastructure/water resources.	Track the location(s) along with the amount planted or remove, or miles improved or restored. Analyzing the areas improved upon, the MS4 Operator shall see if there are opportunities to join the improve areas, or work on a watershed basis.
Volunteer water quality monitoring;	To be considered an event, the monitoring must be conducted at the same site, at minimum twice a year.	Record the sites for the volunteer monitoring, and the dates of the volunteer monitoring.
Hold events to train residents, or work a project for homeowner associations (HOAs), or other public groups. The	Provide one project or training at minimum annually.	Record the attendance, the topic covered, and any training materials distributed. Use these numbers and

<p>event or training must cover stormwater related topics such as: building rain barrels; Fertilizer application training; Rain garden/ bio retention creation or maintenance; How to recognize illicit discharge activities and communicate observations to appropriate MS4 staff.</p>		<p>interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.</p>
<p>School, public event, etc. educational display/booth; Provide information or displays that work to improve public understanding of issues related to water quality.</p>	<p>Provide one booth or display at minimum annually. The booth or display must be staffed by staff of the MS4 at minimum 50% of the time the event is open to the public.</p>	<p>Record the number of interactions, the overall attendance, the topic covered, and any educational materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.</p>
<p>Stormwater related speaker series;</p>	<p>Provide a minimum of two sessions a year.</p>	<p>Record the attendance, the topic covered, and any training materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought</p>

		to a different or wider audience.
<ul style="list-style-type: none"> <li>• Support given to coordinating groups includes but is not limited to:</li> <li>• Plan, or assist with planning, the event or activity;</li> <li>• Provide supplies, materials, tools, or equipment;</li> <li>• Assistance from MS4 staff during the activity;</li> <li>• Assistance with recruiting volunteers for events;</li> <li>• Provide a space for projects, meetings, or events;</li> <li>• Advertisement for the events;</li> <li>• Disposal services;</li> <li>• Land or stream access;</li> <li>• Financial support; and</li> <li>• In-kind donations such as food.</li> </ul>		
<p><b>4.1.C</b> Using adaptive management as required in parts 4.1.A.3.d and 4.1.B.1.c, all MS4 Operators shall review their Management Plan and Public Education, Outreach, and Involvement Program, at minimum, annually and update implementation procedures and/or BMPs as necessary within the requirements of this permit. This may be conducted when preparing the annual report for submittal to the Department.</p> <p>The MS4 Operator should consider distributing an area wide survey to get a baseline on all topic, then re-distribute to see what changes have taken place after each year. Surveys can be done with utility bills, or online.</p>		

**4.2 - MCM 2. Public Participation**

The permittee shall develop and implement a comprehensive public participation program that provides opportunities for public participation in the development and oversight of the permittee’s Stormwater Program.

This program must provide opportunities for public participation of the permittee’s permit renewal and shall, at a minimum, comply with any state and local public notice requirements in the planning and implementation activities related to developing and implementing the Management Program.

**As part of the Stormwater Management Program, Public Participation shall include the following requirements at a minimum.**

<p><b>4.2.A</b> The MS4 Operator shall hold a public notice period for a minimum of thirty (30) days to allow the public to review the draft permit, description of the Stormwater Management</p>
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Program, and renewal application prior to the submission of these items to the Department. A developed Stormwater Management Plan may be used at the description of the Stormwater Management Program.

- 4.2.A.1** As part of the public notice, if the MS4 Operator has a public website, the required items shall be posted on their website with a way to submit comments either by mail or email, along with the standard public notice methods for the MS4.
- a) The permittee shall respond to comments received during the comment period.
  - b) The MS4 Operator shall retain copies of any public comments and records of information submitted by the public received as part of the public notice process.

- 4.2.A.2** The MS4 Operator shall hold a public information meeting to provide information on and describe the contents of the proposed Stormwater Management Program. This meeting shall be advertised at least thirty (30) days prior to the public meeting.
- a) As part of the notice of public meeting, if the MS4 Operator has a public website, the MS4 Operator shall post on that site, along with the standard public notice methods for the MS4. The notice of the public informational meeting, including the date, time and location.
  - b) The meeting must be held within the service area of the MS4.

**4.2.B** The MS4 Operator shall have a publically available mechanism to take public inquiries, concerns, or take information about stormwater and stormwater related topics. This shall encompass all MCMs of this permit. This mechanism may be a phone number, voicemail box, an email address, or social media platform.

All reports shall be tracked, recording the topic, location, and concern. This information can help identify pollutants of concern, priority areas, pollutant sources, and other information the MS4 Operator may use to evaluate the Stormwater Management Program.

**4.2.C** If the MS4 Operator utilizes a stormwater management panel or committee, the MS4 Operator shall provide opportunities for citizen representatives on the panel or committee.

Record the attendance list and minutes of the meetings

**4.2.D** If the permittee has a governing board, such a County Council, City Council, or Board of Curators, a representative of the MS4 Operator, who is familiar with the MS4 Stormwater Program, shall present to the governing board, at minimum, annually with the status of, or updates on, the Stormwater Program, and compliance with the Stormwater Management Program.

If the board holds Open Public Meetings, this presentation must be a forum which is open to the public. It is recommended that members of the governing boards and/or other elected officials of the MS4 service area participate in stormwater activities.

Record the attendance and any comments or question from the board or residents. Based on comments or questions, use adaptive management to determine if the event needs to highlight other areas of the Stormwater Management Program.

**4.2.E Existing permittees:** Shall evaluate their current program to ensure it meets the needs of the community and compliance with this permit. Existing permittees shall modify their program as necessary, and develop and implement elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the maximum extent practicable, following the requirements of Section 4.2 of this permit.

**4.2.F Newly regulated permittees:** Shall develop a stormwater Public Participation program. The Permittees shall have the program fully implemented by the end of this permit term following the requirements of this permit.

**4.2 G Tracking mechanisms** shall be used for tracking attendance, inquiries or concerns per the requirements of part 4.2. of this permit. Using adaptive management, all MS4 Operators shall review their Public Participation Program, at minimum, annually and update implementation procedures as necessary within the requirements of this permit. This shall be used to review how to best reach the public, the effectiveness of the mechanisms, the effectiveness of reaching the public and the MS4 Governing board and if the community and MS4 government are working together for water quality. Any additional events and/or BMPs shall be acknowledged in the annual report.

**4.3 - MCM 3. Illicit Discharge Detection and Elimination**

The permittee shall develop, implement, and enforce a program to detect and eliminate illicit discharges, as defined in 10 CSR 20-6.200 and 40 CFR 122.34(b)(3), into the permittee’s MS4. The program must include a plan to detect and address non-stormwater discharges, including illegal dumping to the MS4 system.

**As part of the Stormwater Management Program, the Illicit Discharge Detection and Elimination (IDDE) Program shall include the following requirements at a minimum.**

**4.3.A** A current storm sewer system map that shall be updated as needed to include features which are added, removed, or changed.

This storm sewer map, must show at a minimum:

1.	The location of all MS4 outfalls. The map scale shall be such that the outfalls can be accurately located.
2.	The names and locations of all receiving waters of the state that receive discharges from the MS4 outfalls.
3.	The boundary of the regulated MS4 area.

<p>This map may be paper or electronic. The map shall be readily available and used by field staff as needed. The map shall be made available to the Department upon request.</p>	
<p><b>4.3.B</b> The MS4 Operator must record the sources of information used for the map and track, at minimum:</p>	
1.	The GPS location of all outfalls;
2.	Dates that the outfall locations were verified/ or last field survey; and
3.	If a newly added outfall, the date that it was added to the stormsewer system
<p><b>4.3.C</b> The MS4 shall effectively prohibit non-stormwater discharges into the permittee’s storm sewer system and implement appropriate enforcement procedures and actions. This prohibition shall be through ordinance or other regulatory mechanism, to the extent allowable under State or local law. This may be accomplished by more than one ordinance or mechanism. This may be done through a “nuisance code” however it must be certain that non-stormwater discharges are covered in this code.</p> <p>Applicable non-stormwater discharges may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Litter</li> <li>• Household hazardous waste</li> <li>• Leaves</li> <li>• Soaps &amp; detergents</li> <li>• Illegal dumping</li> <li>• Vehicle fluids</li> <li>• Grass clippings</li> <li>• Pet waste</li> <li>• Sewage</li> </ul>	
<p><b>4.3.D</b> A dry weather field screening strategy.</p> <p>1. The MS4 Operator shall conduct (or have conducted on their behalf) outfall field assessments. The screening shall be conducted during dry weather conditions to check for the presence of a discharge.</p>	
Group A	Group B
<p>a) All MS4 outfalls shall be field screened during the 5 year permit cycle.</p>	<p><b>Existing permittees:</b> a) A minimum of 75% of all outfalls shall be screened during the 5 year permit cycle.</p> <p><b>Newly regulated permittees:</b> a) All MS4 outfalls shall be field screened during the 5 year permit cycle.</p>

<p>b) An average minimum of 20% of all outfalls shall be screened each year, along with, a minimum of one priority (per Section 4.3.F of this permit) area each year.</p> <p>OR</p> <p>c) An average minimum of 25% of all outfalls shall be screened for four years of the permit cycle, and one year of the permit cycle shall be for repeat screening of priority areas, or problem areas.</p>	<p><b>Existing permittees:</b></p> <p>b) All priority areas (per Section 4.3.F of this permit) shall be screened during the 5 year permit cycle.</p> <p><b>Newly regulated permittees:</b></p> <p>b) An average minimum of 20% of all outfalls shall be screened each year, along with, a minimum of one priority area each year.</p> <p>OR</p> <p>c) An average minimum of 25% of all outfalls shall be screened for four years of the permit cycle, and one year of the permit cycle shall be for repeat screening of priority areas, or problem areas.</p>
	<p>d) This screening shall include a checklist or other tracking device to; ensure a complete inspection of each outfall, enhance consistency, and to track the field screening. This shall be used regardless of the presence of dry weather flow.</p> <p>When discharge is present, the checklist or tracking device shall note the following general observations and physical characteristics at a minimum:</p> <ul style="list-style-type: none"> <li>i) Date and time;</li> <li>ii) Weather conditions and temperature (air &amp; water);</li> <li>iii) Color of discharge;</li> <li>iv) Estimate of flow rate;</li> <li>v) Odor;</li> <li>vi) Surface scum, floatables or oil sheen present;</li> <li>vii) Deposits or stains;</li> <li>viii) Turbidity;</li> <li>ix) Stream impact including vegetation, fish, wildlife; and</li> <li>x) Length of impacted stream.</li> </ul>
<p>2.</p>	<p>Diagnostic monitoring procedures to detect and investigate non-stormwater flows as part of the dry weather screening program.</p> <p>a) This diagnostic monitoring shall include sampling the discharge from MS4 outfalls that are found to be flowing or ponding more than 72 hours after the last precipitation event.</p>

	<p>b) The samples shall be analyzed for relevant parameters to determine if a pollutant is involved.</p> <p>Relevant parameters will need to be determined on a case by case basis depending on the nature of the discharge and what the potential sources may be.</p> <p>The MS4 Operator shall have the ability to sample for and analyze the samples. This may be done by having a contractor(s).</p> <p>The MS4 Operator shall maintain the ability to have at minimum the following parameters sampled for and analyzed when deemed applicable:</p> <ul style="list-style-type: none"><li>i) pH;</li><li>ii) Oil and grease;</li><li>iii) <i>E.Coli</i> or fecal coliform;</li><li>iv) surfactants or fluorescence concentration;</li><li>v) specific conductivity;</li><li>vi) ammonia;</li><li>vii) chlorine;</li><li>viii) dissolved oxygen; and</li><li>ix) fluoride/ hardness.</li></ul>
3.	<p>Procedures for tracing the source of an illicit discharge.</p> <p>If initial screening indicates that a dry weather discharge contains pollutants, or if an illicit discharge is suspected from another reporting method, the source shall be traced. These procedures shall include mechanisms to locate and follow stormwater infrastructure.</p> <p>A variety of investigative tools may be used as appropriate for each situation, such as, but not limited to;</p> <ul style="list-style-type: none"><li>• Visually following the flow</li><li>• Stormsewer system sampling</li><li>• Full stormsewer map</li><li>• Closed circuit television</li><li>• Smoke or dye tracing</li><li>• Tunnel entry</li></ul>
4.	<p>Procedures for removing the source of the discharge.</p> <p>After locating the source, the pollutant and source must be removed. While the exact procedure will depend on the source and the circumstances, The MS4 Operator must maintain possible contacts and make this information available to the responsible staff.</p> <p>The MS4 Operator is encouraged to work with the source of the illicit discharge to remedy the situation.</p> <p>Possible remedies shall include:</p>

	a) Implement source control or treatment BMPs to prevent reoccurrence of the violation
	b) Remediation or restoration of affected property
<b>4.3.F</b> In order to prevent further illicit discharge, the MS4 Operator shall identify priority areas such as, but not limited to:	
Areas with evidence of ongoing illicit discharges	Neighborhoods with onsite sewage
Past history of illicit discharges	Number of citizen complaints
Land use leading to stormsewer	Industrial areas
Potential pollutant sources	Areas of higher population density
<b>Group A</b>	<b>Group B</b>
1. The MS4 Operator shall identify a minimum of one (1) priority area.	1. The MS4 Operator shall identify a minimum of two (2) priority areas.
2. If there is an area(s) where there are reports on more than three (3) separate events within six (6) months, the MS4 Operator shall identify that area as a priority area until the source is determined.	2. If there is an area(s) where there are reports on more than three (3) separate events within six (6) months, the MS4 Operator shall identify that area as a priority area until the source is determined.
3.	The MS4 Operator shall conduct additional dry weather screening, samples, or visual inspections of these priority areas as stated in Section E.1.a) of this Permit.
4.	The MS4 Operator shall maintain written procedures for implementing the IDDE Program, including those components described within this section, to ensure program continuity and consistency. a) This shall include a description of this dry weather field screening strategy and implementation schedule to detect and address non-stormwater discharges, including discharges from illegal dumping and spills, to the permittee's system. b) This shall include a description of the how discharge is evaluated and the possible parameters that are tested.
<b>4.3.G</b> The MS4 Operator must conduct investigations in response to field screening discoveries, spills, or in response to complaints from the public, municipal staff, or adjacent MS4s. The investigation must work to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection. Responses shall meet the following investigation timelines:	
1.	Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment.
2.	Investigate (or refer to the appropriate agency with the authority to act) within five (5) days, on average, any complaints, reports or monitoring information that indicates a

	potential illicit discharge which does not constitute a threat to human health, welfare or the environment.
3.	If illicit connections or illicit discharges are observed related to, discharging to, or discharging from, an adjacent MS4 Operator’s municipal storm sewer system, the MS4 Operator must notify the other MS4’s Operator within 24 hours of discovery or as soon as practicable.
<b>4.3.H</b> The MS4 Operator shall have procedures for appropriate enforcement, this may include fines, the ability to collect cleanup and abatement costs, and actions to ensure that the permittee’s illicit discharge ordinance (or other regulatory mechanism) is being implemented. The MS4 Operator shall maintain a written description of the enforcement procedure. This shall include a copy of or link to the ordinance and/or other regulatory mechanism that the MS4 Operator will use to enforce the prohibition of illicit discharges into the MS4.	
<b>4.3.I</b> The MS4 Operator shall maintain a database, or other centralized system, to track dry weather field screenings, spills, incidents, and investigations.	
1.	Tracking mechanisms shall be used for incidents, investigations, enforcement and follow up. This data shall be used to continuously evaluate the effectiveness of the IDDE program. The MS4 Operator shall record at a minimum:
	a) Number of outfalls screened
	b) Number of complaints received and investigated
	c) Number of discharges or flows eliminated
2.	The MS4 Operator shall track illicit discharge investigations, including any illegal dump sites. This data shall be reviewed to determine if there is a new priority area. The MS4 Operator shall document all investigations to track at a minimum:
	a) The date(s) the illicit discharge was observed;
	b) The date(s) the illicit discharge was investigated;
	c) Summary of procedures used to investigate the illicit discharge;
	d) Photos when possible;
	e) The outcome of the investigation including sample results and findings;
	f) Any follow-up of the investigation including cleanup, enforcement actions, visits to confirm the illicit discharges have been removed; and
	g) The date the investigation or issue was closed or resolved.
<b>4.3.J</b> The MS4 Operator shall Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste, this may work with part 4.1 of this permit (MCM #1).	

The MS4 Operator shall also look at possible significant contributors of pollutants into their MS4 from their field screenings, investigations, and/or complaint report data. These pollutants shall be addressed by at minimum education procedures to the appropriate audience.

These pollutants or sources include but are not limited to:

- Oil water separator overflow;
- Fats, oils, and grease (FOG);
- Floor washing/ carpet cleaning wastewater;
- Commercial power washing;
- Private snow removal salt usage & storage;
- Residential swimming pool discharges;
- Fleet vehicle washing;
- Community events: Balloon releases, color/foam runs, car washing.
- Illegal dumping/ solid waste disposal; and
- Household hazardous waste/ vehicle fluid disposal;

**4.3.K** All MS4 Operators shall review their Illicit Discharge Detection and Elimination (IDDE) Program, at minimum, annually and update implementation procedures as necessary.

**4.3.L Existing permittees:** Shall evaluate their current program to ensure that it is in compliance with this permit. Existing permittees shall modify their program as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the maximum extent practicable.

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| 1. | Any revisions to the ordinance or regulatory mechanism shall be complete in the first year of the permit cycle.  |
| 2. | Maintain an updated map with the items listed above. Items not included in the current map must be added within the first 2 years of the permit cycle. |

**4.3.M Newly regulated permittees:** Shall develop an Illicit Discharge Detection and Elimination (IDDE) Program. Newly regulated permittees shall describe the IDDE program in their Stormwater Management Plan. The MS4 Operator shall have the program fully implemented within five (5) years of permit issuance.

If the MS4 Operator needs to develop the regulatory mechanism, the ordinance or regulatory mechanism must be adopted within the first 3 years of permit coverage.

Develop or update a map in accordance with Section 4.3.A of this Permit. The MS4 Operator must develop or update a map with the items listed above. All outfalls shall be dry weather field screened within the first five (5) years of permit issuance.

The map shall be available to the Department upon request.

**4.3.N** The MS4 Operator must develop and implement or maintain a training program for all municipal field staff, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system.

This shall include staff who may handle materials which may become an illicit discharge. This shall include discharges through spills, improper disposal, mismanagement, improper vehicle or equipment washing or rinsing. Each staff shall take this training at minimum, annually and within 2 months of a new employee being hired.

This training may be conducted with resources online and may be focused for what topics are relevant to their position. This training may break up topics and given throughout the year as long as these dates, topics and the attendance is being recorded.

The applicable staff shall include the following; (unless the MS4 Operator does not have the listed department under their jurisdiction). Additional staff or departments shall be included if appropriate;

1.	Fleet maintenance staff;
2.	Staff at facilities with fuel, chemicals, washing of vehicles or equipment;
3.	Road maintenance staff;
4.	Road salt/de-icing staff;
5.	Parks, swimming pool, or golf course staff that encounter spills, equipment washing, fuel, chemicals, etc.;
6.	Fire Department; and
7.	Police Department.

Training documents and attendance records shall be maintained and made available to the Department upon request. Reviews of the training effectiveness shall be considered after municipal site inspections or after an incident occurs. If a certain department or facility did not perform the way they were trained, or if an issue arises that was not handled properly, the MS4 Operator should consider if the training is enough or is ineffective. The MS4 Operator shall consider ways to survey or test staff to see if the training is effective.

**4.3.O** Using adaptive management the MS4 Operator shall review their Illicit Discharge Detection and Elimination (IDDE) Program, at minimum, annually and update implementation procedures as necessary. This data shall be used to continuously evaluate the effectiveness of each BMP and the implementation of each BMP. Any additional BMPs shall be acknowledged in the annual report.

**4.4 - MCM 4. Construction Site Stormwater Runoff Control**

The MS4 Operator shall develop, implement and enforce a program to reduce pollutants in any stormwater runoff to their MS4 from construction activities that result in land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

**As part of the Stormwater Management Program, the Construction Site Stormwater Runoff Control Program shall ensure the following requirements at a minimum.**

<p><b>4.4.A</b> The MS4 Operator shall have a law, ordinance and/or other regulatory mechanism to require erosion and sediment control BMPs at construction/land disturbance sites greater than or equal to one (1) acre or less than one acre if the construction activity is part of a larger common plan or development or sale that would disturb one acre or more. The mechanism shall include sanctions which are designed to ensure compliance, to the extent allowable under State, Tribal, or local law.</p>	
<p><b>4.4.B</b> The MS4 Operator must ensure the following minimum requirements are effectively implemented for all construction activities in the MS4 service area:</p>	
1.	<p>The MS4 Operator shall review pre-construction plans. These reviews at a minimum shall.</p>
	<p>a) Incorporate the consideration of potential water quality impacts through procedures for site plan review. The site plan review procedures shall evaluate threats to water quality shall by considering, at minimum, the following factors:</p> <ul style="list-style-type: none"> <li>i) Soil erosion potential;</li> <li>ii) Site slope;</li> <li>iii) Project size and type;</li> <li>iv) Sensitivity of receiving waterbodies;</li> <li>v) Proximity to receiving waterbodies;</li> <li>vi) Past compliance of the construction site operators; and</li> <li>vii) Other factors relevant to the MS4 service area.</li> </ul>
	<p>b) Use a checklist, or other listed criteria, to ensure consistency and completeness. This, along with the plans, should also be available to MS4 erosion control inspectors if needed to ensure the site is being devolved as planned and any relevant concerns or comments are seen.</p>
2.	<p>Include requirements for construction site operators to select, install, implement, and maintain appropriate stormwater control measures. This includes temporary BMPs throughout the life of the land disturbance, and permanent BMPs which remain on site. Consider ways to minimize disturbed areas through actions such as, phased construction requirements, temporary seeding or sodding, or erosion mats to exposed areas.</p>

3.	<p>Include requirements for construction site operators to control construction-site waste that may cause adverse impacts to water quality. This shall include at a minimum:</p> <p>a) Discarded building materials;</p> <p>b) Concrete truck, and mortar mix washout;</p> <p>c) Chemicals (such as fertilizer, paint, oils, herbicides, pesticides);</p> <p>d) Litter; and</p> <p>e) Sanitary waste.</p>
4.	<p>Establish authority for site inspections and enforcement of control measures.</p>
5.	<p>Confirmation of coverage under the Department’s NPDES Land Disturbance stormwater general permit has been obtained for those sites one acre and greater or part of a common plan.</p>
<p><b>4.4.C</b> To the extent allowable by state, federal, and local law, all permittees shall implement procedures for inspecting construction/land disturbance projects. The construction site stormwater program shall implement at a minimum:</p>	
1.	<p>Identify priority sites for inspection based on nature of the construction activity, topography, disturbed area, and the characteristics of soils and sensitivity of, or proximity to, receiving water;</p>
2.	<p>Construction site inspections shall include assessment of compliance with the MS4 Operator’s construction site storm water runoff control ordinance or regulatory mechanism, and other applicable ordinances;</p>
3.	<p>The inspections shall evaluate any structure that functions to prevent pollution of stormwater or to remove pollutants from stormwater and ensure that all BMPs are implemented and effective;</p>
4.	<p>Final inspection, upon completion of the land disturbance and prior to final approval or occupancy of construction project. Ensure all disturbed areas have been stabilized, that all temporary erosion and sediment control measures are removed, and instruct the site operator to terminate the Department’s NPDES Land Disturbance general permit; and</p>
5.	<p>The inspections shall be documented with a checklist. The checklist must include structural BMPs and check on the self-inspection which are conducted by the construction site operator. These MS4 Operator checklists may be electronic, and shall be retained for, at minimum, the life of the construction project.</p>
<p><b>4.4.D</b> Inspections shall be conducted at the following minimum:</p>	
1.	<p>Routine inspections shall be conducted at least every fourteen (14) days, when construction is active. These may be conducted by the construction site operator and submitted to the MS4 Operator, or conducted by the MS4 Operator.</p>
2.	<p>Compliance inspections by the MS4 Operator shall be conducted at least seven (7) days from a concern report.</p>

3.	<p>An inspection shall be conducted within 72 hours of any storm event, and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased. These inspection may be conducted by construction site operator and submitted to the MS4 Operator, or conducted by the MS4 Operator.</p>
<p><b>4.4.E</b> The construction site stormwater program shall include an established, escalating enforcement policy that clearly describes the action to be taken for violations. The program shall have procedures to ensure compliance with the permittee’s erosion and sediment control regulatory mechanism. This shall include the sanctions and enforcement mechanisms the permittee will use to ensure compliance and procedures for when certain penalties, injunctions or other measures will be used.</p>	
1.	<p>The MS4 Operator must have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.</p> <p>Enforcement responses to violations must consider the following criteria at minimum:</p>
a) Degree and duration of the violation	
b) Compliance history of the construction site operator	
c) Site operator cooperation with compliance efforts	
d) Effect the violation has on the receiving water	
2.	<p>Enforcement actions shall be timely in order to ensure the actions are effective. These procedures and actions must be written and available for MS4 staff for consistency and training purposes.</p>
a) The MS4 Operator must have the ability to issue “Stop Work” orders.	
<p>The MS4 Operator must have a minimum of two (2) additional enforcement actions they are able to use.</p> <p>Possible enforcement actions include, but are not limited to:</p>	
b) Verbal or material education;	
c) Written warnings or notice of violation;	
d) Bonding or escrow requirements;	
e) Fines/ penalties; and	
f) Denials for previous non-compliance.	
<p><b>4.4.F</b> The MS4 Operator shall maintain an inventory of active public and private land disturbance sites, as defined in Section 4.4 of this permit. This may be supplemented with records such as a plan review checklist and email correspondence.</p> <p>The inventory must contain:</p>	
1.	<p>Relevant contact information for each project (e.g., tracking number, name, address, phone, etc.);</p>
2.	<p>Size of the project/ area of disturbance;</p>

3.	Whether the project has a permit under the Missouri Land Disturbance General Permit (MORA);
4.	If the site is a priority site/ how high of priority;
5.	The date the MS4 Operator approved or reviewed the construction site plan; and,
6.	Complaints regarding the site.
<p><b>4.4.G</b> The MS4 Operator shall track the inspections. This may be done by retaining copies of records such as inspection checklists and email correspondence. The MS4 Operator must make these inventories available to the Department upon request.</p>	
<p>The tracking must contain at a minimum:</p>	
1.	Inspection dates;
2.	Inspection findings; and,
3.	Follow up actions including all enforcement actions.
<p><b>4.4.H Existing permittees:</b> Review the Stormwater Management Program including ordinances, permitting procedures, review procedures, inspection procedures and enforcement procedures to ensure compliance with these requirements. Any changes necessary to be in compliance with this permit shall be completed within the first year of this permit issuance. The inventory of active sites must be updated as new projects are reviewed and projects are completed. If the MS4 Operator needs to develop this inventory, it shall be completed within one (1) year of this permit issuance.</p>	
<p><b>4.4.I Newly regulated permittees:</b> If the MS4 Operator needs to develop this mechanism, the Management Plan shall describe the construction site stormwater plan and scheduled implementation. Development of this program shall be completed within the first three (3) years of the permit issuance. If the MS4 Operator’s ordinance or regulatory mechanism is already developed, the permittee shall include a copy of the relevant sections with the Management Plan.</p> <p>For new permittees, the inventory must be completed with one (1) year of permit issuance and then updated as new projects are permitted and projects are completed.</p>	
<p><b>4.4.J</b> The Stormwater Management Program must include procedures for the MS4 Operator to receive and consider information submitted by the public. This may be an advertised public notice period prior to development, along with a publically available mechanism to take public inquiries, concerns, or take information about stormwater and stormwater related topics. This mechanism may be a phone number, voicemail box, an email address, or social media platform. These reports shall be tracked and evaluated at minimum annually to determine if changes to the program are needed.</p>	

**4.4.K** The MS4 Operator shall provide sediment and erosion control training for MS4 inspectors and plan reviewers, at minimum annually. This education shall be tracked or documented. The documentation shall be made available to the Department if requested. The MS4 Operator must also provide written procedures outlining the local inspection and enforcement procedures to their inspectors to ensure consistency among the inspections.

**4.4.L** The MS4 Operator must develop or utilize existing education and outreach BMPs such as, but not limited to: brochures, posters, websites, and manuals. These BMPs shall be aimed at educating construction operators on installation, implementation, and maintenance of stormwater controls, good housekeeping practices for construction sites, as well as overall program compliance. The MS4 Operator shall make these outreach tools available to land disturbance operators. This may be provided as links to a publically accessible website.

**4.4.M** Using adaptive management, all MS4 Operators shall review, at minimum annually, their Construction Site Stormwater Runoff Control Program and evaluate the ordinances, review procedures, inspection procedures, enforcement procedures, and education procedures to ensure compliance with these requirements and determine if changes are needed. Any additional BMPs shall be acknowledged in the annual report.

#### **4.5 - MCM 5. Post-Construction Stormwater Management in New Development and Redevelopment**

The MS4 Operator shall continue or develop, implement, and enforce a program to address the quality of long-term stormwater runoff from new development and redevelopment projects that disturb equal to and greater than one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the permittee's regulated Small MS4. The permittee's program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts

The MS4 Operator shall continue or develop a strategy to minimize water quality impacts. This shall include a combination of structural and/or non-structural controls (BMPs) appropriate for the permittee's community.

**As part of the Stormwater Management Program, the Post-Construction Stormwater Management Program shall include the following requirements at a minimum.**

**4.5.A** An ordinance(s) or other regulatory mechanism(s) to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law for sites equal to or greater than one acre including projects less than one acre that are part of a larger common plan of development or sale.

<p>The MS4’s program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts from stormwater, after construction.</p>	
1.	<p>The MS4 Operator shall maintain requirements, and enforce the requirements, for both structural and non-structural, BMPs appropriate for the community.</p>
	<p>a) The MS4 shall have a minimum of one ordinance or other regulatory mechanism for structural controls and a minimum of one ordinance or other regulatory mechanism for non-structural controls.</p>
	<p>b) If adopting a set of standards from another MS4 or other established standards, the MS4’s ordinance may incorporate by reference, therefore the MS4 does not need to incorporate the entire guidance into their codes. It is recommended that the MS4 Operator does not state a specific year for the adopted standards, but rather states “most current editions” to prevent continuous updates to ordinances.</p>
2.	<p>The program shall apply to private and public sites, including roads.</p>
3.	<p>This program may be accomplished through multiple ordinances or regulatory mechanisms.</p>
<p><b>4.5.B</b> Structural controls include but are not limited to; extended detention basins, grass swales, bio-retention, permeable surfaces, sand filter basins, stormwater planters, proprietary BMPs. The ordinance or regulatory mechanism for structural post-construction controls, or water quality facilities, shall include:</p>	
1.	<p>Adoption or development of numeric or technical performance and/or design standards to control post-construction stormwater discharges. These post-construction stormwater standards are for designing, installing, implementing, and maintaining stormwater control measures which include BMPs that infiltration, evapo-transpiration, harvesting, detention, and/or reuse stormwater discharges. The MS4 Operator must adopt or maintain local stormwater discharge design standards that consider parameters such as site discharge volume, rate, duration, and frequency for new development and redevelopment sites.</p>
<p><b>4.5.C</b> <u>Non-structural controls</u> include but are not limited to; stream buffers, no mow zones, preservation of open spaces, tree preservation, impervious cover reduction, land use planning, and low impact development. The ordinances or regulatory mechanisms for non-structural Post-Construction controls, shall include:</p>	
1.	<p>Adoption or development of preventative actions that involve management and source controls such as, but not limited to:</p>

	a) Policies and ordinances that provide requirements and standards to direct growth to identified areas;
	b) Protection of sensitive areas such as wetlands and riparian areas;
	c) Maintain and/or increase open space (including a dedicated funding source for open space acquisition);
	d) Require buffer zones a minimum of 100 feet along water bodies;
	e) Require minimizing impervious surfaces;
	f) Require minimizing disturbance of soils and vegetation;
	g) Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure;
	h) Requirements for minimization of directly connected impervious areas; and
	i) Tree preservation ordinances.
<p><b>4.5.D</b> Pre-construction plan review shall be conducted by the MS4 Operator to assess site characteristics at the beginning of the construction site design phase to ensure adequate planning for stormwater program compliance.</p> <p>The structural or non-structural controls chosen shall; protect sensitive areas, minimize the creation of stormwater pollution, and effectively remove stormwater pollution. This can be achieved by reasonably mimicking pre-construction runoff conditions on all affected new development projects, or the permittee may achieve this goal through a method more appropriate for its community.</p>	
1.	The plan review process shall use a checklist. This may be part of the same plan review in MCM 4.
2.	The structural or non-structural controls chosen shall protect sensitive areas, minimize the creation of stormwater pollution, and effectively remove stormwater pollution.
3.	The post-construction BMP selection process shall consider pollutants of concern, or nutrient reduction.
4.	The plan review process shall evaluate non-structural BMP selection first, such as comprehensive plans, zoning ordinances, buffer strips, and/or maximization of open space.
<p><b>4.5.E</b> The MS4 Operator shall have methods to ensure adequate long-term operation and maintenance (O&amp;M) of the selected BMPs, including, as appropriate, agreements between the MS4 Operator and other parties such as post-development landowners or regional authorities.</p>	
1.	Long term O&M shall be addressed during the plan review and approval process.
2.	A copy of O&M manuals shall be given to the party responsible for the post-construction BMP, and a copy retained with the MS4 Operator. This may be done electronically.
<p><b>4.5.F</b> The MS4 Operator shall inspect, or require inspection of, each structural water quality facility according to the following:</p>	

1.	A minimum of one (1) inspection shall be conducted during construction, and/or before the site is finalized, to verify water quality facilities are built as designed and/or any applicable boundaries or practices are being observed.	
	a) The MS4 inspector shall have access to the approved plans to ensure proper installation.	
2.	A minimum of once in the first three years after the installation by, or on behalf of, the MS4 Operator.	
3.	Annually by the owner or operator of the post construction BMP. This inspection report shall be submitted to the MS4 Operator for evaluation.	
4.	Any installations with maintenance or enforcement issues shall be inspected at minimum once every five years.	
	<b>Group A</b>	<b>Group B</b>
	The MS4 Operator shall inspect all of the structural water quality facilities within the five year permit cycle.	The MS4 Operator shall inspect a minimum of 75% of all structural water quality facilities within the five year permit cycle.
	<b>4.5.G</b> The MS4 Operator shall re-evaluate non-structural controls to ensure they are being maintained as required. All non-structural BMPs shall be re-evaluated at least once every five years. This shall be accomplished as a physical in-field assessment or through data analysis.	
	<b>4.5.H</b> The MS4 Operator must maintain a plan designed to ensure compliance with the MS4's post-construction water quality regulatory mechanism. This plan shall include escalating enforcement mechanisms the MS4 Operator will use to ensure compliance. The MS4 Operator must have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.  Enforcement responses to violations must consider criteria such as, but not limited to:	
1.	Degree and duration of the violation;	
2.	Effect the violation has on the receiving water;	
3.	Compliance history of the water quality facility or non-structural BMP owner or operator; and	
4.	Cooperation of the owner or operator with compliance efforts.	
	<b>4.5.I</b> Enforcement actions shall be timely in order to ensure the actions are effective. The MS4 Operator shall begin enforcement actions within seven (7) days of discovering a violation.  Possible sanctions include, but are not limited to:	
1.	Written warnings or notice of violation (this includes email notification);	
2.	Property lien; and	
3.	Fines.	

**4.5.J** The MS4 Operator shall maintain an inventory tracking the public and private structural post construction water quality facilities.

This inventory must contain, at a minimum:

- |    |   |
|----|---|
| 1. | Relevant contact information for the responsible person(s) or entity (e.g., tracking number, name, address, phone, etc.);                                 |
| 2. | The type of water quality facility;   |
| 3. | Applicable operations and maintenance documents;  |
| 4. | Date the permittee approved the construction site plan; and,  |
| 5. | If the water quality facility is owned or operated by the MS4, the tracking shall also include any maintenance, such as sediment clean-out or replanting. |

**4.5.K** The MS4 Operator shall also track the inspections. This may be done by retaining copies of records such as inspection checklists and email correspondence. The MS4 Operator must make these inventories available to the Department upon request.

The MS4 Operator shall track at a minimum:

- |    |  |
|----|--|
| 1. | Inspection dates;                                    |
| 2. | Inspection findings; and,                            |
| 3. | Follow up actions including all enforcement actions. |

**4.5.L** The MS4 Operator shall maintain an inventory of non-structural BMPs confirming that the management associated with the BMP is carried out.

The inventory may be recorded as square feet of no-mow zones, acres of wooded preserves, miles of stream with buffer zones.

This inventory shall also track the follow-up inspections/ reviews of the non-structural BMPs.

**4.5.M Existing permittees:** Annually, shall evaluate the ordinances, permitting procedures, review procedures, inspection procedures and enforcement procedures to ensure compliance with these requirements and determine if changes are needed. Any changes necessary to be in compliance with this permit shall be completed within the first two (2) years of permit issuance.

The inventory of water quality facilities must be updated as new facilities are added and projects are completed. If the MS4 Operator needs to develop this inventory, it shall be completed within two (2) years of this permit issuance.

**4.5.N Newly regulated permittees:** Shall develop the ordinance or regulatory mechanism. Development of this program shall be completed within the first five (5) years of the permit issuance.

For new permittees, the inventories of active public and private post construction water quality facilities and non-structural BMPs must be completed with two (2) years of permit issuance and then updated as new projects are permitted and projects are completed.

**4.5.O** The MS4 Operator must have procedures to receive and consider information submitted by the public. This may be an advertised public notice period prior to development, along with a publically available mechanism to take public inquiries, concerns, or take information about stormwater and stormwater related topics. This mechanism may be a phone number, voicemail box, an email address, or social media platform. These reports shall be tracked, and evaluated annually to determine if changes to the program are needed.

**4.5.P** The MS4 Operator must develop or utilize existing education and outreach BMPs, such as but not limited to; brochures, posters, websites, and manuals. These BMPs shall be aimed at educating the general public and/or developers on the function of both structural and non-structural post construction water quality BMPs and project designs that minimize water quality impacts. The MS4 Operator shall make these outreach tools available to all residents. This may be provided as a publically accessible website.

**4.5.Q** The MS4 Operator shall provide appropriate training for MS4 inspectors, if they have not received this through their own means. This may include Green Infrastructure training, or specific operation of proprietary water quality facilities. The MS4 shall provide overall training to explain the function of both structural and non-structural post construction water quality BMPs.

**4.5 P** Using adaptive management, all MS4 Operators shall review, at minimum annually, their Construction Site Stormwater Runoff Control Program and evaluate the ordinances, review procedures, inspection procedures, enforcement procedures, and education procedures to ensure compliance with these requirements and determine if changes are needed. Any additional BMPs shall be acknowledged in the annual report.

#### **4.6. - MCM 6. Pollution Prevention/Good Housekeeping for Municipal Operations**

The permittee shall develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

**As part of the Stormwater Management Program, the pollution prevention/good housekeeping program shall include the following information, at a minimum.**

**4.6.A** An employee training program for MS4 staff. The training shall be given at minimum annually to all MS4 staff who work with material handling, at MS4 vehicle or equipment maintenance areas, storage yards, and material storage facilities.

<b>4.6.B</b> The training shall be used to prevent and reduce stormwater pollution. The training shall cover a minimum of the following topic/ activities (if applicable to the MS4):	
1.	Vehicle and equipment washing;
2.	Fluid disposal and spills;
3.	Fleet, equipment, and building maintenance;
4.	Park and open space maintenance procedures (including fertilizer, herbicide, pesticide application);
5.	New construction, road maintenance, and land disturbances;
6.	Stormwater system maintenance;
7.	MS4 operated salt and de-icing operations;
8.	Street sweeper operations;
9.	Firefighter training activities; and
10.	Illicit Discharges.
<b>4.6.C</b> The MS4 Operator shall:	
1.	Maintain material to use in the training program, such as those available from the EPA, the state, or other organizations.
2.	Maintain written procedures for the training program. Include a description of how this training will coordinate with all other minimum control measures (such as Illicit Discharge), monitoring and TMDL implementations where applicable.
3.	Maintain a written schedule to offer topic specific training when it is appropriate. Such as, swimming pool discharges in the summer, leaf disposal in the fall, proper salt clean-up and usage in the winter.
<b>4.6.D</b> The MS4 Operator shall maintain a list of all municipal operations/facilities that are impacted by this operation and maintenance program. This shall include a minimum of (if applicable to the MS4):	
1.	Maintenance yards;
2.	Fleet or maintenance shops, including parks department;
3.	Storage yards;
4.	Parks and golf courses;
5.	Municipal parking lots;
6.	Salt/sand storage locations; and
7.	Snow disposal areas.

**4.6.E** The MS4 Operator shall maintain a list of industrial facilities the MS4 Operator owns or operates which are subject to NDPEs permits for discharges of stormwater associated with industrial activity. The list shall include the permit number or a copy of the No Exposure Exemption Certification (if applicable) for each facility.

This includes Municipal projects with a land disturbance permit.

NPDES permitted facilities not owned or operated by the permittee are not required to be part of the list, however the MS4 Operator should be familiar with all such facilities in their MS4 service area as they may signify a priority area for the IDDE program.

**4.6.F** The MS4 Operator shall develop or maintain controls for reducing or eliminating the discharge of floatables and pollutants from municipal parking lots, maintenance and storage yards, waste transfer station, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations, and snow disposal areas owned or operated by the MS4 Operator.

These controls shall include at a minimum:

1.	A list of potential pollutant sources at each facility;
2.	A minimum of annual inspections of all municipally owned or operated facilities for stormwater issues;
	a) If issues are found, follow up inspections shall be conducted until the issues are resolved. Records shall be kept for inspections and follow up. This may be a checklist, and may be electronic;
3.	Use of structural controls/BMPs to reduce or prevent pollutants from entering waters of the state or into another MS4.
	a) A map with descriptions of these BMPs shall be maintained for each facility;
4.	All paints, solvents, petroleum products, and petroleum waste products (except fuels) under the control of the permittee shall be stored so these materials are not exposed to stormwater;
5.	Sufficient practices of spill prevention, control, and/or management shall be provided to prevent any spill of these pollutants from entering waters of the state. This includes but is not limited to ample and well placed spill kits. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
6.	Conduct inspections of municipally owned or operated permanent stormwater treatment and/or flow control BMPs/facilities. The MS4 Operator shall conduct repairs or take appropriate maintenance actions as needed including cleaning and removal of unsuitable vegetation or debris. All such stormwater treatment or flow control BMPs/facilities shall be inspected a minimum of once every five years.

7.	<p>Conduct inspections of municipally owned or operated permanent stormwater inlets, open channels, catch basins, or other drainage structures. The MS4 Operator shall conduct repairs or take appropriate maintenance actions as needed. This shall include the removal of leaves, trash, and debris.</p> <p>a) All such stormwater treatment and flow control BMPs/facilities shall be inspected a minimum of once every five years.</p> <p>b) Routing cleaning (such as removal of leaves or floatables) shall be conducted at minimum once a year.</p>
8.	<p>The MS4 Operator shall have procedures for properly disposing of waste removed from the MS4 area, or MS4 structures.</p> <p>This waste, shall include at minimum, if applicable to the permittee:</p> <p>a) Street sweeper spoils and washout;</p> <p>b) Accumulated sediment;</p> <p>c) Dredged materials;</p> <p>d) Floatables and litter; and</p> <p>e) Other debris.</p>
9.	<p>Procedures for the washing of all municipal vehicles and equipment.</p>
	<p>a) Use of any soap or detergent shall only be where there is connection to sanitary sewer or equivalent; and</p> <p>b) Any wash or rinse water that contains pollutants such as salt, oils, grease, sediment, grass clippings, lawn chemicals, or pesticides shall not be discharged to waters of the state or the MS4 system without appropriate treatment.</p> <p>c) Any washing or rinsing activities shall be conducted in the appropriate area so the water is treated. This area(s) shall be marked on the map of the facility.</p>
<p>The MS4 Operator shall track the above controls and practices. The MS4 Operator shall maintain written explain the controls, procedures, inspection schedules, and explain the tracking of these controls. Tracking may be aided by retaining inspection reports or checklists. Individual Stormwater Pollution Prevention Plans or one overarching Operations and Maintenance Manual for all applicable MS4 facilities may be used to comply with this requirement. If a unified document is used, each individual site shall be familiar with the document, and a copy shall be present on each site referenced in the document or available electronically.</p> <p>Annually, the MS4 Operator shall evaluate the results, controls, and inspection procedures to ensure compliance with these requirements and determine if changes are needed. This evaluation may also aid in finding priority areas or pollutants in relation to MCM 3, or adding more education in relation to MCM 1.</p>	
<p><b>4.6.G</b> The MS4 Operator shall develop or maintain controls for reducing or eliminating the discharge of floatables and pollutants into the MS4 system.</p>	

These controls shall include:	
1.	Maintaining municipal salt storage area(s) after use (sweeping and shoveling loading area and storage area, unload salt hoppers or keep under cover, close dome door etc.)
2. Rock salt BMPs as follows:	
<b>Group A</b>	<b>Group B</b>
A minimum of one (1) of the following BMPs to reduce or minimize the amount of rock salt entering the MS4, another MS4, or waters of the state.	A minimum of two (2) of the following BMPs to reduce or minimize the amount of rock salt entering the MS4, another MS4, or waters of the state.
	a) Stopping the dispersion of salt when the vehicle stops;
	b) Alternative deicing approaches (physical snow removal, brine etc.);
	c) Sweeping streets after weather event passes.
	d) Education to private entities on salt use and storage; and
	e) Calibrating salt spreading equipment.
3.	The MS4 Operator shall track the amount of rock salt used, the use of alternative de-icing, and what BMPs are utilized annually.
4. Yard waste BMPs as follows:	
<b>Group A</b>	<b>Group B</b>
A minimum of two (2) BMPs to reduce or minimize the amount yard waste entering the MS4.	A minimum of three (3) BMPs to reduce or minimize the amount of yard waste entering the MS4.
	a) Street sweeping or vacuuming, at minimum annually at an appropriate season, to reduce the amount of leaf fall in the storm sewer;
	b) Yard waste collection/ drop off program;
	c) Education for proper disposal of yard waste; and
	d) Ordinance prohibiting improper yard waste disposal.
5.	Tracking of the instances that the BMPs were utilized, such as mileage swept and dates of sweeping, times of leaf collections or amounts collected at a collection facility.
<b>4.6 H</b> The MS4 Operator shall maintain a written description of the BMPs used (controls, procedures, schedules) to reduced floatables and pollutants into the MS4 system, and explain the tracking of these controls. Tracking may be done by retaining inspection reports or checklists.	

Using adaptive management, the MS4 Operator shall evaluate the results, controls, and inspection procedures to ensure compliance with these requirements and determine if changes are needed.

**4.6.I** The MS4 Operator shall maintain procedures to determine if there are impacts to water quality for new flood management projects, if applicable. Any flood management projects shall require the protection of water quality in the standards that are used to plan, design, build, and maintain stormwater infrastructure.

Flood management projects are those projects developed or designed to reduce flooding.

**4.6.J Existing permittees:** Shall evaluate the current Stormwater Management Program including training, inspection procedures, and other municipal operation procedures to ensure compliance with these requirements. Any changes necessary to be in compliance with this permit shall be completed within one (1) year of this permit issuance.

**4.6.K Newly regulated permittees:** Shall develop this program. The Management Plan shall describe the pollution prevention/ good housekeeping plan and scheduled implementation. Development of this program shall be completed within the first five (5) years of the permit issuance.

**4.6.L** Using adaptive management, all MS4 Operators shall review their Municipal Operations Program, at minimum, annually and update implementation procedures as necessary within the permit requirement. Any additional BMPs shall be acknowledged in the annual report.

## **PART 5. MONITORING, RECORDKEEPING, AND REPORTING**

### **5.1 - Monitoring**

A. The MS4 Operator shall retain records of any monitoring information used to complete the application for this operating permit, implementation of any part of this operating permit, and implementation for any part of the permittee's Stormwater Management Program for a period of at least three (3) years from the date of the sample, measurement, or analysis. This period may be extended by official request by the Department at any time. These records may be maintained electronically.

Monitoring data shall include, if applicable, the below information:

1. All calibrations and maintenance records;
2. All original strip chart recordings for continuous monitoring instrumentation;
3. The date, location, and time of sampling or measurement;
4. The individual(s) who performed the sampling or measurements;
5. The date(s) analyses were performed;

6. The individual(s) who performed the analyses;
7. The analytical techniques or methods used; and
8. The results of such analyses.

B. Any monitoring conducted for the purpose of implementation of any part of this permit shall be conducted in accordance to test procedures approved under 40 CFR Part 136 unless another method is required under 40 CFR subchapters N or O.

## **5.2 - Recordkeeping**

These records may be maintained electronically.

- A. The permittee shall retain records of all activities requiring recordkeeping by the Stormwater Management Program, a copy of the NPDES permit, a copy of all ordinances, policies, and formal procedures for all six (6) MCMs and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the report or application. This period may be extended by official request of the Department at any time.
- B. The permittee shall retain the most recent version of their Stormwater Management Plan at a reasonable location accessible to the Department, including a publically available website.
- C. The permittee shall submit the items required under Part 5 of this permit, including a copy of the permit, Stormwater Management Plan, or application upon written request by the public.
- D. The permittee shall submit the items contained in Part 5 of this permit upon request to the Department.

## **5.3 - MS4 Annual Report**

**5.3.A** A report due to the Department on the status of the MS4's program is due annually. The MS4 Operator shall submit the MS4 Annual Report containing, at a minimum:

1. Information regarding progress toward achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable.
2. The status of the MS4's compliance with permit conditions.
3. Assessment(s) of the appropriateness of identified BMPs and corresponding measurable goals for each MCM.
4. A summary of results of information collected and analyzed during the reporting period, including monitoring data or quantifiable values per the MS4's measurable goals.
5. A summary of the TMDL Assumptions and Requirement Attainment Plan (ARAP), if applicable, containing the implementation status of BMPs and measurable goals specific to the TMDL ARAP or progress toward implementing the schedule for implementation

of the TMDL ARAP. The summary shall also include any changes to BMPs and corresponding measurable goals.

6. If the permittee is utilizing a Department approved integrated planning process, the permittee shall provide a summary of the status of the integrated plan incorporated with the TMDL ARAP.
7. A summary of the stormwater activities the permittee plans to undertake during the next reporting cycle (including an implementation schedule).
8. Notice that the permittee is relying on another government entity to satisfy some of the permittee's permit obligations. If applicable, the permittee shall supply the name of the entity, the name of the entity's primary contact person, and other relevant contact information.
9. MS4 Annual Reports shall contain all required information from January 1st to December 31st each year.
10. If approved by the Department, permittees may submit the MS4 Annual Report using an alternative report format.
11. The MS4 Annual Report shall also be posted on a publically available website as part of the Public Outreach program. This is a BMP to inform the MS4 residents of the Stormwater Management Program, what the program is doing for public health and clean water.

**5.3.B** Permittees shall submit the MS4 Annual Report via the Department's Electronic Discharge Monitoring Report (eDMR) Submission System.

1. Per 40 CFR 122.34(c)(3) reports must be submitted electronically by the owner, operator, or the duly authorized representative of the small MS4 to the NPDES permitting authority or initial recipient, as defined in 40 CFR 127.2(b). All general permit covered facilities under this master general permit shall comply with the Department's requirements for electronic reporting.
  - a) Registration to participate in the Department's eDMR system is required as part of the application for general permit coverage in order to constitute a complete permit application and may be accessed at [dnr.mo.gov/env/wpp/edmr.htm](http://dnr.mo.gov/env/wpp/edmr.htm).
  - b) Electronic Submissions. To access the eDMR system, use the following link in your web browser:  
<https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>. If you experience difficulties with using the eDMR system you may contact [edmr@dnr.mo.gov](mailto:edmr@dnr.mo.gov) or call 855-789-3889 or 573-526-2082 for assistance.

c) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the Department in compliance with 40 CFR Part 127.

2. The permittee may obtain a temporary or permanent electronic reporting waiver by first submitting an eDMR Waiver Request Form (Form 780-2692): <http://dnr.mo.gov/forms/780-2692-f.pdf>, by contacting the appropriate permitting office or emailing Electronic Discharge Monitoring Report (eDMR) Submission System. Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data about the NPDES program.

a) The permittee must electronically submit annual reports unless a waiver is granted by the Department compliance with 40 CFR Part 127. in

b) The Department will either approve or deny this electronic reporting waiver request within 120 calendar days of receipt.

## **PART 6. SPECIAL CONDITIONS FOR TOTAL MAXIMUM DAILY LOADS**

### **6.1 - MS4s Subject to Total Maximum Daily Loads (TMDL)**

A. Any regulated MS4 identified in an EPA approved or established Total Maximum Daily Load (TMDL) with an applicable Wasteload Allocation (WLA) shall implement steps toward the attainment of applicable WLAs in accordance with 40 CFR 122.44(k)(2) and (3).

B. The MS4 Operator shall develop a TMDL Assumptions and Requirement Attainment Plan (ARAP) to address the TMDL's assumptions and requirements where applicable.

C. The TMDL ARAP shall be incorporated into the Stormwater Management Program and include, at a minimum:

1. A process to identify potential sources of the pollutants(s);
2. BMPs to be implemented to address the sources within the MS4 service area;
3. A prioritization of those actions/BMPs; and
4. A schedule, including beginning and ending milestones, which are expressed as month and year.

The schedule for the implementation of the TMDL ARAP shall be completed as soon as practicable, but is not limited to the five year term of this operating permit as attainment can take years or even multiple permit terms.

D. BMPs shall be developed or designed with a purpose of reducing the pollutant(s) of concern. Each BMP shall contain a description of the BMP, the purpose of the BMP, and the expected result of the BMP.

E. Measurable goals shall be established for each BMP or in conjunction with multiple BMPs.

1. Each measurable goal shall contain a statement clearly indicating how it will be established to determine the appropriateness of identified BMPs and progress toward the expected results of the BMP.

2. Measurable goals shall be quantifiable; however, if it is not feasible to utilize a measurable goal that is quantifiable, then the permittee shall provide justification indicating why the measurable goal cannot be quantifiable.

3. If applicable, measurable goals shall also utilize interim and completion milestone dates, and a periodic frequency of measurement to document progress. Interim and final milestone dates shall be established with a format of month and year, or as 1st, 2nd, 3rd, 4th, and 5th year of the operating permit cycle.

F. A continuous evaluation process and documentation showing how each BMP is evaluated and subject to replacement or modification. The permittee shall apply reasonable further progress by replacing or modifying ineffective BMPs with effective BMPs.

G. If the permittee is subject to an approved or established TMDL, the permittee shall draft and submit their TMDL ARAP to the Department as soon as practicable but no later than 30 months after the date the EPA approves or establishes the TMDL or the effective date of their operating permit, whichever is later.

The initial TMDL ARAP is to be submitted to the Department's Water Protection Program, MS4 Team for review and rating at MS4@DNR.MO.GOV or Water Protection Program, MS4 Team, P.O. Box 176, Jefferson City, MO 65102. The deadline for the TMDL ARAP may be extended through written request by the permittee and written approval by the Department.

H. The MS4 Operator shall submit annual TMDL ARAP status reports to the Department on January 28th of each year until the TMDL ARAP has been submitted.

The annual status report shall provide a brief update on the status of completion of the TMDL ARAP to be submitted to the Department. The deadline for the TMDL ARAP may be extended through written request by the permittee and with written approval by the Department. The annual status report shall be submitted to the Department's Water Protection Program, MS4 Team at MS4@DNR.MO.GOV or Water Protection Program, MS4 Team, P.O. Box 176, Jefferson City, MO 65102.

I. If the Department approves the TMDL ARAP, it will be presumed that the TDML ARAP is affordable by the permittee.

If the Department disapproves a submitted TMDL ARAP and requires any additional or different controls or expenses, the Department will conduct an affordability analysis in support of the disapproval unless waived by the permittee. In addition to the disapproval, the Department shall provide an itemized list of recommendations, discrepancies, and plan corrective action(s) to the permittee in written correspondence, which will also provide deadlines for any corrective action(s).

J. If the TMDL ARAP has been submitted to the Department but has not received approval, the MS4 Operator is not required to implement any actions listed in their TMDL ARAP and shall notify the Department of this in their MS4 Annual Report.

K. If the TMDL ARAP has received Department approval, the permittee shall implement their TMDL ARAP in accordance to schedules established in the TMDL ARAP.

Implementation of all TMDL ARAP control measures shall be documented and retained by the permittee, and made available to the Department or the EPA upon request.

L. If the MS4 Operator has an approved TMDL ARAP, the permittee shall provide a summary that lists the BMPs and the status of the measurable goals in the MS4 Annual Report.

M. If the MS4 Operator is subject to a TMDL, the MS4 Operator may demonstrate that no additional controls are needed beyond the successful implementation of the six Minimum Control Measures (MCMs), which includes modifications to the BMPs or measurable goals, for the attainment with the TMDL's assumptions and requirements.

The demonstration is subject to Department approval. The MS4 Operator shall contact the Water Protection Program's MS4 Team to begin the process.

N. If the MS4 Operator is subject to a TMDL, the MS4 Operator may submit an Integrated Plan as an approach for the implementation of a TMDL's assumptions and requirements.

Review and rating of an Integrated Plan is subject to the same requirements of section 6.1 of this permit. The MS4 Operator shall contact the Water Protection Program's MS4 to begin the process.

O. Permittees subject to existing TMDL Assumptions and Requirements shall submit their plan and status of implementation to the Department with the MS4 Annual Report required by this permit. Existing plans shall be subject to the same conditions listed in items 6.1.

P. If the EPA approved or established TMDL indicates that the permittee does not cause or contribute to the impairment, the permittee is not required to develop and implement any action contained in Part 6 of this permit.

## **PART 7. STANDARD PERMIT CONDITION**

A. Duty to Comply. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and the Federal Clean Water Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal.

B. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

C. Proper Operation and Maintenance. The permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

D. Inspection and Entry. The permittee shall allow the Department or an authorized representative (including an authorized contractor acting as a representative to the EPA, or the Department) upon the presentation of credentials and other documents as may be required by law to:

1. Enter the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit.
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.
3. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act, any substance or parameters at any location.

I. Monitoring Methods. See Part 5.1 of this operating permit.

J. Need to Halt or Reduce Activity Not an Excuse. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

K. Permit Actions. This permit may be modified, revoked, reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

L. Duty to Re-apply. If the permittee wishes to continue an activity regulated by this permit after the permit expiration date, the permittee must apply for, and obtain, a new permit. The renewal

application shall be submitted at least 180 days prior to expiration of this permit unless the Department allows a later deadline not to exceed the expiration date of the permit. Continuation of expiring permits are in accordance with 10 CSR 20-6.010(10)(C) and subsequent amendments.

M. Administrative Continuation of the Permit. If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 10 CSR 20-6.010(10)(C) and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date, and who has applied for renewal at least 180 days prior to the expiration date, will automatically remain covered by the continued permit until the earlier of:

1. Reissuance or replacement of this permit, at which time the permittee shall comply with the application conditions of the new permit to maintain authorization to discharge;
2. Notice of termination;
3. Issuance of a site-specific permit or alternative general permit for MS4 discharges; or
4. A permit decision by the Director not to reissue this general permit, at which time the permittee shall seek coverage under an alternative general permit or a site-specific permit.

N. Permit Transfers. Subject to 10 CSR 20-6.010(11), an operating permit may be transferred upon submission to the Department. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the MCWL or the CWA. (See 40 CFR 122.61. In some cases, modification or revocation and reissuance is mandatory.)

O. Procedures for Modification or Revocation. If at any time the Department determines that the quality of waters of the state may be better protected by reopening this permit, or revoking this permit and requiring the owner/operator of the permitted site to apply for a site-specific (individual) permit or alternative general permit, the department may revoke a general permit and require any person to obtain such an operating permit as authorized by 10 CSR 20-6.010(13), 10 CSR 20-6.200(1)(B) or 10 CSR 20-6.200(6).

P. If this permit is reopened, modified, or revoked pursuant to this section, the permittee retains all rights under Chapters 536 and 644 Revised Statutes of Missouri upon the Department's reissuance of the permit as well as all other forms of administrative, judicial, and equitable relief available under law.

Q. The Department may require the permittee to apply for and obtain a site-specific or alternative general permit if:

1. The permittee is not in compliance with the conditions of this general permit.

2. The discharge no longer qualifies for this general permit due to changed site conditions and regulations.

3. The permittee will be notified in writing of the need to apply for a site-specific permit or an alternative general permit. When a site-specific permit or alternative general permit is issued to the authorized permittee, the applicability of this general permit to the permittee will be terminated upon the effective date of the site-specific or alternative general permit, whichever the case may be.

R. Site-Specific Permit or Alternative General Permit. The permittee may apply for a site-specific permit or alternative general permit in lieu of coverage under this general permit. In such cases, the permittee shall submit an application for the alternate permit in accordance with the requirements of 10 CSR 20-6.200 with reasons supporting the request. The request may be granted by issuance of any site-specific permit or an alternative general permit.

S. Property Rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

T. Duty to Provide Information. The permittee shall furnish to the Department, within a reasonable amount of time, any information which the Department may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

U. Falsification Penalties. Any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six months, or by both. Second and successive convictions for violations under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two years, or both;

V. Reopener Clause. Nothing in this permit shall prevent the Department from re-opening, modifying, or revoking this permit as authorized by law.

W. Signatory Requirements.

1. All permit applications shall be signed and certified in accordance with 40 CFR 122.22 and 10 CSR 20-6.010(2)(B) by either a principal executive officer or by an individual having overall responsibility for environmental matters for the permittee.

2. All reports required by this permit, and other information requested by the Department shall be signed by a person described in paragraph 6.17.1 of this permit, or by a duly

authorized representative of that person. A person is a duly authorized representative only if:

- a) The authorization is made in writing by a person designated in Section 2 of this permit;
- b) The authorization specifies an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the permittee. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
- c) The written authorization is submitted to the Director; and
- d) If an authorization under 6.10 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new, written authorization satisfying the requirements of this paragraph must be submitted to the Director prior to, or together, with any reports, information, or applications signed by an authorized representative.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**PHASE II SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)**  
**MO-R04C000**  
**MASTER GENERAL PERMIT**

The Federal Water Pollution Control Act [Clean Water Act (CWA)] Section 402 of Public Law 92-500 (as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the CWA). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Missouri Department of Natural Resources (Department) under an approved program, operated in accordance with federal and state laws (Federal CWA and Missouri Clean Water Law Section 644 as amended). Permits are issued for a period of five (5) years unless otherwise specified.

Per 40 CFR 124.56, 40 CFR 124.8, and 10 CSR 20-6.020(1)(A)2., a Fact Sheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the permit. A Fact Sheet is not an enforceable part of an MSOP.

This Fact Sheet is for a Master General Permit.

**Part I – Facility Information**

Facility Type: Industrial; Stormwater

Facility SIC Code(s): #9511

Facility Description: Urban Stormwater Runoff. The permittee's MS4 collects and routes stormwater from industrial, commercial, roadways, and residential areas located within the permittee's municipal boundary and discharges the stormwater to waters of the state.

This Permit establishes Stormwater Management Program and Stormwater Management Plan requirements for all permit holders under this permit.

**Clarification:**

Coverage under this general permit may be issued to Public entities located inside the service

area of a publically owned separate storm sewer system designated by the Department if it is determined that its discharges from the MS4 have caused, or have the potential to cause, an adverse impact on water quality. Extension of such coverage shall be at the discretion of the Department.

**Significant Changes to this permit include:**

- ✓ Establishment of terms and conditions of the permit necessary to meet the MS4 permit standard in clear, specific and measureable terms per 40 CFR 122.34.
- ✓ Establishment of public notice, public comment and public hearing process necessary to meet the permit standard per 40 CFR 124.10.

**Part II – Receiving Stream Information**

**Stormwater Outfalls:**

Applications for MS4 operating permit (renewal or new) require the MS4 to provide information regarding the location of outfalls from the regulated MS4. In accordance with 10 CSR 20-6.200(1)(D)18, an outfall is defined as, “A point source as defined by 10 CSR 20-2.010 at the point where a municipal separate storm sewer discharges and does not include open conveyances connecting two (2) municipal separate storm sewers, pipes, tunnels or other conveyances which connect segments of waters of the state and are used to convey water of the state.” A point source is, as defined in 644.016(16), RSMo “Any discernible, confined and discrete conveyance including but not limited to, any pipe, ditch, channel, tunnel conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, separate storm sewer or vessel or other floating craft from which pollutants are, or may be, discharged.”

The NPDES MS4 operating permit covers all discharges from the permittee's stormwater system into waters of the state. Outfalls listed under the Facility Description in the operating permit only include representative stormwater outfalls. Representative outfalls are outfalls that discharge to the primary stem of principal watercourses in separate sub-regional watersheds and are representative of various land uses. Representative outfalls are listed in the permit as a subset of ALL of the MS4's outfalls. Listing all MS4 stormwater outfalls could add several extra pages to the permit and would require the operating permit to be modified if any outfall changes were made. However, the permittee is required by the operating permit to maintain a map as part of their Stormwater Management Program of all stormwater outfalls that discharge to waters of the state.

Applications for renewal or to receive (i.e., new permit) of the MS4 general permit require the permittee to provide the legal description, outfall number and receiving stream. In addition, the application for both co-permittees and individual MS4 permittees require a United States Geological Survey map showing the locations of the municipality/area in relation to the local road system and to indicate on the map the municipal/area boundary, receiving stream(s), all

known stormwater outlets, and the map section, township, and range.

From this information, Department permit writers will establish a full description of these permitted features on the permit's certification page with the following:

Permitted Feature ID (e.g., Outfall #001)

Legal Description: ¼, ¼, Section, Township, Range, Direction

UTM Coordinates: X=000000.0, Y=0000000.0 (Easting, Northing respectively)

Receiving Stream: Name & Classification

First Classified Stream and ID: Name, Class, Waterbody ID – currently provided by the department

USGS Basin & Sub-watershed No.: (# – #) [12 digit USGS Hydrologic Unit Code (HUC)]

### **Applicable Designations of Waters of the State:**

Per Missouri Effluent Regulations (10 CSR 20-7.015), the waters of the state are divided into seven (7) categories. This permit applies to facilities discharging to the following water body categories:

- Missouri or Mississippi River [10 CSR 20-7.015(2)]
- Lakes or Reservoirs [10 CSR 20-7.015(3)]
- Losing Streams [10 CSR 20-7.015(4)]
- Metropolitan No-Discharge Streams [10 CSR 20-7.015(5)]
- Special Streams [10 CSR 20-7.015(6)]
- All Other Waters [10 CSR 20-7.015(8)]

Missouri Water Quality Standards (10 CSR 20-7.031) defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1<sup>st</sup> classified receiving stream's beneficial water uses shall be maintained in accordance with 10 CSR 20-7.031(4). A general permit does not take into consideration site-specific conditions.

### **Part III – Stormwater Management Program and Plan:**

#### **Stormwater Management Program**

This permit, in accordance with 10 CSR 20-6.200 and 40 CFR Part 122, requires the permittee to develop and implement a Stormwater Management Program. The Stormwater Management Program shall address the six minimum control measures; public education and outreach, public involvement/participation process, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management and pollution prevention/good housekeeping for municipal operations. In addition, the Stormwater Management Program addresses TMDL implementation plan components.

The Stormwater Management Program also includes, but is not limited to, specific BMPs, relevant local regulations, policies, procedures, interim milestones, measurable goals, measures of success, and responsible persons/positions for each of the measurable goals, and any applicable TMDL assumptions and requirements.

### **Stormwater Management Plan**

The Stormwater Management Plan is a documented implementation plan describing a schedule of MS4 program activities including prohibitions of practices, implementation of required practices, development of standards for urban growth, maintenance procedures, education, trainings, inspections and other management practices to prevent or reduce the pollution of waters of the state.

For this comprehensive permit, an Stormwater Management Program Plan is required, it does not need to be submitted to the Department as part of the application. The Management Plan shall lay out standard procedures and details of the Stormwater Management Program. This document will help ensure consistency and continuity in the Stormwater Management Program.

### **Stormwater Management Plan Public Notice Procedure:**

The MS4 Remand Rule became effective on January 9, 2017 and requires public participation in the permitting process. The comprehensive permit lays out the requirements of the Stormwater Management Program, using the specific Stormwater Management Plan may make an effective method of explaining the Stormwater Management Program.

### **Stormwater Management Program Ordinances:**

To the extent allowable under state or local law, ordinances (or other regulatory mechanisms if a non-traditional MS4) are required to be developed, implemented and enforced within five years of initial permit issuance under the following sections, in accordance with 40 CFR 122.34(b):

*Illicit discharge detection and elimination*; to prohibit non-stormwater discharges into the storm sewer system, and implement appropriate enforcement procedures and actions;

*Construction site stormwater runoff control*; to require erosion and sediment controls at construction sites, as well as sanctions designed to ensure compliance; and

*Post-construction*; to address post-construction runoff from new development and redevelopment projects, and sanctions designed to ensure compliance. The “Missouri Guide to Green Infrastructure: Integrating Water Quality into Municipal Stormwater Management” (May 2012) was written specifically to aid MS4s in developing and implementing the post-construction runoff program. The guide can be viewed at

<http://www.dnr.mo.gov/env/wpp/stormwater/mo-gi-guide.htm>. The EPA and the Department and certain MS4s have developed compliant model ordinances that may be adapted for use by other interested MS4s.

### **Stormwater Management Program Reporting Frequency:**

The previous version of this operating permit required biennial reporting of the Stormwater Management Program for existing regulated MS4s; however, annual reporting will now be required for existing regulated MS4 permittees in accordance with 40 CFR 122.34(d)(3).

The annual reporting ensures the annual review of the MCMs and overall stormwater management program is being conducted as required in this permit. The annual requirement also ensure there is no further confusion regarding which year the biennial due. The annual report is also consistent with the MS4 Operators who are subject to TMDLs that must submit annual water quality schedules.

The reports shall be reported electronically by the owner, operator, or the duly authorized representative of the MS4 to the Department via the eDMR system. This annual report can be used by the Department and the public to evaluate the quality and compliance of an MS4's program. An MS4 Operator may consider including additional information with the annual report to show the quality and comprehensiveness of the MS4 program. The report can be used to showcase an outstanding program.

### **Part IV - Rationale and Derivation of Effluent Limitations & Permit Conditions**

#### **Best Professional Judgement (BPJ):**

BPJs are technology-based limits derived on a case-by-case basis. BPJ limits are establishes in cases where Effluent Limit Guidelines (ELGs) are not available for, or do not regulate, a particular pollutant of concern. BPJ is defined as the highest quality technical opinion developed by a permit writer after considerations of all reasonably available and pertinent data or information that forms the basis for the terms and conditions of a NPDES permit.

The authority for BPJ is contained in Section 402(a)(1) of the Clean Water Act (CWA), which authorizes the NPDES authority to issue a permit containing "such conditions as the Administrator determines necessary to carry out the provisions of this Act" prior to taking the necessary implementing actions, such as the establishment of ELGs. ELGs are national regulatory standards for wastewater discharged to surface waters and municipal sewage treatment plants. EPA issues these regulations for industrial categories, based on the performance of treatment and control technology.

Previous versions of the MS4 Master General Permit followed federal regulations for the BMPs applicable to Phase II MS4s via the Minimum Control Measures (MCMs) under 40 CFR 122.34(b). BMPs are Technology-based Effluent Limits (TBELs), which then subjects the BMPs to BPJ case- by-case determinations.

The Remand Rule was a non-substantive rule, requiring the permitting authority (the Department) to ensure permit requirements include narrative, numeric, or other types of requirements. Permit requirements that simply copy the language of the federal Phase II regulations without providing further detail on the level of effort required or that do not include the minimum actions that must be carried out during the permit term do not provide clear, specific, and measurable requirements. The permit writer used BPJ in deciding the clear, specific and measurable requirements for this permit.

### **Integrated Planning**

As noted in the June 5, 2012 EPA memorandum, “*Integrated Municipal Stormwater and Wastewater Planning Approach Framework*” EPA has increasingly embraced integrated planning approaches to municipal wastewater and stormwater management. EPA further committed to work with states and communities to implement and utilize these approaches in its October 27, 2011 memorandum “*Achieving Water Quality through Municipal Stormwater and Wastewater Plans.*”

Integrated planning assist MS4 communities on their critical paths to achieving the human health and water quality objectives of the Clean Water Act by identifying efficiencies in implementing requirements that arise from distinct wastewater and stormwater programs, including how best to prioritize capital investments. Integrated planning can also facilitate the use of sustainable and comprehensive solutions, including green infrastructure, that protect human health, improve water quality, manage stormwater as a resource, and support other economic benefits and quality of life attributes that enhance the vitality of communities.

For more information regarding Integrated Planning please review both of the memorandums cited under this portion of the factsheet or contact the Department’s MS4 Team.

### **Maximum Extent Practicable (MEP)**

Prior to 1987, municipal stormwater was subject to the same controls as other point sources like industrial and domestic discharges, which was section 301(b) of the CWA. However, in 1987, “Congress retained the existing, stricter controls for industrial stormwater discharges but prescribed new controls for municipal stormwater discharges,” *NRDC v. EPA*, 966 f.2D 1292, 9<sup>th</sup> Cir. 1992 (*NRDC v. EPA*). This “new control” was established in section 402(p)(3)(B)(iii) of the CWA, which states, “*Permits for discharges from municipal storm sewers – shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, designs and engineering methods, and such other provisions as the Administrator or State determines appropriate for the controls of such pollutants.*”

The argument for “new controls” contained in the case of *NRDC v. EPA* was subsequently supported in the case of *Defenders of Wildlife v. Browner*, in which it was concluded that section 402(p)(3)(B) of the CWA “replaces” the requirements of 301( b) of the CWA with the MEP standard for MS4 discharges, and that it creates a “lesser standard” than section 301(b) of the CWA establishes on other types of discharges. Thus, MEP is a technology-based standard established by Congress in Section 402(p)(3)(B)(iii) of the CWA. As established in the *1999 National Pollution Discharge Elimination System Regulations for Revisions of Water Pollution Control Program Addressing Storm Water Discharges* (64 FR No. 235), MEP is, “...*the statutory standard that establishes the level of pollutant reduction that operators of regulated MS4s must achieve,*” (i.e., not water quality standards).

In addition to indicating that MEP is the statutory requirement, the EPA also clearly stated that MEP is applicable to the six (6) minimum controls measures in 64 FR No. 235, which states, “*The first component, reduction to the MEP, would be realized through implementation of the six minimum measures.*” The description of MEP continues in 64 FR No. 235, with “*EPA envisions application of the MEP standard as an iterative process. MEP should continually adapt to current conditions and BMP effectiveness and should strive to attain water quality standards.*” The iterative process, mentioned is also defined in 644 FR. No 235 with the following, “...*implement an iterative process of using BMPs, assessment, and refocused BMPs, leading toward the attainment of water quality standards.*”

Ninth Circuit court ruling in *EDC v. EPA* (2003) found that the Phase II rule requirements for small MS4 General Permits violated the CWA. The court ruling found a lack of permitting authority review and lack of public participation in permit process. The MS4 Remand Rule was promulgated December 9, 2016 and became effective on January 9, 2017 as a result of this ruling. The Remand Rule increase and specifies public notice requirements and authorization requirements, including Stormwater Management Plan review, approval, and incorporation for two-step general permits.

The Remand Rule ensures permit requirements include narrative, numeric, or other types of requirements such as:

- Implementation of specific tasks or best management practices (BMPs)
- BMP design requirements, performance requirements
- Adaptive management requirements
- Schedules for implementation and maintenance
- Frequency of actions.

All requirements in this permit must be expressed in clear, specific and measurable terms. This applies to any part of the permit addressing the six MCMs, TMDLs, and annual reports. MCMs were not intended to serve as stand-alone permit requirements, but rather areas of stormwater

management that must be addressed in the permit through clear, specific, and measurable terms and conditions that meet the MS4 permit standard. Exact adoption of the MCMs from the Federal regulations will not satisfy this requirement.

### **Measurable Goals**

Measurable goals are designed objectives or goals that quantify the progress of program implementation and performance of BMPs. They are objective markers or milestones that the permittee uses to track the progress and effectiveness of BMPs in reducing pollutants to the MEP. At a minimum, measurable goal should contain descriptions of actions that will be taken to implement each BMP, what is anticipated to be achieved by each goal, and the frequency and dates for such actions to be taken. BMPs and measurable goals are the mechanisms that are used to establish a clear and specific baseline against which future progress at reducing pollutants to the MEP can be measured.

There are a number of different ways the permittee can establish measurable goals. It is recommended that the below categories are used when developing goals:

- **Tracking implementation over time** - Where a BMP is continually implemented over the permit term, a measurable goal can be developed to track how often, or where, this BMP is implemented.
- **Measuring progress in implementing the BMP** - Some BMPs are developed over time, and a measurable goal can be used to track this progress until the BMP implementation is completed.
- **Tracking total numbers of BMPs implemented** - Measurable goals can be used to track BMP implementation numerically (e.g., the number of wet detention basins in place or the number of people changing their behavior due to the receipt of educational materials).
- **Tracking program/BMP effectiveness** - Measurable goals can be developed to evaluate BMP effectiveness, for example, by evaluating a structural BMP's effectiveness at reducing pollutant loading, or evaluating a public education campaign's effectiveness at reaching and informing the target audience to determine whether it reduces pollutants to the MEP. A measurable goal can also be a BMP design objective or performance standard.
- **Tracking environmental improvement** - The ultimate goal of the NPDES stormwater program is environmental improvement, which can be a measurable goal. Achievement of environmental improvement can be assessed and documented by ascertaining whether state water quality standards are being attained, or by tracking trends or improvements in water quality (chemical, physical, and biological) and other indicators, such as the hydraulic or habitat condition of the waterbody or watershed.

Because of changes due to the MS4 Remand Rule, measurable goals are specifically laid out in this permit. The MS4 Remand Rule emphasizes that permit requirements must be expressed in “clear, specific, and measurable” terms, which 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). These rule modifications do not alter the existing, substantive requirements of the six minimum control measures in 40 CFR 122.34(b).

### **Modifications**

Minor modifications to BMPs or implementation may be allowed under this Comprehensive General Permit, if the changes do not alter the permit requirements.

*As an example, the MS4 permit requires tracking for construction sites including plan reviews, inspections, and enforcement actions. The MS4 Operator used a central excel sheet, but now has the ability to purchase software that will store checklists for each step. This is considered an alteration in a BMP and is not a major modification as the permit requirement is still in effect.*

### **Minimum Control Measures (MCMs)**

The NPDES Permitting authority must include permit terms and conditions to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. 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) per 40 CFR 122.34(a).

In general, the Phase II MCMs as described in the federal regulation are not intended to serve as permit requirements, but rather areas of stormwater management that must be addressed in the permit through clear, specific, and measurable terms and conditions. Relying on the literal adoption of the MCMs from the federal regulations will not meet the requirement to establish clear, specific, and measurable permit requirements under the MS4 remand rule.

#### *MCM 1 Public Education, Outreach, and Involvement Program on Stormwater Impacts*

Terms and conditions related to this MCM are in accordance with 40 CFR 122.34(b)(1).

Public education and outreach is vital, as an informed and knowledgeable community is central to the success of a stormwater management program. Everyone has a part to play in both contributing to stormwater runoff and protecting water quality.

The MS4 Operator has the flexibility to choose which target audiences make sense for their MS4. The MS4 Operator can choose the audience, the medium, and the specific message. By educating the residents, the MS4 can help ensure greater support as the public gains a greater understanding of the reasons why stormwater management programs are necessary and

important. Public support is extremely beneficial for MS4 operators to instituting new funding initiatives for the stormwater program or in seeking support or volunteers to help implement the program.

Education to schools or youth will reach the next generation of residents, and they can bring their lessons home.

Businesses of all types have potential to impact urban stormwater. Retail, restaurants, manufacturing, even home based businesses bring their own potential issues. Plastic bags, litter, grease disposal, and improper disposal methods should be evaluated and be seen as educational opportunities. Formal organizations such as Rotary Clubs, Lions, Churches, sports teams, or college organizations, can support the messages and provide audiences ready to listen, learn, and even help. In MS4s where development is happening, or being encouraged, educating developers is a great way to get in front of issues, and improve compliance with MCM #4.

By educating Homeowner Associations audiences can be targeted for pollutants specific to them such as fertilizer usage, car washing practices, stream buffers, and proper disposal of organic and household hazardous waste. This audience can also be informed on maintenance of post-construction water quality facilities or ways they as homeowners can improve the quality of stormwater runoff. Industrial facilities will bring potential new issues with the products or the production processes. Looking at each facility, and offering education based on the stormwater concerns can reduce the pollutants in the runoff and the chance for larger issues in the future.

Some MS4s may have a valid reason to include another target audience to their education program. If an area has a high level of tourist this may be a good target. If the area is retrofitting basins, the neighboring homeowners may be a target audience.

It is part of the Missouri Nutrient Loss Reduction Strategy to enhance public involvement and education of nutrients in urban stormwater runoff. Residents can learn practical ways to decrease nutrients into the stormwater. Educating people on way they can make an impact on a bigger picture can cause small changes which will add up.

Focusing on trash is a way to show MS4 audiences the problem with a very visible media. By seeing how litter travels in the stormwater, it is easier to understand how smaller pollutants, such as oils, heavy metals, nutrients, or bacteria travel through the stormwater.

Tracking is important ensure the target audiences are getting the information about the targeted pollutants. Many MS4 programs will see cycles of when education is more need for certain topics. Learning through tracking and adaptive management will help the MS4 get effective education to the audiences.

Encouraging multiple stakeholder groups to become involved in the Stormwater Management Program will help foster a greater understanding of urban stormwater runoff and the potential impacts that can come from daily life in an urban setting. Because impacts are made in stormwater at businesses, and at home, it is vital to reach as many different groups as possible. Making the topic of stormwater management a relatable issue will help to get the message across, and give the recipients more reason to make changes.

When people participate in an activity, the underlying message becomes more tangible, and their personal impact has a stronger tie to the message. There are many ways to get people involved, and these ways will ideally reach different groups. Communities may potentially have organizations who may be willing to assist the MS4 Operator with activities. The Missouri Stream Team program is available state wide and engages in most of the activities listed in Part 4.2.F of this permit. Learn more at [mostreamteam.org](http://mostreamteam.org) or contact [StreamTeam@mdc.mo.gov](mailto:StreamTeam@mdc.mo.gov).

The MS4 Operator shall offer support of their own in conjunction with or to organizations helping with participation activities. There are a variety ways to offer support to groups who plan or organize events. By engaging with the groups or individuals creating these participation opportunities, the MS4 Operator can find ways to help in a manner which fits them, and really impacts the activities.

In working to establish a specific minimums of BMPs, the permit writer used Best Professional Judgement. In looking at a calendar year, there are three seasons which are conducive to outdoor activities. Likewise the calendar could be seen as one quarters, or as a traditional school year plus summer break.

Focusing on trash is a way to show MS4 audiences the problem with a very visible media. By seeing how litter travels in the stormwater, it is easier to understand how smaller pollutants, such as oils, heavy metals, nutrients, or bacteria travel through the stormwater.

Recording elements such as the number of participants, the amount of litter collected, trees planted, or audience attending will help the MS4 Operator understand if the activity was useful or not. Attendance sheets, receipts, Stream Team Activity Reports, or a spreadsheet can be used to keep track of events and results. Sometime events may be less attended that anticipated, but the MS4 Operator should consider that even a small impact is still an impact. When using adaptive management properly, adjustments can be made and the activity can be repeated.

### *MCM 2 Public Participation*

This MCM is required in accordance with 40 CFR 122.34(b)(2).

The Stormwater Management Program shall use the same procedure as the Master General Permit because the Management Program is the part that is specific to the MS4 it was created

for. Following the public notice processes laid out in Part 4.2 of this permit will give the public the opportunity to comment on or learn about the Stormwater Management Program.

The MS4 Operator does not need to create a stormwater management panel or committee. Having such a panel or committee will give the MS4 Operator a more immediate way of getting public representation involved and getting feedback from the public. A board with a diverse membership can enhance a stormwater management program by getting multiple viewpoints. Involving so much feedback and input will help gain backing from the residents and this understanding of the program will garner support when needed.

Presenting the Stormwater Management Program to the governing body or board can help the decision makers understand the reasons behind the processes and the benefit a healthy stormwater management can have on the economic value to their area.

### *MCM 3 Illicit Discharge Detection and Elimination (IDDE)*

This MCM is required in accordance with 40 CFR 122.34(b)(3).

Any point where a separate storm sewer system discharges to waters of the state. Outfalls include discharges from stormwater conveyances such as pipes, ditches, swales, gutters, and other points of concentrated flow.

This does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other waters of the state and are used to convey waters of the state (such as culverts). If waters of the state flow through a channelized area, this remains waters of the state, not an open conveyance.

Outfalls are not where streams leave the municipal boundaries of an MS4. Outfalls are not limited by size as illicit discharge can travel through small outfalls. While larger outfalls may collect more drainage from a larger area, small outfalls were constructed to convey stormwater and therefore are also likely to have illicit discharges. Overland flows, or areas of non-concentrated, or sheet flow are not considered to be outfalls and are therefore not required to be mapped, but rather channeled conveyances. Where a conveyance ends and discharges to a BMP, such as a vegetated area, and there is no conveyance to waters of the state, the conveyance end is not an outfall.

Mapping all MS4 outfalls is vital to a functioning illicit discharge program. Outfalls mapping gives the MS4 Operator a starting point to trace back to the source. Knowing the locations of outfalls and receiving waters are necessary to be able to conduct dry weather field screening for non-storm water flows and to respond to illicit discharge reports from the public. Outfalls must be mapped no matter what size.

Mapping the storm sewer system which leads to those outfalls will further assist in illicit discharge tracing. Once an illicit discharge is detected at an outfall, it will be necessary to trace the discharge through that portion of the storm sewer system leading to the outfall in order to locate the source.

Because privately owned storm sewers and conveyances were authorized by a municipality or the county to become connected with the municipal system, the municipality or county with the MS4 permit does have responsibility for that stormwater. Facilities owned by homeowners associations, for example, are subject to local codes, ordinances, and enforcement. The municipalities are responsible, therefore, for discharges of wastes from private storm water conveyance systems. Therefore enforcement actions shall take place if an illicit discharge is detected from a private outfall. So while the outfalls from such private outfall are not required for mapping, it is recommended to do so in order to assist with illicit discharge investigations and enforcement.

Ongoing dry weather field screening for non-stormwater flows is a strong tool for detecting illicit discharges. This process will verify outfall locations by walking, wading or even using a boat in the streams or along the streambanks and shorelines. Evidence of past non-stormwater flows, trash, improper organic disposal, along with the structural integrity of the storm sewer system can be found.

The MS4 Operator does not need to have the sample analyzation equipment, they must at minimum maintain a contract lab relationships so the samples can be taken and analyzed. For guidance on illicit discharge investigations, and parameters to sample for see:

[https://www.epa.gov/sites/production/files/2015-11/documents/sw\\_idde\\_pittbacklit.pdf](https://www.epa.gov/sites/production/files/2015-11/documents/sw_idde_pittbacklit.pdf)

Or [https://stormwater.pca.state.mn.us/images/b/b2/Final IDDE Field Guide HRPDC.pdf](https://stormwater.pca.state.mn.us/images/b/b2/Final_IDDE_Field_Guide_HRPDC.pdf)

The program must include procedures for tracing the source of an illicit discharge. Once an illicit discharge is detected and field tests provide source characteristics, the next step is to determine the location of the source. The map of the storm sewer system is a valuable tool, and is most often the first step in this plan. Techniques for tracing the discharge to its place of origin may include: following the flow up the storm drainage system via observations and/or chemical testing in manholes or in open channels, televising storm sewers, using infrared and thermal photography, conducting smoke or dye tests.

Education efforts in resolving the problem should occur before taking legal action; however, the MS4 needs to have the ability to enforce the IDDE plan. The procedures for removing the source of the illicit discharge will vary depending on the source of the discharge. The plan may include notifying the property owner and specifying a time for the owner to eliminate the discharge. Additional notifications and escalating legal actions should also be described in this part of the

plan. The MS4 Operators should consider creating an enforcement response plan, including the ability to collect cleanup and abatement costs from the responsible party. The MS4 Operator should also maintain proper contacts for environmental cleanup and proper environmental emergency response.

The field screenings are important in relation to priority areas. The field screening may identify new priority areas (problems areas) or the MS4 Operator may conduct more frequent screenings in the priority areas. When considering where priority areas are look at land use on the watershed. A priority area may be industrial areas, areas with a concentration of food establishments with grease disposal, or parts of the city with older infrastructure that may have cross contamination from aged domestic sewers, or an area of retail where litter may be an issue. The MS4 Operator should consider all types of pollutant when determining priority areas. Each MS4 will need to determine their own priority areas. However, if an area receives three complaints or reports of separate events within a six month range, the MS4 must prioritize this area until the source is determined.

The MS4 Operator must have procedures for responding to reports of illicit discharges. The response timeliness should be appropriate to the situation. Actions taken under the illicit discharge program should be documented. The MS4 Operator must use tracking to show progress is being made to eliminate illicit connections and discharges.

Illicit flows may originate in one MS4 jurisdiction and cross into another MS4 jurisdiction before being discharged at an outfall. The MS4 that detects the illicit flow is expected to trace it to the point where it leaves their jurisdiction and notify the adjoining MS4 of the flow, and any other physical or chemical information. The adjoining MS4 should then trace it to the source or to the location where it enters their jurisdiction. The process of notifying the adjoining MS4 should continue until the source is located and eliminated.

#### *MCM 4 Construction Site Runoff Control*

This MCM is required in accordance with 40 CFR 122.34(b)(4).

Polluted stormwater runoff from construction sites often flows to MS4 and ultimately is discharged into local waterbodies. Of the pollutants that have the potential to be discharged, sediment is usually the main point of concern. According to the 2000 National Water Quality Inventory, States and Tribes report that sediment is one of the most widespread pollutants affecting assessed rivers and streams, second only to pathogens (bacteria). Sources of sediment include agriculture, urban runoff, construction and forestry. However, sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands and 1,000 to 2,000 times greater than those from forest lands.

During a short time period, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation and contribution of other pollutants

from construction sites can cause physical, chemical, and biological harm to Missouri's waters.

The MS4 Operator must establish a construction program that controls polluted runoff from construction sites with a land disturbance of greater than or equal to one acre. There must be control through ordinances and/or other regulatory mechanism, such as a permit.

Site Plan Review ensures the implementation of appropriate BMPs on construction sites to control erosion and sediment along with litter and other wastes at the site. To determine if a construction site is in compliance with such provisions, the MS4 operator can review the site plans submitted by the construction site before ground is broken. Plan reviews can aid in compliance and enforcement efforts since it alerts the MS4 operator early in the process to the planned use or non-use of proper BMPs and provides a way to track new construction activities.

Land disturbance activities, such as clearing and grading the land surface, increases the potential for sediment discharges. Clearing reduces the natural uptake of water and nutrients by vegetation and excessive grading can smooth the ground surface, increasing amount and velocity of runoff. Vegetation inhibits erosion as the roots hold the topsoil in place, while leaves protect the surface against rain. Once the vegetative cover is gone, erosion is accelerated. The longer the exposed area is subject to erosive forces, the more severe the effect.

The goal should be to expose the smallest practical area of land, for the shortest possible time, to eroding forces. Phased construction minimizes the amount of land exposed at one time.

When the site becomes active, BMPs must be in place and the MS4 operator inspection and enforcement activities must begin. To ensure that the BMPs are properly installed, the MS4 operator is required to develop procedures for site inspection and enforcement of control measures to deter infractions. Procedures include steps to identify priority sites for inspection and enforcement based on the nature and extent of the construction activity, topography, and the characteristics of soil and receiving water quality. Inspections give MS4s an opportunity to provide additional guidance and education, issue warnings, or assess penalties.

Each site shall self-inspect to ensure their compliance the regulations of both the MS4 and the State of Missouri. An MS4 may require the site operator submit their self-inspection reports to the MS4 Operator as a form of oversight and tracking of compliance or issues with the site. For consistency the requirements mirror the requirements of the Missouri State Land Disturbance permit.

To fully ensure compliance the MS4 Operator must conduct oversight inspections as well. The MS4 Operator may choose to contract out these inspections to qualified inspectors, or consultants. If choosing this option, the MS4 Operator must make it clear to the site operators that the inspections are being conducted on behalf of the MS4.

The oversight inspections must be conducted at a frequency which ensures compliance, but not so often that the site operator can use the MS4 oversight inspections as their own inspections. Too frequent of oversight inspections may cause the inspector to become complacent or too familiar with the site or the personnel. Inspections can be used as educational opportunities from the inspector to the site operator.

Plan reviews before construction begins will help to identify priority site based off of site characteristics. Past inspections and the tracking of compliance issues may also assist in this identification if there have been issues with particular construction site operators or neighbors in the area of a site.

Final inspections ensure the site is properly stabilized, clean of solid waste and temporary BMPs. Closing the Missouri Land Disturbance permit will reduce the number of NPDES permits open in that MS4 service area.

Documenting inspections, such as a checklist, will be evidence that the inspections are being conducting, ensure thoroughness and uniformity for the inspector. These documents be used to show the site operators that the inspectors are being consistent between different sites.

MS4 staff must have enforcement tools available if they observe noncompliance with the MS4 regulatory mechanisms. The tools available may be notices of violation, stop work orders, or withholding of funds. These tools and mechanism to use them should be described in the Management Plan. The Management Plan should also list who can use the enforcement tools, enforcement follow-up actions, such as follow-up inspections, how and when enforcement is escalated if the violation isn't corrected, and documentation requirements.

Having an inventory of all sites with relevant contact information and project information ensures the MS4 Operator is aware of the projects in their area. The tracking of sites is useful not only for the MS4 Operator's recordkeeping and reporting purposes, but also for members of the public interested in ensuring that sites are in compliance.

MCM 4 also includes a requirement to allow the public to report concerns they have regarding construction sites and water quality impacts. An educated public is more aware of sediment runoff as a pollutant, therefore this may be reflected in the amount of reports increasing. Conversely, as education for the developer increases, the amount of reports may decrease. It should also be noted that erosion and sediment regulations are typically focused on sediment, MCM 4 is not limited to just the sediment. MS4 Operators must enforce construction sites for other types of waste such as litter, concrete washout.

Many MS4 use existing code or building inspectors to also look at the sediment and erosion aspects of a site. These inspectors must have training, and must understand why the sediment and erosion inspections

are of value. The permit writer understands that not all MS4s are able to afford extra training for inspectors, however there are free resources available. Because of the great impact even one mismanaged construction site can cause a stream, the effort and time to establish these training resources to create a training program are necessary to have competent inspectors.

Educating the individual site operators will add more awareness for how to manage sediment and erosion on a site, and why this is important.

#### *MCM 5 Post-Construction Runoff Control*

This MCM is required in accordance with 40 CFR 122.34(b)(5).

If water quality impacts are considered from the beginning stages of a project, new development and redevelopment provide more opportunities for water quality protection. Post-construction stormwater management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly affect receiving waterbodies. Many studies indicate that prior planning and design for minimization of pollutants in post-construction stormwater discharges is the most cost-effective approach to stormwater quality management.

The Phase II rule applies to redevelopment projects that alter the footprint of an existing site or building in such a way that there is a disturbance of equal to or greater than one acre of land.

This program requires ordinances, or policies, that address storm water runoff quality. Post-construction stormwater management can be utilized in ways that preserve and protect in a non-structural way, and in structural items that are used to mitigate the decreased water quality in the stormwater runoff. Because structural and non-structural practices work together, a minimum of one ordinance is required for structural and one for non-structural controls.

Structural controls have traditionally been concrete or “gray” infrastructure created to quickly move the stormwater away from the place it fell. These have caused increased erosion and water quality degradation to the receiving streams. Current standards include water quality as a factor in design, and many are actually based on natural systems and rely upon vegetation and soil mechanisms in order to perform as intended. The choice of which structural BMPs are most appropriate comes not as a post-construction fix, but rather as a result of the site design review, which should also look at the stormwater management of the site comprehensively.

Numeric, or technical, performance standards are broken into two types for stormwater discharges, a treatment standard or a volume-based/retention standard. Treatment standards typically specify an amount of pollutant to be managed, for example 80% TSS removal. Volume-based or retention standards typically require the use of infiltration, evapotranspiration or harvest practices to control a specified volume of stormwater onsite and are usually expressed as a volume of rainfall, a percentile storm event or a groundwater recharge volume.

Non-structural controls focus on preserving open space, protecting natural systems, and incorporating existing landscape features such as wetlands and stream corridors into a site plan to manage stormwater at its source. There is also emphasis on clustering and concentrating development, minimizing disturbed areas, and reducing the size of impervious areas.

Both structural and non-structural controls consider comprehensive stormwater management items such as:

- Stormwater should be managed as a resource
- Natural features and systems should be preserved and utilized
- Stormwater should be managed as close to the source as possible
- The hydrologic balance of surface and ground water should be maintained
- Runoff should be slowed down
- Potential water quality and quantity problems should be prevented
- Problems that cannot be avoided should be minimized
- Stormwater management should be integrated into the initial site design process.

The Department has created the Missouri Guide to Green Infrastructure, Integrating Water Quality into Municipal Stormwater Management for guidance; <https://dnr.mo.gov/env/wpp/stormwater/mo-gi-guide.htm>.

Other guidance and model ordinances may be found at the following:

<https://www.epa.gov/nps/urban-runoff-model-ordinances-post-construction-controls>

<https://www.epa.gov/nps/urban-runoff-model-ordinances-aquatic-buffers>

<https://www.epa.gov/nps/urban-runoff-model-ordinances-open-space-development>

[https://www3.epa.gov/npdes/pubs/sw\\_ms4\\_compendium.pdf](https://www3.epa.gov/npdes/pubs/sw_ms4_compendium.pdf)

[https://www.epa.gov/sites/production/files/2015-09/documents/urban\\_ch05.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/urban_ch05.pdf)

<https://www.epa.gov/green-infrastructure>

<https://www.cwp.org/reducing-stormwater-runoff/>

The MS4 Operator must ensure adequate long-term operation and maintenance of post construction BMPs. This is accomplished through agreements between the MS4 Operator and land owners or regional authorities. Tying a structural control to the land deed may be adequate for some MS4s. If the agreement is recorded with local land records, any successive owner of the property would take the responsibilities of the operations and maintenance of that structural control in the agreement.

Both structural controls and non-structural controls, must be tracked and inspected. An inspection program must be established to ensure the stormwater controls are working and being properly maintained.

Non-structural controls must also be reevaluated. If a growth area was identified, it must be evaluated to ensure is room for more, or if a new growth area should be found. If open spaces or sensitive areas are protected, these places should be inspected to ensure there is no encroachment. If there impervious areas were minimized, these places should be inspected to ensure no additional impervious areas were added.

Educating MS4 on post-constructions BMPs will ensure the inspections are effective. There are free resources available online such as:

<https://www.youtube.com/watch?v=SM9sI9wQgz0&feature=youtu.be>

As the public becomes more educated on post-construction stormwater runoff BMPs and controls, they may have more concerns to report. Through education however, there may be ways an MS4 can also gain participation to assist with maintenance issues, and to also further education on water quality and stormwater management.

#### *MCM 6 Pollution Prevention/Good Housekeeping*

This MCM is required in accordance with 40 CFR 122.34(b)(6).

The MS4 Operator's actions, and facilities are the example for the residents of that MS4. Leading by example can be a strong piece for education.

Training shall be given to staff that have influence to stormwater for the MS4. By only focusing the training on a few members, the message will not get out. Each MS4 should take a realistic look at each department, division, and individual. If they work in a way that may either negatively impact or positively impact stormwater runoff, they must attend annual training.

Training may be broken down into topics and dispersed throughout the year. It may be given in conjunction with other training. There are free resources available online such as;

[https://stormwater.pca.state.mn.us/index.php?title=Employee\\_training](https://stormwater.pca.state.mn.us/index.php?title=Employee_training)

<https://www.youtube.com/watch?v=UxOam2GEVgQ>

<https://www.youtube.com/watch?v=16ubsys6AZY>

While emergency firefighting actives are an authorized non-stormwater discharge, other actives related to a fire department, such as washing of trucks, run-off water from training activities, test water from fire suppression systems, and hydrant pressure testing, are not exempt.

Live and simulated fire training should be conducted at facilities that have been built and engineered specifically for training exercises. These facilities should have run-off controls or BMPs to prevent discharging this water. Any water used during training activities is considered process wastewater.

If training cannot be conducted at a specially designed facility, additional pollution prevention

actions will need to be taken before training begins in order to prevent illicit such as, sweeping prior to and after training, blocking off all potentially effected stormwater structures, direct to a sanitary sewer line, if spraying water over a landscape arch the water so that velocities are dissipated and there is less chance of soil erosion, use dechlorination blankets and/or dechlorination diffusers after/prior to spraying, dispose of ashes and partially burnt debris in dumpster.

Maintaining an Operations and Maintenance document, or SWPPP for each municipal site will ensure proper management, and behavior at those sites. This also includes inspections for these sites as a method of checking up on the individual site programs. Inspections, cleaning, and routine maintenance of stormwater structures is necessary to ensure the structures are functioning properly and stormwater is managed properly.

Road salt is a safety item for most residents of Missouri. However the chloride concentrations in streams is increasing which can potentially to harm aquatic life and may impair drinking water. So while there is a need for road salt, there are changes that can be made to use less salt and still clear the roads for the safety of the public. This is seen in product management. Loading, unloading and cleanup practices in the loading and parking areas can greatly reduce the amount of salt loss. A winter maintenance program which tracks the rock salt use and finds ways to manage the product to reduce loss on the municipal yard is the goal of the rock salt BMPs.

Brine spreads more evenly, stays where it falls and begins working immediately because the salt is already in solution. As a result, spraying liquid brine is more effective while using less salt. Beet juice has been suggested as an alternative, however the sugar in the runoff causes the nutrient loading of waterways to increase.

Educating private entities to reduce their usage by salt reduction or not salting an entire parking lot. For training or additional resources including application rates please see;  
<https://www.wisaltwise.com/Tools/Application-Guidelines-Calculator>  
<https://www.iwla.org/conservation/water/winter-salt-watch/road-salt-best-practices>

Yard waste includes any organic debris such as grass clippings, leaves, and tree branches. Research by the U.S. Geological Survey show municipal leaf collection programs have the ability to reduce loads of total and dissolved phosphorus in a given drainage area by 84 and 83%, respectively, and total and dissolved nitrogen by 74 and 71%. This research indicates that nearly 60% of the annual phosphorus yield in urban and suburban environments comes from leaf litter in the fall, making it a huge contributor of nutrients to urban receiving waters.

Removing leaf litter from roads and drain systems means; cleaner streets, safety, and a reduced likelihood of clogged storm drain inlets. Educating residents to not put leaves in, or on storm inlets and/or providing alternate means of disposal can help reduce the amount needed to clean.

For more information please see;

<https://www.sciencedirect.com/science/article/pii/S0048969716314462>

<https://slco.org/watershed/stream-friendly-practices/dont-dump-debris/>

There is also free training on overall stormwater management for MS4 Operators;

<https://www.torranceca.gov/home/showdocument?id=18591>

<https://njmel.org/mel-safety-institute/webinars/>

[https://www.youtube.com/watch?v=Z09Yz\\_qS1f4](https://www.youtube.com/watch?v=Z09Yz_qS1f4)

<https://www.youtube.com/watch?v=ACP7DOdOEDE>

## **Part V – Rationale for General Terms and Conditions:**

### **Additional Federal Acts**

In accordance with 40 CFR 122.49(b) and (c) the operating permit cites the Endangered Species Act (ESA) and the National Historic Preservation Act (NHPA) and places the permittee on notice that the operating permit does not affect, remove or replace the requirements or compliance determination for NPDES operating permits. It is the responsibility of the permittee to determine if activities conducted within their MS4 or stormwater discharging from their MS4 are in compliance with the ESA and NHPA.

Assistance in determining applicability to ESA conditions and requirements can be found in the U.S. Fish and Wildlife Service (FWS) Endangered Species webpage, which is located at:

<http://www.fws.gov/angered/>. Additionally, the FWS Information for Planning and Conservation (IPaC) web-based project planning tool that streamlines the environmental review process is highly recommended and is located at: <http://ecos.fws.gov/ipac/>.

Assistance in determining applicability to NHPA conditions and requirements can be found in the Department's State Historic Preservation Office Section 106 Review, which is located at:

<http://dnr.mo.gov/shpo/sectionrev.htm>. Additionally, the Advisory Council on Historic Preservation Citizen Guide to Section 106 Review, which explains the process, is located at: <http://www.achp.gov/citizensguide.html>.

In addition to the ESA and NHPA, this operating permit does not affect, replace or remove the requirements and compliance determinations with respect to substances not otherwise covered under a NPDES permit and regulated by federal law under the Resource Conservation and Recovery Act or the Comprehensive Environmental Response, Compensation, and Liability Act.

### **Anti-Backsliding**

Anti-backsliding is a provision in federal regulations CWA §303(d)(4); CWA §402(o); 40 CFR 122.44(l) that requires a reissued permit to be as stringent as the previous permit with some exceptions.

The permit complies with Anti-backsliding regulations.

### **Anti-Degradation**

Antidegradation policies ensure protection of water quality for a particular water body on a pollutant by pollutant basis to ensure Water Quality Standards are maintained to support beneficial uses such as fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as an Outstanding National Resource Water or Outstanding State Resource Water [10 CSR 20-7.031(3)(C)]. Antidegradation policies are adopted to minimize adverse effects on water.

The Department has determined that the best avenue forward for implementing the Anti-degradation requirements into the MS4 general permit is by requiring the appropriate development and maintenance of a Stormwater Management Program.

### **Application requirements**

Small MS4s (as defined under 10 CSR 20-6.200) are to apply and obtain a small MS4 General Permit or site-specific permit in accordance with 40 CFR 122.33 and 10 CSR 20-6.200(5).

### **Compliance and Enforcement**

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri CWL, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Dischargers of stormwater from regulated MS4s, as defined in the Missouri Stormwater Regulations 10 CSR 20-6.200 who do not obtain coverage under this or other Missouri general permits, or under a site-specific NPDES permit, will be in violation of the Missouri CWL and its implementing regulations and subject to civil penalties of up to \$10,000 per violation per day. For entities covered under a NPDES permit, failure to comply with any NPDES permit requirement also constitutes a violation of the Missouri CWL and its implementing regulations.

### **Permit Shield**

Missouri statute, §644.051.16, RSMo, states "The Department shall implement permit shield provisions equivalent to the permit shield provisions implemented by the U.S. Environmental Protection Agency pursuant to the Clean Water Act, Section 402(k), 33 U.S.C. Section 1342(k), and its implementing regulations, for permits issued pursuant to chapter 644."

CWA section 402(k) states "Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of sections 1319 and 1365 of this title, with sections 1311, 1312, 1316, 1317, and 1343 of this title, except any standard imposed under section 1317 of this title for a toxic pollutant injurious to human health. Until December 31, 1974, in any case where

a permit for discharge has been applied for pursuant to this section, but final administrative disposition of such application has not been made, such discharge shall not be a violation of (1) section 1311, 1316, or 1342 of this title, or (2) section 407 of this title, unless the Administrator or other plaintiff proves that final administrative disposition of such application has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application. For the 180-day period beginning on October 18, 1972, in the case of any point source discharging any pollutant or combination of pollutants immediately prior to such date which source is not subject to section 407 of this title, the discharge by such source shall not be a violation of this chapter if such a source applies for a permit for discharge pursuant to this section within such 180-day period."

### **Pesticide Rule**

The Department has developed a Pesticide General Permit #MOG-870000 for point source discharges resulting from the application of pesticides. This permit has been developed as a result of federal requirements under NPDES.

The general permit authorizes the discharge of pesticides that leave a residue in water when such applications are made into, over or near waters of the United States. The department has determined that entities most likely affected by this permit include public health entities, including mosquito or other vector control districts and commercial applicators that service this sector. Others potentially affected by this permit include resource and land management entities such as public and private entities managing public land, park areas and university campuses, as well as utilities maintaining easements and right-of-ways, golf courses and other large residential developments which maintain a large grounds area. In addition, permits may be required for applications involving pesticide use for agricultural related activities when pesticides are applied to crops grown in or near a water of the United States.

The Department is collaborating closely with the Missouri Department of Agriculture, which already administers the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) along with the Missouri Pesticide Use Act.

The permittee/facility is subject to the pesticide rule. To determine if a permit is required, please visit the Department's website. The thresholds listed in Table 1 of the pesticide general permit will assist in determining if a permit is required. If a permit is required, the permittee/facility shall apply for either the Pesticide General Permit or a site-specific pesticide permit from the Department.

### **Water Quality Standards**

As noted previously, the nature of the MS4 program is technology-based, which is in accordance with Section §402(p)(3)(B)(iii) of the CWA with the establishment of the technology-based standard MEP. Many in the MS4 community believe that MEP is the only standard applicable

for compliance determination, which for the most part (specifically for the six (6) minimum control measures, is correct). Given the litigious nature surrounding the “agreeability” of MS4 compliance with WQS, MS4 permits have been the subject of court cases for several years.

40 CFR 122.34(a)(1) clearly requires that the MS4 permit will require the MS4 permittee to, “...develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from your MS4 to the maximum extent practicable (MEP), to protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act.” While this regulation seems to be in contradiction to Section §402(p)(3)(B)(iii) of the CWA due to the fact that it appears to require the permittee to “...protect water quality” and “satisfy the appropriate water quality requirements...” it actually is not; however, has been mistakenly applied to require strict, immediate compliance with WQS even in previously issued Missouri MS4 Master General Permits.

As noted in 64 FR No. 235, “*The Court, did, however, disagree with the EPA’s interpretation of the relationship between CWA sections 301 and 402(p). The Court reasoned that MS4s are not compelled by section 301(b)(1)(C) to meet all State water quality standards, but rather the Administrator or the State may rely on section 402(p)(3)(B)(iii) to require such controls.*” The discussion continues with, “...*the 1996 Policy describes how permits would implement an iterative process using BMPs, assessment, and refocused BMPs leading toward attainment of water quality standards. The ultimate goal of the iteration would be for water bodies to support their designated uses...*” and “*EPA also believes the iterative approach toward attainment of water quality standards represents a reasonable interpretation of CWA section 402(p)(3)(B)(iii).*”

A break-down of 40 CFR 122.34(a) is given in 64 FR No. 235, as follows, “*The first component, reduction to the MEP, would be realized through implementation of the six minimum measures. The second component, to protect water quality, reflects the overall design objective for municipal programs based on CWA section 402(p)(6). The third component, to implement other applicable water quality requirements of the CWA, recognizes the Agency’s specific determination under the CWA section 402(p)(3)(B)(iii) of the need to achieve reasonable further progress toward the attainment of water quality standards according to the iterative BMP process, as well as the determination that State or EPA officials who establish TMDLs could allocate waste loads to MS4s, as they would other point sources.*”

#### **Part VI - 303(D) List, Total Maximum Daily Load (TMDL)**

Section 303(d) of the CWA requires that each state identify waters that are not meeting water quality standards. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) List helps state and federal agencies keep

track of waters that are impaired but not addressed by typical water pollution control programs. Federal regulations require permitting authorities to develop TMDLs to address impaired waters listed per Section 303(d) of the CWA. A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is impaired. Please visit the Department's website to determine if you are listed in an approved or established TMDL at: <http://dnr.mo.gov/env/wpp/tmdl/index.html>.

Federal regulation 40 CFR 122.34(a) establishes the requirements applicable to all MS4s with, *“Your NPDES MS4 permit will require at a minimum that you develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from 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.”* EPA translated this regulation into three parts in 64 FR No. 235, as follows, *“The first component, reductions to the MEP, would be realized through implementation of the six minimum measures. The second component, to protect water quality, reflects the overall design objective for municipal programs based on CWA section 402(p)(6). The third component, to implement other applicable water quality requirements of the CWA, recognizes the Agency's specific determination under CWA section 402(p)(3)(B)(iii) of the need to achieve reasonable further progress toward attainment of water quality standards according to the iterative BMP process, as well as the determination that State or EPA officials who establish TMDLs could allocate waste loads to MS4s, as they would to other point sources.”*

The above citation of 64 FR No. 235 clearly states that MEP is specific to the six (6) MCMs and clearly establishes that Wasteload Allocations (WLAs) are applicable to MS4s. However, unlike other traditional point sources that utilize treatment facilities, the EPA clearly indicated that attainment of the WLA is to be conducted via *“the iterative BMP process.”* Thus, requiring any condition for the attainment of water quality standards in addition to the MCMs is going beyond MEP but the process for attainment of the WLA is still achieved with BMPs using the iterative process of establishing BMPs, evaluating the BMPs, and refocusing on BMPs.

However, just because a WLA for any given pollutant(s) of concern (POC) has been established in a TMDL for a MS4, additional BMPs or modifications to BMPs for the six MCMs should not be required as a trigger action. Rather, the MS4 permittee subject to an effective and approved TMDL should first make a determination if the implementation of their MCMs is adequately meeting the requirements and assumptions of the TMDL. As noted in 64 FR No. 235, *“At this time, EPA determines that water quality-based controls, implemented through the iterative process today are appropriate for the control of such pollutants and will result in reasonable further progress towards the attainment of water quality standards.”* While potentially rare this does indicate that no further action may be necessary to implement the requirements and assumptions of the TMDL as the MS4 community may, through successful implementation to

the MEP for each of the MCMs, have already demonstrated “*reasonable further progress.*” This, rightfully so, places the burden of support on the MS4 community; however, in order for the MS4 community to continue operating only under the six MCMs, the determination of beneficial use re-attainment must be reviewed and timely approved by applicable program staff (i.e., the MS4 Team and Watershed Protection Section staff).

If the requirements and assumptions of the TMDL are not being met, then the MS4 will need to, at a minimum, develop BMPs that target the given POC with the goal or design for the reduction of the pollutant. Due to the nature of stormwater controls via the iterative process, subsequent determinations can and should be made by the MS4 community to determine if “*reasonable further progress*” has resulted in the attainment of the WLA.

In addition to the initial determination or additional BMPs as required in the MS4 general permit, integrated planning actions may be considered as actions taken to specifically restore a waterbody’s beneficial uses. Regardless, if the MS4 permittee uses integrated planning or BMPs design to reduce pollutants, other factors need to be considered in accordance with 64 FR No. 235, which states, “*If the permitting authority (rather than the regulated small MS4 operator) needs to impose additional or more specific measures to protect water quality, then that action will most likely be the result of an assessment based on a TMDL or equivalent analysis that determines sources and allocations of pollutant(s) of concern. EPA believes that the small MS4’s additional requirements, if any, should be guided by its equitable share based on a variety of considerations, such as cost effectiveness, proportionate contribution of pollutants, and ability to reasonably achieve Wasteload reductions. Narrative effluent limitations in the form of BMPs may still be the best means of achieving those reductions.*”

In addition to the above, the TMDL portion of the permit (Part 3) requires the development and implementation of a TMDL Assumption and Requirement Attainment Plan (ARAP). While the TMDL ARAP is not a Schedule of Compliance actions and schedules established in the TMDL ARAP will be subjected to the federal regulations on Schedules of Compliance [40 CFR 122.47]. Specifically if the development and implementation of the TMDL ARAP is to be conducted in a period of time extending one calendar year, then the permittee will be required to report annually for either the status of the development of the plan or for the implementation of the plan based on 40 CFR 122.47(a)(3)(ii).

Regarding the time period allowed for development of the TMDL ARAP (i.e., as soon as practicable not exceeding 30 months), the Department has determined the 30 month time period is appropriate as it allows the permittee the necessary time and flexibility that is needed to ultimately achieve attainment with the TMDLs assumptions and requirements. The Department has experience in the facilitation of an adaptive management plan, along with EPA Region 7, with a MS4 community that addressed the assumption and requirements of an applicable TMDL.

The time period to develop the adaptive management plan took more than 30 months, but the assumptions and requirements of the TMDL were more complex than other straight forward TMDLs. Thus, the 30 month maximum time period allows the permittee to determine or develop appropriate BMPs, measurable goals, funding sources, local votes, strategic planning, opportunity to engage interested parties and stakeholders, etc... However, it would be naïve to believe that all regulated MS4s could develop a plan in 30 months, which is why the permit also indicates that the permittee can request an extension to the 30 months.

Permittees seeking approval of the extension will need to provide appropriate justification of why the extension is needed, a revised time schedule of compliance, and reason for failing to meet the 30 month maximum time; however, the allowance of extending the time period beyond 30 months is not guaranteed.

**Stakeholder Outreach**

In an effort to improve overall effectiveness of the MS4 MOR04 permit renewal process and to maximize stakeholder input, the Department published a preliminary draft of this MS4 NPDES permit and conducted extensive outreach for stakeholders in the preparation of the draft MS4 NPDES permits. A listing of stakeholder meetings is as follows:

Meeting Location	Meeting Date	Number of attendees	Number of regulated MS4s represented

Additionally, the Department held small group workshops with municipal permittees in an effort to explain and gather feedback about proposed permit conditions. Notification of such workshops was provided via e-mail invitation to all Stormwater Coordinators and mayors in Missouri’s permitted municipalities. A listing of each workshop is below.

Workshop Location	Meeting Date	Number of attendees	Number of regulated MS4s represented

**Part VII – Administrative Requirements**

On the basis of preliminary staff review and applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to

issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the permit. The proposed determinations are tentative pending public comment.

**Public Meeting:**

A public meeting for this permit was held on

**Public Notice:**

The Department shall give public notice when a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest or because of water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and facility must be notified of the denial in writing.

The Department must give public notice of a pending permit or of a new or reissued Missouri State Operating Permit. The public comment period is a length of time not less than thirty (30) days following the date of the public notice, during which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed permit, please refer to the Public Notice page located at the front of this draft permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- ✓ The Public Notice period for this permit was from

**Date of Fact Sheet:**

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