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1. **COVERAGE UNDER THIS PERMIT**

1.1 Permit Area:

1.1.1 This permit covers all areas served by a Municipal Separate Storm Sewer System (MS4) for which the applicant is identified as the Continuing Authority.

1.2 Applicability:

1.2.1 This permit authorizes discharges of stormwater from regulated Small MS4s, as defined in 10 CSR 20-6.200. This permit also authorizes the discharge of stormwater commingled with flows contributed by process wastewater, non-process wastewater, or stormwater associated with industrial activity provided such discharges are authorized under separate National Pollutant Discharge Elimination System (NPDES) permits. The permittee, or co-permittee, is authorized to discharge under the terms and conditions of this general permit if the permittee:

1.2.1.1 Owns or operates a regulated Small MS4 as defined in 10 CSR 20-6.200; located fully or partially within an urbanized area as determined by the latest Decennial Census by the Bureau of Census or designated for permit authorization by the Missouri Department of Natural Resources (Department); and

1.2.1.2 Submits a general permit application in accordance with Section 2 of this permit.

1.2.2 The following are types of discharges authorized by this permit:

1.2.2.1 *Stormwater discharges*. This permit authorizes stormwater discharges to waters of the state from the regulated Small MS4s identified in Section 1.2.1, except as excluded in Section 1.3.

1.2.2.2 *Non-stormwater discharges.* The permittee is authorized to discharge the following non-stormwater sources provided the permitting authority has not determined these sources to be substantial contributors of pollutants to the permittee's MS4 that required a separate permit:

- Landscape irrigation and lawn watering,
- Rising groundwater,
- Uncontaminated groundwater infiltration (infiltration is defined as water other than wastewater that enters a sewer system, including sewer service connections and foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow),
- Uncontaminated pumped groundwater,
- Discharges from potable water sources,
- Foundation or footing drains,
- Air conditioning condensate,
- Springs,
- Uncontaminated water from crawl space pumps,
- Flows from riparian habitat and wetlands,
- Street wash water,
- Discharges or flows from emergency fire-fighting activities,
- Individual residential car washing, and
- Dechlorinated residential swimming pool discharges.

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1.3 Limitations of Coverage

1.3.1 *Non-stormwater Discharges*. The permittee, as defined herein, shall prohibit non-stormwater discharges into the MS4, except to the extent such discharges are regulated with a separate NPDES permit or as authorized by Section 1.2.2.2 above.

1.3.2 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.

1.4 Discharge Limitations

1.4.1 The permittee shall implement Best Management Practices (BMPs) via an iterative process 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.

1.4.2 The permittee shall implement and enforce a Stormwater Management Program (SWMP) 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, and in accordance with the Missouri Clean Water Law (MCWL) and it's implementing regulations under 10 CSR 20-6.200(5)(A)(1 – 6).

1.4.3 The permittee shall comply with all provisions and requirements contained in this permit and with their SWMP including plans and schedules developed in fulfillment of this permit.

1.4.4 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 via an iterative process to reduce pollutants to the MEP. Additionally, the Department may require the regulated MS4 to submit an application for an alternative general permit.

1.4.5 Newly designated regulated 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. AUTHORIZATION TO DISCHARGE AND APPLICATION REQUIREMENTS

2.1 Authorization to discharge stormwater from a regulated small 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. In addition to the application, permittees shall submit their written SWMP including implementation schedule and items listed under Section 4.1 of this operating permit.

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2.1.1 Each submitted SWMP shall be subjected to a review and rating. If the Department approves the SWMP, it will be presumed to be affordable for the permittee. However, if the Department disapproves the SWMP and requires any additional or different controls or expenses, then the Department will conduct an affordability analysis in support of the disapproval for the permittee. However, permittees may waive the requirement of the Department to conduct an affordability analysis at any time.

2.2 The permittee shall submit their application on the latest version of the application form(s). The application shall be signed and dated by an authorized signatory in accordance with section 6.17 of this operating permit.

2.3 Existing regulated permittees seeking renewal of their MS4 permit shall submit a renewal application within 30 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.

2.4 Recently 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.

3. SPECIAL CONDITIONS FOR TOTAL MAXIMUM DAILY LOADS

3.1 <u>MS4s Subject to Total Maximum Daily Loads (TMDL)</u>

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

3.1.2 The permittee shall develop a TMDL Assumptions and Requirement Attainment Plan (ARAP) to address the TMDL's assumptions and requirements where applicable. The TMDL ARAP shall be incorporated into the SWMP and include, at a minimum, the following:

3.1.2.1 A process to identify potential sources of the pollutants(s), BMPs to be implemented to address the sources within their MS4, a prioritization of those actions, and a schedule including beginning and ending milestones by 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 term of this operating permit (i.e., 5 years) as attainment can take years or even multiple permit terms;

3.1.2.2 BMPs 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.

3.1.2.3 Measurable goals shall be established for each BMP or in conjunction with multiple BMPs. 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. Measureable 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. If applicable, measurable goals shall also utilize interim and completion milestone dates, and a periodic frequency of measurement to document progress. It is recommended that interim and final milestone dates are established with a format of month and

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year. If the format of month and year cannot be utilized, the permittee shall ensure that schedules have the minimum format of 1st, 2nd, 3rd, 4th, and 5th year of the operating permit.

3.1.2.4 An iterative process to be utilized by the permittee that documents 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.

3.1.3 If the permittee is subject to section 3.1.1, then 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 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 MS4 Coordinator for review and rating at Water Protection Program, P.O. Box 179, Jefferson City, MO 65102. The deadline for the TMDL ARAP may be extended by request of the permittee and written approval by the Department.

3.1.3.1 The permittee 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 by request of the permittee and with written approval by the Department. The annual status report shall be submitted to the Department's Water Protection Program, MS4 Coordinator at P.O. Box 176, Jefferson City, MO 65102.

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

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

3.1.3.4 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 with the permittee's SWMP, and made available to the Department or EPA upon request.

3.1.4 If the permittee is subject to section 3.1.1 of this operating permit and has an approved TMDL ARAP, then the permittee shall provide a summary that lists the BMPs, the expected results of the BMPs, how the measurable goals are utilized to document effectiveness of the BMPs, and the status of the measurable goal in the MS4 SWMP Report.

3.1.5 If the permittee is subject to section 3.1.1 of this operating permit, then the permittee 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. If the permittee is to provide a demonstration

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that no additional controls are needed, they shall contact the Water Protection Program's MS4 Coordinator to begin the process.

3.1.6 If the permittee is subject to section 3.1.1 of this operating permit, then the permittee may submit an Integrated Plan as an approach for the implementation of a TDML's assumptions and requirements. Review and rating of an Integrated Plan is subject to the same requirements of sections 3.1.2 through 3.1.3 of this permit. If the permittee is to utilize an Integrated Plan, they shall contact the Water Protection Program's MS4 Coordinator to begin the process.

3.1.7 Permittees subject to existing TMDL Assumptions and Requirements shall submit their plan and status of implementation to the Department with the first MS4 SWMP Report required by this permit. Existing plans shall be subject to the same conditions listed in items 3.1.2.1; 3.1.2.2; 3.1.2.3; 3.1.2.4; 3.1.3.1; 3.1.3.2; 3.1.3.4; 3.1.4; 3.1.5; 3.1.6.

3.1.8 If the EPA approved or established TMDL indicates that the permittee does not cause or contribute to the impairment, then the permittee is not required to develop and implement any action contained in Part 3 of this permit. .

4. STORMWATER MANAGEMENT PROGRAM (SWMP)

4.1 <u>The SWMP document shall include:</u>

4.1.1 The following information for each of the six (6) minimum control measures described in Section 4.2 of this permit:

4.1.1.1 BMPs developed or designed with a purpose of reducing stormwater pollution. Each BMP shall contain a description of the BMP, the purpose of the BMP, and the expected result of the BMP.

4.1.1.2 Measurable goals shall be established for each BMP or in conjunction with multiple BMPs. 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. 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. If applicable, measurable goals shall also utilize interim and completion milestone dates, and a periodic frequency of measurement to document progress. It is recommended that interim and final milestone dates are established with a format of month and year. If the format of month and year cannot be utilized, the permittee shall ensure that schedules have the minimum format of 1st, 2nd, 3rd, 4th, and 5th year of the operating permit.

4.1.1.3 The person primarily responsible for the SWMP and the person(s) responsible for each minimum control measure if different from the primary responsible person; and

4.1.1.4 An iterative process to be utilized by the permittee that documents 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.

4.1.2 Newly designated regulated MS4s shall fully implement each Minimum Control Measures in accordance with their approved SWMP within five (5) years of receipt of its MS4 operating permit.

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4.1.3 Within one (1) year of the effective date of this permit, the permittee shall revise their SWMP, if necessary, and submit the SWMP to the Water Protection Program's MS4 Coordinator for review and rating.

4.2 Minimum Control Measures – The six (6) Minimum Control Measures that shall be included in the permittee's SWMP document are:

4.2.1 ***Public Education and Outreach of Stormwater Impacts***

4.2.1.1 The permittee shall implement a public education program to distribute educational material to the community or conduct equivalent outreach activities about the impact of stormwater discharges on waterbodies and steps the public can take to reduce pollutants in stormwater runoff. As part of the SWMP, the Public Education and Outreach Program shall include the following information at a minimum:

4.2.1.1.1 A plan on how target audiences are identified for the public education program who are likely to have significant stormwater impacts (including commercial and industrial entities):

4.2.1.1.2 A plan to inform individuals and households about steps they can take to reduce stormwater pollution;

4.2.1.1.3 A plan to inform individuals and groups on how to become involved in the SWMP (with activities such as local stream and lake restoration activities);

4.2.1.1.4 The outreach strategy, including the mechanisms (e.g., printed brochures, newspapers, media, workshops, etc…) to reach target audiences; and

4.2.1.1.5 The pollutant(s) sources that the permittee's education program is designed to address.

4.2.2 ***Public Involvement and Participation***

4.2.2.1 The permittee shall implement a public involvement/participation program that provides opportunities for public involvement in the development and oversight of the permittee's SWMP, and provides opportunities for public involvement of the permittee's renewal application. The public involvement/participation program shall, at a minimum, include the following:

4.2.2.1.1 A public notice period to allow the public to review the SWMP and renewal application prior to the submission of the SWMP and renewal application to the Department. It is recommended that the public review period is at least 10 (ten) business days;

4.2.2.1.2 A notice of public meeting, if needed, regarding the SWMP and renewal application. It is recommended that the notice should be at least 72 hours prior to the meeting;

4.2.2.1.3 A plan to target all potentially affected stakeholder groups, including but not limited to, commercial and industrial businesses, trade associations, environmental groups, homeowner associations and educational organizations;

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4.2.2.1.4 If the permittee utilizes a stormwater management panel/committee, then the permittee shall provide opportunities for citizen representatives on the panel/committee;

4.2.2.1.5 If appropriate, volunteer monitoring or stream/lake clean-up activities; and

4.2.2.1.6 Provide opportunities and work with citizen volunteers willing to educate others about the permittee's SWMP.

4.2.4.2.3 ***Illicit Discharge Detection and Elimination***

4.2.3.1 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 regulated Small MS4. As part of the SWMP document, the permittee's illicit discharge detection and elimination program shall include the development and implementation of, at a minimum:

4.2.3.1.1 A storm sewer map showing the location of all constructed outfalls and the names and locations of all receiving waters of the state that receive discharges from those outfalls. The permittee shall describe the sources of information used for the map(s), and how the permittee plans to verify the outfall locations with field surveys. If already completed, the permittee shall describe how the map was developed and how the map will be regularly updated. The permittee shall make the map information available to the Department upon request;

4.2.3.1.2 To the extent allowable under state or local law an effective prohibition, through ordinance or other regulatory mechanism, of non-stormwater discharges into the permittee's storm sewer system and implementation of appropriate enforcement procedures and actions. The permittee shall identify the mechanism (ordinance or other regulatory mechanism) the permittee will use to effectively prohibit illicit discharges into the Small MS4. If the permittee needs to develop this mechanism, describe the permittee's plan and implementation schedule. If the permittee's ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with the permittee's SWMP;

4.2.3.1.3 A plan and implementation schedule to detect and address non-stormwater discharges, including discharges from illegal dumping and spills, to the permittee's system;

4.2.3.1.4 A dry weather field screening plan for non-stormwater flows and field tests of selected chemical parameters as indicators of discharge sources. The plan shall also address on-site sewage disposal systems that flow into the permittee's storm drainage system;

4.2.3.1.5 Procedures for locating priority areas which include areas with higher likelihood of illicit connections (e.g., areas with older sanitary sewer lines) or ambient sampling to locate impacted reaches;

4.2.3.1.6 Procedures for tracing the source of an illicit discharge, including the specific techniques the permittee will use to detect the location of the source;

4.2.3.1.7 Procedure for eliminating the illicit discharge;

4.2.3.1.8 A plan to ensure through appropriate enforcement procedures, including fines, and actions that the permittee's illicit discharge ordinance (or other regulatory mechanism) is implemented;

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4.2.3.1.9 A plan to inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste. The permittee shall describe how this plan will coordinate with all other minimum control measures, monitoring, and TMDL implementation (if applicable);

4.2.3.1.10 A plan to address non-stormwater discharges or flows (i.e., illicit discharges) the permittee identifies as significant contributors of pollutants to the regulated Small MS4 including authorized non-stormwater discharges contained in Section 1.2.2.2 of this permit.

4.2.4 ***Construction Site Stormwater Runoff Control***

4.2.4.1 The permittee shall develop, implement and enforce a program to reduce pollutants in any stormwater runoff to their regulated Small 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 SWMP, the permittee's construction site stormwater runoff control program shall include the development and implementation of, at a minimum:

4.2.4.1.1 An ordinance or other regulatory mechanism to require operators to implement erosion and sediment control BMPs at construction sites; to include sanctions designed to ensure compliance, to the extent allowable under state or local law; and

4.2.4.1.1.1 If the permittee needs to develop this mechanism, the permittee shall describe the plan and scheduled implementation. If the permittee's ordinance or regulatory mechanism is already developed, the permittee shall include a copy of the relevant sections with the permittee's SWMP.

4.2.4.1.2 Requirements for construction site operators to control construction-site waste that may cause adverse impacts to water quality, such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste;

4.2.4.1.3 Procedures for the permittee to consider and review all pre-construction site plans for potential water quality impacts;

4.2.4.1.4 Procedures for the permittee receive and consider information submitted by the public, including coordination with the permittee's public education and involvement programs;

4.2.4.1.5 Procedures for the permittee to inspect sites and enforce control measures, including prioritization of site inspection; and

4.2.4.1.5.1 The permittee shall inspect (or require inspection of) any structure that functions to prevent pollution of stormwater or to remove pollutants from stormwater and ensure that all BMPs are implemented and effective; and a monitoring plan with implementation schedules shall be referenced in the SWMP document.

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4.2.4.1.6 A plan designed to ensure compliance with the permittee's erosion and sediment control regulatory mechanism, including the sanctions and enforcement mechanisms the permittee will use to ensure compliance and procedures for when certain sanctions will be used. Possible sanctions include non-monetary penalties (such as stop work orders), fines, bonding requirements, and/or permit denials for non-compliance.

4.2.5 ***Post-Construction Stormwater Management in New Development and Redevelopment***

4.2.5.1 The permittee shall 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. As part of the SWMP document, the post-construction runoff control program shall include the following information, at a minimum:

4.2.5.1.1 An ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law. If the permittee needs to develop a mechanism, the permittee shall describe the plan and a schedule for implementation. If the permittee's ordinance or regulatory mechanism is already developed, the permittee shall include a copy of the relevant sections with the SWMP document;

4.2.5.1.2 A plan to ensure adequate long-term operation and maintenance of selected BMPs, including, as appropriate, types of agreements between the permittee and other parties such as post-development landowners or regional authorities;

4.2.5.1.3 Strategies to minimize water quality impacts, which include a combination of structural and/or non-structural BMPs appropriate for the permittee's community, including but not limited to the assessment of site characteristics at the beginning of the construction site design phase to ensure adequate planning for stormwater program compliance. The goal of this approach is to arrive at designs that protect sensitive areas, minimize the creation of stormwater pollution, and utilize BMPs that 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;

4.2.5.1.4 An inspection plan with implementation schedules for post-construction BMPs; and

4.2.5.1.5 The permittee shall inspect or require the inspection of post-construction stormwater BMPs to ensure that all BMPs are implemented and effective.

4.2.6 ***Pollution Prevention/Good Housekeeping for Municipal Operations***

4.2.6.1 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 SWMP, the pollution prevention/good housekeeping program shall include the following information, at a minimum:

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4.2.6.1.1 A government employee training program to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance. The permittee shall describe any existing, available material the permittee plans to use such as those available from EPA, the state, or other organizations. The permittee shall describe how this plan will coordinate with all other minimum control measures, monitoring and TMDL implementations where applicable;

4.2.6.1.2 A list of all municipal operations that are impacted by this operation and maintenance program. The permittee shall also include a list of industrial facilities that the permittee owns or operates that are subject to NDPES permits for discharges of stormwater associated with industrial activity that ultimately discharge to the permittee's MS4. The permittee shall include the permit number or a copy of the No Exposure Exemption Certification (if applicable) for each facility. NPDES permitted facilities not owned or operated by the permittee are not required to be part of the list;

4.2.6.1.3 Maintenance BMPs, maintenance schedules, and long-term inspection procedures for controls to reduce floatable and other pollutants to the permittee's regulated Small MS4;

4.2.6.1.4 Controls for reducing or eliminating the discharge of pollutants from street, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer station, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas the permittee operates;

4.2.6.1.5 Procedures for the proper disposal of waste removed from the permittee's Small MS4 and areas of jurisdiction, including dredged material, accumulated sediments, floatables and other debris;

4.2.6.1.6 Procedures to assess impacts of water quality for new flood management projects, if applicable. Flood management projects are those projects developed or designed to reduce flooding.

4.2.6.2 All paints, solvents, petroleum products and petroleum waste products (except fuels) under the control of the permittee shall be stored so that these materials are not exposed to stormwater. 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. 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.

4.2.7 <u>BMP Substitutions</u>

4.2.7.1 BMPs and methods prescribed in Sections 4.2.1.1.1 through 4.2.1.1.5 (Public Education and Outreach) , Sections 4.2.2.1.1 through 4.2.2.1.6 (Public Involvement and Participation), Sections 4.2.3.1.3 through 4.2.3.1.10 (Illicit Discharge Detection and Elimination), and Sections 4.2.6.1.4 through 4.2.6.1.6 (Pollution Prevention/Good Housekeeping for Municipal Operations) may be substituted with alternative BMPs under the following conditions:

4.2.7.1.1 The substitutions are reasonably as protective as those they replace;

4.2.7.1.2 Substitutions and methods are identified in the SWMP, along with rational for substitutions; and

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4.2.7.1.3 Progress on compliance with applicable minimum control measure(s) via substitution(s) is reported in the MS4 SWMP Report.

4.3 Sharing Responsibility

4.3.1 Implementation of one or more of the minimum measures may be shared with another governmental entity or the governmental entity can assume responsibility for the measure via the co-permittee option if:

4.3.1.1 The co-permittee has a MS4 located within or partially within an Urbanized Area as determined by the most recent Bureau of Census, which can include, but is not limited, to: municipalities, county, military bases, large hospitals, prison complexes, universities, sewer districts, and highway departments;

4.3.1.2 The co-permittee, in fact, implements the control measure;

4.3.1.3 The particular control measure, or component of that measure, is at least as stringent as the corresponding permit requirements; and

4.3.1.3 The co-permittee agrees to implement the control measure on the permittee's behalf:

4.3.1.3.1 Written acceptance of this obligation is required;

4.3.1.3.2 This obligation shall be maintained as part of the documented description of the permittee's SWMP;

4.3.1.3.3 If the co-permittee agrees to report on the control measure, the permittee shall supply the co-permittee with the reporting requirements contained in Section 5.3 of this permit.

4.3.1.3.4 If the co-permittee fails to implement the control measures on the permittee's behalf, then the co-permittee shall remain liable for any discharges due to that failure to implement. Additionally, the Department may require corrective actions(s), require an application for a site-specific permit, or require the co-permittee to apply and obtain their own Small Phase II MS4 general permit.

4.4 Reviewing and Updating the SWMP

4.4.1 The permittee shall conduct an annual review of their SMWP in conjunction with preparation of the MS4 SWMP Report required under Section 5.3;

4.4.2 The permittee may change the SWMP during the life of the permit in accordance with the following procedures:

4.4.2.1 Changes adding components, controls, or requirements to the SWMP may be made at any time upon written notification to the Department; or through the MS4 SWMP Report if changes are minor or through a timely resubmittal of the SWMP if major changes are needed;

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4.4.2.2 Changes replacing an ineffective or infeasible BMP specifically identified in the SWMP with an alternate BMP may be made at any time and reported to the Department through the MS4 SWMP Report or a timely resubmittal of the SWMP if major changes are needed. The permittee's modifications shall include a documentation of the following:

4.4.2.2.1 An analysis of why the BMP is ineffective or infeasible (including cost prohibitive);

4.4.2.2.2 Expectations on the effectiveness of the replacement BMP; and

4.4.2.2.3 An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.

4.4.2.3 The permittee shall give advanced notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

4.4.3 Changes to the SWMP requested by the Department must be made in writing, set forth a time schedule for the permittee to develop the changes, and offer the permittee opportunities to propose alternative program changes to meet the objective of the requested modification. All changes required by the Department will be made in accordance with 10 CSR 20-6.200. The Department may require changes to the SWMP as needed to:

4.4.3.1 Address impacts on receiving water quality caused or affected by discharges from the MS4.

4.4.3.2 Include more stringent requirements necessary to comply with new federal or state statutory or regulatory requirements; or

4.4.3.3 Include such other conditions deemed necessary by the Department to comply with the goals and requirements of the MCWL.

4.4.4 In the event of a transfer of ownership, change in Continuing Authority, or change in responsibility for SWMP implementation; the permittee shall implement the SWMP 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:

4.4.4.1 Within 90 days of a transfer of ownership, change of continuing authority, or change in responsibility for SWMP implementation, the permittee shall submit a revised plan, if necessary, for implementing the revised SWMP on all affected areas. The plan shall include revised schedules for implementation. Information on all new annexed areas and any resulting updates required to the SWMP shall be included in the MS4 SWMP Report.

4.4.5 Addition of components, controls or requirements by the permittee(s) and replacement of an ineffective or infeasible BMP implementing a required component of the SWMP with an alternate BMP expected to achieve the goal of the original BMP shall be considered minor changes to the SWMP and not a modification to this permit.

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5. MONITORING, RECORDKEEPING, AND REPORTING

5.1 Monitoring

5.1.1 The permittee 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 SWMP 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. Monitoring data shall include, if applicable, the below information:

5.1.1.1 All calibrations and maintenance records;

5.1.1.2 All original strip chart recordings for continuous monitoring instrumentation;

5.1.1.3 The date, location, and time of sampling or measurement;

5.1.1.4 The individual(s) who performed the sampling or measurements;

5.1.1.5 The date(s) analyses were performed;

5.1.1.6 The individual(s) who performed the analyses;

5.1.1.7 The analytical techniques or methods used; and

5.1.1.8 The results of such analyses.

5.1.2 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

5.2.1 The permittee shall retain records of all activities requiring recordkeeping by the SWMP, 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.

5.2.2 The permittee shall retain the most recent version of their SWMP at a reasonable location accessible to the Department.

5.2.3 The permittee shall submit the items required under Part 5 – MONITORING, RECORDKEEPING, REPORTING of this permit, including a copy of the permit, SWMP, or application upon written request by the public.

5.2.3 The permittee shall submit the items contained in Sections 5.2.1 and 5.2.2 of this permit upon request to the Department. The permittee shall retain a written description of the SWMP required by this permit (including a copy of the permit) at a location accessible to the Department.

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5.2.4 The permittee shall submit the items contained in Section 5.2.1 and 5.2.2 of this permit, information and/or application, and description of the SWMP upon written request by the public.

5.3 MS4 SWMP Report

5.3.1 The permittee shall submit MS4 SWMP Reports containing, at a minimum:

5.3.1.1 Information regarding progress toward achieving the statutory goal of reducing the discharge of pollutants to the MEP;

5.3.1.2 The status of the MS4's compliance with permit conditions;

5.3.1.3 Assessment(s) of the appropriateness of identified BMPs and corresponding measureable goals for each Minimum Control Measure;

5.3.1.4 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;

5.3.1.5 A summary of the TMDL ARAP, if applicable, containing the implementation status of BMPs and measurable goals specific to the TMDL Assumptions and Requirement Attainment Plan or progress toward implementing the schedule for implementation of the TMDL Assumptions and Requirement Attainment Plan. The summary shall also include any changes to BMPs and corresponding measurable goals;

5.3.1.5.6 If the permittee is utilizing a Department approved integrated planning process, then the permittee shall provide a summary of the status of the integrated plan incorporated with the TMDL ARAP;

5.3.1.7 A summary of the stormwater activities the permittee plans to undertake during the next reporting cycle (including an implementation schedule);

5.3.1.8 Any proposed changes to the permittee's SWMP, including changes to any identified BMPs or measureable goals that apply to the SWMP; and

5.3.1.9 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.

5.3.2 The MS4 SWMP Report shall contain the above information for previously unreported calendar year(s). The MS4 SWMP Report shall be submitted based on the schedule below:

Report Frequency	**Report Due Dates**	**Applicability**
Annual	February 28th each year*	Newly designated MS4s, MS4s subject to TMDLs
Biennial	February 28th odd years only**	Existing MS4s not subject to TMDLs

* - Annual reports will continue to be due every year on February 28th after expiration of this permit until the permit is renewed.

** - Biennial reports will continue to be due every odd number year on February 28th after expiration of this permit until the permit is renewed.

5.3.3 Annual MS4 SWMP Reports shall contain all required information from January 1st to December 31st each year. Biennial MS4 SWMP Reports shall contain all required information from January 1st of the beginning year to December 31st of the immediate following year.

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5.3.4 Permittees shall submit the MS4 SWMP Reports on the Department approved, *MS4 STORMWATER MANAGEMENT PLAN (SWMP) REPORT* (Form MO 780-1846).

5.3.5 If approved by the Department, permittees may submit the MS4 SWMP Report using an alternative report format.

6. STANDARD PERMIT CONDITIONS

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

6.2 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;

6.3 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;

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

6.4.1 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;

6.4.2 Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

6.4.3 Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

6.4.4 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.

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

6.6 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.

6.7 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;

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6.8 Duty to Reapply. 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 30 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)(E) and subsequent amendments;

6.9 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)(E) 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 30 days prior to the expiration date, will automatically remain covered by the continued permit until the earlier of:

6.9.1. 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;

6.9.2. Notice of termination;

6.9.3 Issuance of a site-specific permit or alternative general permit for MS4 discharges; or

6.9.4. 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.

6.10 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 Missouri CWL or the Federal CWA. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory.)

6.11 Procedures for Modification or Revocation.

6.11.1 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);

6.11.2 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;

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

6.11.3.1 The permittee is not in compliance with the conditions of this general permit; or

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

6.11.4 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.

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6.12 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.

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

6.14 Duty to Provide Information. The permittee shall furnish to the department, within a reasonable 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;

6.15 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 ten thousand dollars, 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;

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

6.17 Signatory Requirements.

6.17.1 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; and

6.17.2 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:

6.17.2.1 The authorization is made in writing by a person designated in Section 6.17.1 of this permit;

6.17.2.2 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);

6.17.2.3 The written authorization is submitted to the Director; and

6.17.2.4 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.

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Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
PHASE II SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
MO-R040000
MASTER GENERAL PERMIT

The Federal Water Pollution Control Act ("Clean Water Act or CWA" Section 402 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. Permits in Missouri are issued by the Director of the Missouri Department of Natural Resources (department) under an approved program, operating in accordance with federal and state laws (Federal CWA and Missouri Clean Water Law or CWL Section 644 as amended). NPDES operating permits are issued for a period of five (5) years unless otherwise specified.

The purpose of a fact sheet is to give the reader pertinent information regarding the applicable regulations, rationale for the development of the NPDES Missouri State Operating Permit (operating permit), and the public participation process for operating permit listed below.

A fact sheet is not an enforceable part of an operating permit.

This fact sheet is for a 2015 renewal of Master General Permit MOR040000 for regulated Small Municipal Separate Storm Sewer Systems (MS4s) and has been significantly modified to better provide justification to the terms and conditions of the MS4 general permit MOR040000 due to comment received during the October 31, 2014 to December 31, 2014, public notice period.

Part I - Facility Information

The following MS4 facility information should appear on the certification page of the General Permit Covered Facility operating permit. If the below information listed on the certification page is not correct, please contact the appropriate Regional Office on how to correct the information. This may include an operating permit modification application along with application fee.

- NPDES Permit Number
- Facility Name/Address
- Owner's Name/Address
- Department's Regional office(s) the MS4 is located
- Missouri County or Counties the MS4 is located
- MS4 SIC code and NAICS code
- Facility Description

Part II – Permitted Features

A NPDES Permitted Feature is a term borrowed from the Department's Clean Water Information System (MoCWIS), which is typically a three digit code used to describe if the point source location is an outfall, monitoring location, well, internal monitoring location, stormwater outfall, etc.

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)(C)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 10 CSR 20-2.010(54), "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."

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)]

This permit allows regulated MS4s to discharge stormwater to the following waters, depending on location of the regulated MS4: Missouri or Mississippi River, lakes or reservoirs, losing streams, metropolitan no-discharge waters, special streams, subsurface waters and other waters of the state.

Part III - Rationale and Derivation of Limitations & Permit 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/endangered/. 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.gove/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.

This operating permit conforms with anti-backsliding in accordance with CWA §402(o)(2)(B)(ii), which states, "The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B) of this section." However, while this is a true statement, the department believes this operating permit does not backslide as it is more protective than the previous Master General Permit for Phase II

Small MS4 (previous general permit). Regardless, the discussion in support of CWA §402(o)(2)(B)(ii) is given below.

The previous general permit contained several terms and conditions regarding water quality standards, which were incorrectly established, unenforceable and not in keeping with applicable federal and state statutes and regulations. Specifically, section 1.3.6 established that the permit did not authorize "discharges that cause or contribute to a violation of instream water quality standards." Section 3.1.2 established, "The permittees SWMP document required under section 4 shall include a description of how the permittee's program will control the discharge of measurable pollutants of concern and ensure the permittee's discharge will not cause or contribute to instream exceedances of water quality standards." Section 3.1.3.7 established, "The permittee shall continue meeting the requirements of 3.1.3.4 through 3.1.3.7 for this permit duration until the department determines WLAs are being met or that water quality standards are being met." Additionally, section 4.1.4 requires the permittee to, "implement a program designed to protect water quality in potentially affected waters and ensure that the permitted activities do not cause a violation of the Water Quality Standards." Finally, under section 4.1.4.1, the permit establishes, "Discharge to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria."

Federal regulation 40 CFR 122.34(a) states, "Your NPDES MS4 permit will require at a minimum that you develop, implement, and enforce a stormwater management program 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…" It is believed (i.e., not documented in the fact sheet) the previous operating permit was issued under the concept that "to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act" was to require strict and immediate compliance with both numeric and narrative Missouri's Water Quality Standards (WQS).
As noted in the *1999 National Pollution Discharge Elimination System Regulations for Revisions of Water Pollution Control Program Addressing Storm Water Discharges* (64 FR No. 235), "For this reason, today's rule specifies that the 'compliance target' for the design and implementation of municipal storm water control program is 'to reduce the pollutants to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the CWA'. The first component, reduction to the MEP, would be realized through the 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."

As noted above in 64 FR No. 235, 40 CFR 122.34(a), specifies the "compliance target" (i.e., the goal, what to aim for, etc.…) is MEP, protection of water quality, and to satisfy the appropriate water quality requirements of the CWS. Additionally, it establishes that the phrase "to protect water quality" reflects the overall design objective for the municipal program, which is in contrast to the previous general permit as it established water quality shall not be violated rather than what to set goals to achieve (i.e., as a design objective). This is subsequently supported with the third portion of 40 CFR 122.34(a), "to satisfy the appropriate water quality requirements of the CWA" as 64 FR No. 235 clearly establishes that this is achieved via reasonable further progress toward attainment of water quality standards according to the iterative process (i.e., the process of establishing BMPs, evaluating the BMPs, and refocusing on BMPs). The phrase, "via reasonable further progress toward attainment of water quality standards" establishes (1) that water quality is the goal, but more importantly (2) there is a process that allows the permittee to reach attainment with water quality, which is "reasonable further progress." When the previous general operating permit established that violation of water quality were not permitted and that the permittee could not exceed numeric and narrative water quality standards, it removed the ability of the permittee to utilize the iterative process and reasonable further progress.

Additionally, the previous general permit's requirement to not violate WQS without the establishment of numeric limitations is not in keeping with 40 CFR 122.44(d). Specifically, the previous general permit did not allow the specific MS4s to be subject to reasonable potential in accordance with 122.44(d)(ii). Rather, the previous operating permit skips the requirement under 40 CFR 122.44(d)(1)(ii) by assuming the permitting authority has determined the discharges already cause or have reasonable potential to cause or contribute to in-stream excursions above the allowable ambient concentrations of Missouri's WQS. Additionally, the permit fails to establish required numeric

effluent limitations per 40 CFR 122.44(d)(1)(iii) and (iv) when it required compliance with numeric water quality standards.

The previous general permit was also in contrast with Missouri's CWL §644.051.4, which states, "…The director, in order to effectuate the purposes of sections 644.006 to 644.141, shall deny a permit if the source will violate any such acts, regulations, limitations or standards or will appreciably affect the water quality standards or the water quality standards are being substantially exceeded, unless the permit is issued with such conditions as to make the source comply with such requirements within an acceptable time schedule." The previous operating permit was not in keeping with this statute as it failed to be issued with conditions to make the source comply with such requirements (i.e., numeric effluent limits) and within an acceptable time schedule.

Additionally, 64 FR No. 235 establishes, "Because the six measures representing a significant level of control if properly implement, EPA anticipates that a permit for regulated small MS4 operator implementing the six minimum control measures will be sufficiently stringent to protect water quality, including water quality standards, so that additional, more stringent and/or more prescriptive water quality based effluent limitations will be unnecessary." While this places responsibility on the permittee to successfully implement the six MCMs in accordance with 40 CFR 122.34(a), it also places a responsibility onto the NPDES authority to ensure that the MS4 permit establishes clear conditions in the permit to ensure that the MS4 is implementing the six minimum control measures successfully. Thus, a portion of the increased protection comes from simplifying terms and conditions so as to provide clear mechanism for implementing 40 CFR 122.34(a) and (b).

One set of revisions to the operating permit requires the permittee to clearly document the purpose or rather expected result of the BMP. This is the first step in the process of reducing pollutants to the MEP as it places more emphasis on BMP selection and provides more clarity to the permittee when determining measurable goals, which is the second step in reducing pollutants to the MEP. The evaluation of BMPs is just as important as the actual mechanism to reduce pollutants. Without knowing the effectiveness of BMPs, permittees cannot achieve MEP. Likewise, without knowing the effectiveness of BMPs, permittees have a greater potential to mismanage funding for BMPs. Meaning, BMPs that are not effectively evaluated may be draining the permittee's stormwater funds on an ineffective BMP, which places a significant hurdle in the attainment of MEP.

As noted above, this operating permit requires the permittee to develop/design BMPs and conduct evaluations of these BMPs. In addition, this operating permit requires the permittee to develop and implement an iterative process (please see the Iterative Process portion of this fact sheet). Without the iterative process in place, which is a process to replace ineffective BMPs, permittees cannot use reasonable further progress. Reasonable further progress is the process that, by design, replaces ineffective BMPs with effective BMPs, which in time become more protective of water quality; thus, ensuring the requirement under 40 CFR 122.34(a) are continued beyond protection of water quality and satisfaction of the Clean Water Act due to the continued reduction of pollutants to the MEP.

While the above permit requirements, by themselves, are more protective than the previous general permit, this operating permit establishes additional steps on the department that were not previously required. This operating permit requires the department to review and rate (i.e., approve or disapprove) the SWMP, which is the real mechanism of MEP. This is due to the fact that this operating permit establishes the minimum framework but places responsibility onto the permittee to develop and implement BMPs in accordance with 40 CFR 122.34(a) and ultimately section 402(p)(3)(B)(iii) of the CWA (i.e., MEP) to the best of their ability, which includes cost. By conducting the review and rating of the SWMP, the department is ensuring that the permittee is meeting the requirements of 40 CFR 122.34(a); however, SWMP will not be reviewed prior to this operating permit being issued due to changes in this permit will give cause for SWMPs to be revised and resubmitted for review and rating.

ANTI-DEGRADATION:

Anti-degradation consists of policies designed to ensure protection of water quality for a particular waterbody where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters. Anti-degradation plans are adopted by each state to minimize adverse effects on water.

As per 10 CSR 20-7.031(2)(D), the three (3) levels of protection provided by the anti-degradation policy in subsections (A), (B) and (C) of this section shall be implemented according to procedures developed by the department. On April 20, 2007, the Missouri Clean Water Commission approved "Missouri Anti-degradation Rule and Implementation Procedure" (Anti-degradation Rule), which is applicable to new or upgraded/expanded facilities.

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 SWMP. Section 4.1 of the permit directs the permittee to identify reasonable and effective BMPs in the SWMP, document the decision process for each minimum control measure, include a rationale statement for each BMP and measurable goal defined, provide an implementation schedule and develop a plan to evaluate program compliance, appropriateness of identified BMPs and progress towards achieving identified measurable goals. This selection and documentation of appropriate control measures will then serve as the analysis of alternatives and fulfill the requirements of the Antidegradation Rule and Implementation Procedure 10 CSR 20-7.031(3) and 10 CSR 20-7.015(9)(A)5.

Any facility seeking coverage under this permit, which undergoes expansion or discharges a new pollutant of concern, must update their SWMP and select new BMPs that are reasonable and cost effective. Facilities seeking coverage under this permit are required to develop a SWMP that includes this analysis and documentation of appropriate BMPs. Renewal of coverage for a facility requires a review of the SWMP to assure that the selected BMPs continue to be appropriate.

Adequate implementation of BMPs and terms and conditions described in this permit satisfies anti-degradation requirements. Compliance with the requirements established in this permit for the protection of General Criteria, along with the evaluation and implementation of BMPs as documented in the SWMP, meets the requirements of Missouri's Antidegradation Review [10 CSR 20-7.031(3) and Table A and 10 CSR 20-7.015(9)(A)5.]

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 Small MS4s, as defined in the Missouri Stormwater Regulations10 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.

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 MS4 Coordinator.

ITERATIVE PROCESS
The iterative process is documented process consisting of action items and analysis that is to be conducted by the permittee to ensure that BMPs are effective and that the permittee is meeting the MEP standard. The process starts with the evaluation of a BMP with its designated measurable goal, which is the reason quantifiable measurable goals greatly assist in the iterative process vs. tracking measurable goals. If the BMP is found effective, then the permittee with regards to the BMP continues as normal until the next round of evaluation. If the BMP is found to be ineffective, then the permittee is required to conduct analysis to determine if the ineffective BMP is truly ineffective or if the measurable goal set was ill-chosen or unattainable due to no fault of the permittee.

If the measurable goal was ill-chosen or unattainable, then the permittee would need to conduct analysis to determine a more appropriate measurable goal, preferably quantifiable. If the measurable goal wasn't ill-chosen or unattainable, then the permittee is to conduct analysis, research, or review to determine a replacement BMP that is to be effective at reaching the existing measurable goal or new measurable goal that is more "protective" than the previous measurable goal. However, if the replacement BMP requires a new measurable goal, preferably quantifiable, then it is advantageous for the permittee to develop an appropriate measurable goal for the BMP. The replacement of the ineffective BMP with an effective BMP provides the permittee with compliance with reasonable further progress.

This process should occur as an annual evaluation; however, it would be naïve to believe that all BMPs can be evaluated annually. Thus, BMPs are to be evaluated every 5 years (i.e., the life of the permit) as a minimum and as required by this operating permit.

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, 9th 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*."

Therefore, compliance is determined by the successful implementation of the six MCMs in accordance with the conditions established in the operating permit, BMPs designed to reduce pollutants to the MEP and the utilization of the iterative process.

MEASURABLE GOALS
Measureable goals are described in the Phase II rule as BMPs designed objectives or goals that quantify the progress of program implementation and performance of your BMPs. They are objective markers or milestones that the MS4 permittee or the permitting authority will use to track the progress and effectiveness of BMPs in reducing pollutants to the MEP. At a minimum, your measurable goal should contain descriptions of actions that will be taken to implement each BMP, what you anticipate 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 MS4 permittees can establish measureable goals. It is recommended that the below categories 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** – Measureable 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 met for the receiving waterbody or by tracking trends or improvements in water quality (chemical, physical, and biological) and other indicators, such as the hydrologic or habitat condition of the waterbody or watershed.

Additionally, it is recommended that measurable goals include, where appropriate, the following items:

- The activity, or BMP, to be completed;
- A schedule or date of completion; and
- A quantifiable target to measure progress toward achieving the activity or BMP.

Measurable goals that include these items (not necessarily all three) are easy quantifiable, which leads to being easily tracked, and ultimately leading to a clear demonstration of reducing pollutants to the MEP. However, just because the MS4 permittee has a measureable goal does not equate that it is effective as a measurable goal. In order to help in the selection of measurable goals that will work for the MS4 permittee, it is recommended that the below criteria are used in selecting measurable goals:

- **Consider the objective for each minimum measure** – The BMP that permittees chose should work toward one or more common objectives related to stormwater quality improvement and reducing pollutants to the MEP. Objectives should be based on what is known about existing pollutant sources and problems in the watershed and what is required by the minimum measure. The objective can be something the MS4 permittee can quantify or it can be a goal or purpose statement.
- **Review the programs that are already in place for each minimum measure** – Use a self-audit/self-analysis. Coordination with other agencies, non-profit groups, citizen groups, etc.… to identify existing initiatives that can be used as part of the stormwater management program.

- **Corresponding BMP –** Select BMPs that can be utilized for more than one minimum control measure each other and work toward meeting each minimum measure. These BMPs should address the minimum measures objective identified above and meet the regulatory requirement in the minimum measure. Likewise, when a BMP can be utilized for more than one minimum control, the measurable goal can also be used on more than one minimum measure.
- **Milestones for implementation –** Measurable goals should include a timeframe and a quantity to measure, if possible. To assist in this, MS4s should consider the following questions:
    - When will BMP be implemented?
    - What and when can institutional, funding, and legal issues, if any, need to be resolved before implementation can occur?
    - How will progress of implementation be tracked? (Spreadsheets or databases are very useful in tracking progress.
    - How can the BMP be measured to demonstrate pollutants are being reduced to the MEP? Changes in behavior, number of BMPs implemented, or documented improvements in water quality are results that can demonstrate this.
- **Evaluation and Effectiveness of each BMP** - MS4s will need to ascertain what effects individual and collective BMPs have on water quality and associated indicators. Instream monitoring, such as physical, chemical, and biological monitoring is ideal because it allows the MS4 to determine if the BMP is improving water quality resulting from management efforts. Intermediate goals can provide documentation of progress toward the measurable goal. Ultimately, the evaluation method that is used by the MS4 permittee for each BMP should lead to a determination of the environmental benefits of each minimum measure and overall effectiveness of the SWMP in reducing pollutants to the MEP.

MINIMUM CONTROL MEASURES (MCMS)

The Phase II rule defines a small MS4 stormwater management program as being comprised of six (6) Minimum Control Measures (MCMs) that, when administered in concert, are expected to result in the reduction of the discharge of pollutants into receiving water bodies. Operators of regulated small MS4s are required to design their programs to do the following: reduce the discharge of pollutants to the MEP, protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act per 40 CFR 122.34(a).

Proper implementation of the measures will improve water quality as indicated in 64 FR. No. 235, which states, "*Absent to the contrary, EPA presumes that a small MS4 program that implements the six minimum measures in today's rule does not require more stringent limitations to meet water quality standards. Proper implementation of the measures will significantly improve water quality*." The department considers narrative effluent limitations requiring the implementation of BMPs to be the most appropriate in accordance with 40 CFR 122.44(k)(2) and (3).

The national menu of BMPs for each specific MCM can be found at:
https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#edu

Public Education and Outreach

Terms and conditions related to this MCM are in accordance with 40 CFR 122.34(b)(1). Below guidance is per 40 CFR 122.34(b)(1)(ii) and are not requirements, but is highly encouraged.

- Storm water educational materials provided by your State, Tribe, EPA, environmental, public interest or trade organizations, or other MS4s may be used.
- The public education program should inform individuals and households about the steps they can take to reduce storm water pollution, such as ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil or household hazardous wastes.
- It is recommended that the program inform individuals and groups how to become involved in local stream and beach restoration activities as well as activities that are coordinated by youth service and conservation corps or other citizen groups.
- It is recommended that the public education program be tailored, using a mix of locally appropriate strategies, to target specific audiences and communities. Examples of strategies include:
    - Distributing brochures or fact sheets (like those already created by the state or EPA),
    - Recreational guides,
    - Alternative information sources (web sites, bumper stickers, refrigerator magnets, and posters/place mats),
    - Sponsoring speaking engagements before community groups,
    - Library of educational material,
    - Volunteer citizens/tasks force
    - Storm drain stenciling (e.g., "Do Not Dump – Drains to River"),
    - Stormwater hotlines for the reporting of polluters
    - Economic incentives,
    - Tributary signage
    - Providing public service announcements,
    - Implementing educational programs targeted at school age children, and
    - Conducting community-based projects such as storm drain stenciling, and watershed and beach cleanups.

- In addition, EPA recommends that some of the materials or outreach programs be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant storm water impacts. For example, providing information to restaurants on the impact of grease clogging storm drains and to garages on the impact of oil discharges.
- It is also recommended that the outreach program is tailored to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children.

Public education and outreach is needed due to the fact that an informed and knowledgeable community is crucial to the success of a stormwater management program since it helps ensure greater support which allows the public to gain a greater understanding of the reasons why it is necessary and important. Public support is particularly beneficial when operators of small MS4s attempt to institute new funding initiatives for the program or seek volunteers to help implement the program.

In addition, Measurable Goals are required in this operating permit, which are intended to gauge permit compliance and program effectiveness. Successful and obtainable measureable goals reflect the needs and characteristics of the operator and the area served by its small MS4, and are chosen using an integrated approach that fully addresses the requirements and intent of the program. Examples of measureable goals are as follows:

- BMP – Stormwater Public Education for radio or television.
- Measurable Goal – Increase the number of dog owners who pick up after their pets.
- Achievement/Progress Determination: Conduct a survey at the beginning, during, and at the end of the permit term to gauge any change.

Public Participation/Involvement
This MCM is required in accordance with 40 CFR 122.34(b)(2). Below guidance is per 40 CFR 122.34(b)(2)(ii) and is not a requirement, but is highly encouraged.

- It is recommended that the public be included in developing, implementing, and reviewing your storm water management program and that the public participation process should make efforts to reach out and engage all economic and ethnic groups.
- Opportunities for members of the public to participate in program development and implementation include:
  - Serving as citizen representatives on a local storm water management panel,
  - Attending public hearings,
  - Working as citizen volunteers to educate other individuals about the program,
  - Assisting in program coordination with other pre-existing programs, or
  - Participating in volunteer monitoring efforts. (Citizens should obtain approval where necessary for lawful access to monitoring sites.)

Public can provide valuable input and assistance to regulated small MS4s; therefore, it is encouraged that the public be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a stormwater management program because it allows for broader public support, which means citizens who participate in the development and decision making process are partially responsible for the program may be less likely to raise legal challenges and more likely to take an active role. An active public can also result in shorter implementation times due to fewer obstacles in the form of public and legal challenges and increase sources in the form of citizen volunteers.

Example BMPs for this program can include, but are not limited to the below:

- Public meetings/citizen panels: allow citizens to discuss various viewpoints and provide input concerning appropriate stormwater management policies and BMPs.
- Volunteer water quality monitoring: gives citizens first-hand knowledge of the quality of local water bodies and provides a cost-effective means to collecting water quality data.
- Volunteer educators/speakers: can conduct workshops encourage public participation, and staff special events.
- Storm-drain stenciling: important and simple activity that can be conducted by citizens (especially students).
- Community clean-ups: can be conducted along local waterways, beaches, and around storm drains.
- Citizen watch groups: can aid local enforcement authorities in the identification of polluters.
- "Adopt a Storm Drain" program: encourages individuals or groups to keep storm drains free of debris and to monitor what is entering local waterways through the storm drains.

Measurable goals for this program can include, but are not limited to the below:
- BMP – Volunteer water quality monitoring.
- Measurable Goal – Increase the number of citizen/groups conducting water quality monitoring.
- Achievement/Progress Determination: Determine number of citizens/groups conducting water quality monitoring at the beginning, during, and at the end of the permit term. Determine if there has been an increase along with any relevant data to be used.

Illicit Discharge Detection and Elimination(IDDE)
This MCM is required in accordance with 40 CFR 122.34(b)(3). Below guidance is per 40 CFR 122.34(b)(3)(iv) and is not a requirement, but is highly encouraged.

- It is recommended that the plan to detect and address illicit discharges include the following four components:
  - Procedures for locating priority areas likely to have illicit discharges;
  - Procedures for tracing the source of an illicit discharge;

  - Procedures for removing the source of the discharge; and
  - Procedures for program evaluation and assessment.

- It is recommended that the plan contain:
  - Visually screening outfalls during dry weather and
  - Conducting field tests of selected pollutants as part of the procedures for locating priority areas.

- Illicit discharge education actions may include storm drain stenciling,
- A program to promote, publicize, and facilitate public reporting of illicit connections or discharges, and
- Distribution of outreach materials.

Discharges from MS4s often include waste and wastewater from non-stormwater sources. A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows were from illicit and/or inappropriate discharges and connections to the MS4.

Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drain) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high level pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human life.

The Illicit Discharge Detection and Elimination (IDDE) plan is dependent upon several factors, including the permittee's available resources, size of staff, and degree and character of illicit discharges. As guidance only, the four steps of a recommended plan are outlined below:

Locate Problem Areas – It is recommended that the priority areas be identified for detailed screening of the system based on the likelihood of illicit connections (e.g., areas with older sanitary sewer lines) Methods that can locate problem areas include:
- Visual Screening,
- Water sampling from manholes and outfalls during dry weather,
- The use of infrared and thermal photography,
- Cross-training field staff to detect illicit discharges, and
- Public complaints.

Find the Source – Once a problem area or discharge is found, additional efforts usually are necessary to determine the source of the problem. Methods that can find the source of the illicit discharge include:
- Dye-testing buildings in problem areas,
- Dye- or smoke-testing buildings at the time of sale,
- Tracing the discharge upstream in the storm sewer,
- Employing a certification program that shows that buildings have been checked from illicit connections,
- Implementing an inspection program of existing septic systems, and
- Using video to inspect the storm sewer.

Remove/Correct Illicit Connections – Once the source is identified, the offending discharger should be notified and directed to correct the problem. 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.

Document Actions Taken – As a final step, all actions taken under the IDDE plan should be documented. This illustrates that progress is being made to eliminate illicit connections and discharges. Documented action should be included in reports as required by your operating permit and may include:
- Number of outfalls screened,
- Any complaints received and corrected,
- Number of discharges and quantities of flow eliminated, and the number of dye- or smoke-test conducted.

Measurable goals can include, but are not limited to the below example:

- BMP – 24 Hour Hotline
- Measurable Goal – Respond within 24 hours or less upon receipt of a citizen complaint.
- Achievement/Progress Determination: May require the development of a compliant tracking system to log times calls were received and time response was implemented.

Construction Site Runoff Control

This MCM is required in accordance with 40 CFR 122.34(b)(4). Below guidance is per 40 CFR 122.34(b)(4)(iii) and is not a requirement, but is highly recommended.

- Examples of sanctions to ensure compliance may include non-monetary penalties, fines, bonding requirements and/or permit denials for non-compliance.
- It is recommended that procedures for site plan review include the review of individual pre-construction site plans to ensure consistency with local sediment and erosion control requirements.
- Procedures for site inspections and enforcement of control measures could include steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.
- It is encouraged that the MS4 provide appropriate educational and training measures for construction site operators.
- MS4s may wish to require a storm water pollution prevention plan for construction sites within your jurisdiction that discharge into your system.
    - See §122.44(s) (NPDES permitting authorities' option to incorporate qualifying State, Tribal and local erosion and sediment control programs into NPDES permits for storm water discharges from construction sites).
    - Also see §122.35(b) (The NPDES permitting authority may recognize that another government entity, including the permitting authority, may be responsible for implementing one or more of the minimum measures on your behalf.)

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 raters 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.

Some BMPs for the construction program include:

Regulatory Mechanism – Through the development of ordinances or other regulatory mechanism, the small MS4 operator will need to establish a construction program that controls polluted runoff from construction sites with a land disturbance of greater than or equal to one acre. Because there may be limitations on regulatory authority, the small MS4 operator is required to satisfy this minimum control measure only to the MEP and allowable State, Tribal, or local law.

Site Plan Review – The small MS4 will need to include in its construction program requirements for the implementation of appropriate BMPs on construction sites to control erosion and sediment and other waste 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.

Site plan reviews can aid in compliance and enforcement efforts since it alerts the small 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. The tracking of sites is useful not only for the MS4 operator recordkeeping and reporting purpose, which are required under this permit, but also for members of the public interested in ensuring that sites are in compliance.

Inspections and Penalties – Once construction commences, BMPS should be in place and the MS4 operator enforcement activities should 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 conduce 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 soli and receiving water quality. Inspections give MS4s an opportunity to provide additional guidance and education, issue warnings, or assess penalties.

Information Submitted by the Public – A final consideration, but is highly recommended, is that the MS4 is developed to contain procedures for the receipt and considerations of public inquiries, concerns, and information submitted regarding local construction activities. This provision is intended to further reinforce the public participation component of the regulated MS4 and recognize the crucial role that public can play in identifying instances of non-compliance.

MS4s are required to only consider the information submitted, and may not need to follow-up and respond to every complaint or concern. Although some form of enforcement action or reply is not required, MS4s is required to demonstrate acknowledgement and consideration of the information submitted.

Measurable goals for this program can include, but are not limited to the below:

- BMP – Direct or indirect education of construction site operators and contractors about proper selection, installation, inspection, and maintenance of BMPs.
- Measureable Goal – 80% will have attended erosion/sediment control training for all projects that occurred in the MS4's jurisdiction during the permit term.
- Achievement/Progress Determination: This goal could be tracked by documenting attendance at local, State, or Federal training programs. Attendance can be encouraged by decreasing permitting fees for those contractors who have been trained and provide proof of attendance when applying for permits.

Post-Construction Runoff Control

This MCM is required in accordance with 40 CFR 122.34(b)(5). Below guidance is per 40 CFR 122.34(b)(5)(iii) and is not a requirement, but is highly encouraged.

- If water quality impacts are considered from the beginning stages of a project, new development and potentially redevelopment provide more opportunities for water quality protection.
- It is recommended that the BMPs chosen:
  - Be appropriate for the local community,
  - Minimize water quality impacts, and
  - Attempt to maintain pre-development runoff conditions (i.e., reasonably mimic).

- In choosing appropriate BMPs, it is encouraged that the MS4 participate in locally-based watershed planning efforts which attempt to involve a diverse group of stakeholders including interested citizens.
- When developing a program that is consistent with this measure's intent, it is recommended that the MS4 adopt a planning process that:
  - Identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment),
  - Implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs),
  - Operation and maintenance policies and procedures, and
  - Enforcement procedures.

- The development of this program should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality.
- In addition to assessing these existing documents and programs, you should provide opportunities to the public to participate in the development of the program.
- Non-structural BMPs are preventative actions that involve management and source controls such as:
  - Policies and ordinances that provide requirements and standards to direct growth to identified areas,
  - Protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition),
  - Provide buffers along sensitive water bodies,
  - Minimize impervious surfaces, and minimize disturbance of soils and vegetation;
  - Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure;

  - Education programs for developers and the public about project designs that minimize water quality impacts, and
  - Measures such as minimization of percent impervious area after development and minimization of directly connected impervious areas.

- Structural BMPs include:
  - Storage practices such as wet ponds and extended-detention outlet structures,
  - Filtration practices such as grassed swales, sand filters and filter strips, and
  - Infiltration practices such as infiltration basins and infiltration trenches.

- It is recommended that the MS4 ensure the appropriate implementation of the structural BMPs by considering some or all of the following:
  - Pre-construction review of BMP designs;
  - Inspections during construction to verify BMPs are built as designed;
  - Post-construction inspection and maintenance of BMPs; and
  - Penalty provisions for the noncompliance with design, construction or operation and maintenance.

- Storm water technologies are constantly being improved, and EPA recommends that your requirements be responsive to these changes, developments or improvements in control technologies.

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. Redevelopment projects do not include such activities as exterior remodeling. Guidelines and BMPs (both non-structural and structural) for the development and implementation of this program include, but are not limited to the below:

Planning Procedures – runoff problems can be addressed efficiently with sound planning procedures. Local master plans, comprehensive plans, and zoning ordinances can promote improved water quality in many ways, such as guiding the growth of a community way from sensitive areas to areas that can support it without compromising water quality.

Site-Based BMPs – these BMPs can include buffer strips and riparian zones preservation, minimization of disturbance and imperviousness , and maximization of open spaces.

Stormwater Retention/Detention BMPs – control stormwater by gathering runoff in wet ponds, dry basins, or multi-chamber catch basins and slowly release it to receiving water bodies or drainage systems. The practices can be designed to both control stormwater volume and settle out particulates for pollutant removal.

Infiltration BMPs – are designed to facilitate the percolation of runoff through the soil to ground water resulting in the reduction of stormwater quantity, which reduces the mobilization of pollutants. Examples are:
- Basins/trenches,
- Dry wells, and
- Porous pavement.

Vegetative BMPs – are landscaping features that, with optimal design and good soil conditions, remove pollutants, and facilitate percolation of runoff resulting in the maintenance of natural site hydrology, promoting healthier habits, and increase aesthetic appeal. Examples are:
- Grassy swales,
- Filter strips,
- Artificial wetlands, and
- Rain gardens.

Measurable goals for this program can include, but are not limited to the below:
- BMP – Reduce/Replace road surface areas directly connected to storm sewer systems (using traditional curb and gutter infrastructure) with stormwater conveyance approaches such as grassy swales and similar.

- Measureable Goal – Reduce/Replace new development by 20% and re-development by 10% during the permit term.
- Achievement/Progress Determination: Ensure that 20% of new projects and 10% of re-development projects use alternative stormwater conveyance systems vs. traditional curb and gutter approach. This can be tracked by linear feet of curb and gutter not installed in projects that would have historically used them.

Pollution Prevention/Good Housekeeping
This MCM is required in accordance with 40 CFR 122.34(b)(6). Below guidance is per 40 CRFR 122.34(b)(6)(ii) and is not a requirement, but is highly encouraged.

- EPA recommends that, at a minimum, you consider the following in developing your program:
  - Maintenance activities and schedules, and long-term inspection procedures for structural and non-structural storm water controls to reduce floatables and other pollutants discharged from your separate storm sewers;
  - Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by you, and waste transfer stations;
  - Procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris); and
  - Ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices.

- Operation and maintenance should be an integral component of all storm water management programs.
- This measure is intended to improve the efficiency of these programs and require new programs as needed.
- Properly developed and implemented operation and maintenance programs reduce the risk of water quality problems.

This program for municipal operations is a key element of the small MS4 stormwater management program. This measure requires the small MS4 operating to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that:
- Collects on the street, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and
- Result from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer system.

While this plan is meant primarily to improve or protect receiving water quality by altering municipal or facility operations, it also can result in a cost savings for the MS4, since proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

Some guidelines and BMPs for this plan include:

Maintenance activities, maintenance schedules, and long-term inspection procedures – for structural and non-structural controls to reduce floatables and other pollutants discharge from the storm sewers.

Controls for reducing or eliminating the discharge of pollutants – from areas such as roads and parking lots, maintenance and storage yards (including salt/sand and snow disposal areas), and waste transfer stations. These controls could include programs that promote recycling (to reduce litter), minimize pesticide use, and ensure the proper disposal of animal waste.

Procedures for the proper disposal of waste – removed from separate storm sewer systems and areas listed in the Controls for reducing or eliminating the discharge of pollutants, including dredge spoil, accumulated sediments, floatables, and other debris.

Ways to ensure that new flood management projects assess the impacts on water quality – and examine existing projects for incorporation of additional water quality protection devices or practices. It is encouraged coordination with flood control managers for the purpose of identifying and addressing environmental impacts from such projects.

Measurable goals for this program can include, but are not limited to the below:
- BMP –Incorporate the use of road salt alternatives for highway deicing and reduce the use of traditional road salt.
- Measureable Goal – Reduce road salt usage by 50% in permit term.

- Achievement/Progress Determination: Use alternative deicing for roads and highways leading to the reduction of traditional road salt by 50% by the end of the permit term.

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, see general permit #MOG-870000 located at http://dnr.mo.gov/env/wpp/permits/wpcpermits-general.htm. 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.

STORMWATER MANAGEMENT PROGRAM AND PLAN (SWMP):
The SWMP 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.

This permit in accordance with 10 CSR 20-6.200 and 40 CFR Part 122 requires the permittee to develop and implement a SWMP. The SWMP 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 SWMP addresses TMDL implementation plan components. The SWMP also includes, but is not limited to, BMPs, pertinent local regulations, policies, procedures, interim milestones, measurable goals, measures of success, responsible persons/positions for each of the measurable goals, and any applicable TMDL assumptions and requirements.

SWMP 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):

1. Illicit discharge detection and elimination – to prohibit non-stormwater discharges into the storm sewer system, and implement appropriate enforcement procedures and actions;
2. Construction site stormwater runoff control – to require erosion and sediment controls at construction sites, as well as sanctions designed to ensure compliance; and
3. 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

EPA and the department and certain MS4s have developed compliant model ordinances that may be adapted for use by other interested MS4s.

SWMP REPORTING FREQUENCY:
Previous versions of this operating permit required annual reporting of the SWMP; however, the annual reporting will now only be required for new MS4 permittees in accordance with 40 CFR 122.34(g)(3) and MS4 permittees subject to TMDLs (water quality schedules over one calendar year require annual reporting). For MS4 permittees that have obtained MS4 permits (either site-specific or general permits) prior to this version of the Small Phase II MS4 general permit, they will be required to submit the MS4 SWMP report biennial (2nd and 4th year of the operating permit) in accordance with the same federal regulation 40 CFR 122.34(g)(3).

In addition, the MS4 SWMP Report Form 780-1846 has been revised. Please note that this operating permit does not require the Qualitative Monitoring Program anymore; however, the report form still list this. The Qualitative Monitoring Program portion of the report form will be removed after the public notice of this operating permit.

The MS4 SWMP Report is attached to this factsheet under Addendum 1. Additionally, as noted in the operating permit, MS4s may adopt their own report form. However, it must be approved by the Department prior to being utilized.

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*."

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 program coordinator 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.

Part IV - Administrative Requirements & Public Notice of Small MS4's SWMPs

COST ANALYSIS FOR COMPLIANCE (CAFCOM):
Pursuant to Section 644.145, RSMo, when issuing permits (under this chapter) that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the department shall make a cost analysis for compliance upon which to base such permits and decisions to the extent allowable under this chapter and the Federal Water Pollution Control Act. Where permit modifications, permit renewals, or sewer extensions do not impose new requirements and/or do not require rate increases, the cost analysis for compliance may receive a less detailed review. Permits that do not include new requirements may be deemed affordable.

Existing Permittees – New Requirements:
The results of the CAFCOM below were drafted during in accordance with the previous draft permit (i.e., 3rd round). This operating permit does not require the same level of sampling or parameters to be sampled. Thus, if the below was determined affordable under the previous draft operating permit, then it is affordable under this draft operating permit.

DEFINITIONS
All definitions contained in 10 CSR 20-6.200 shall apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided, but in the event of a conflict, the definition found in the regulation takes precedence.

Control Measure as used in this permit refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the state.

Director refers to the Director of staff, Water Protection Program, Missouri Department of Natural Resources.

Discharge when used without a qualifier, refers to "discharge of a pollutant" as defined at 40 CFR 122.2.

Illicit Connection means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

Illicit Discharge refers to any discharge to a municipal separate storm sewer that is not entirely composed of stormwater, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from emergency fire-fighting activities.

Load Allocation is similar to Wasteload allocation, except refers to nonpoint source pollutants; whereas, Wasteload allocation pertains to point source pollutants. Per EPA, load allocation refers to the portion of the loading capacity attributed to (1) the existing or future nonpoint sources of pollution, and (2) natural background sources. Wherever possible, nonpoint source loads and natural loads should be distinguished.

MS4 is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to a Large, Medium, or Small MS4 (e.g., "the Joplin Small MS4").

Permittee, as used in this permit refers to the holder of this general permit.

Representative Outfalls: Representative outfalls can be 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.

Site-specific Permit also means individual permit (per EPA's definition) and one that is specific to the permittee's facility or discharges.

Stormwater means stormwater runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Management Program and Plan (SWMP) refers to a comprehensive documented program and plan to manage the quality of stormwater discharged from the municipal separate storm sewer system.

Wasteload allocation per 10-CSR-20.010 means the amount of pollutants each [point source] discharger is allowed by the department to release into a given stream after the department has determined the total amount of pollutants that may be discharged into that stream without endangering its water quality. Point sources are typically permitted.

PUBLIC NOTICE AND COVERAGE FOR AN INDIVIDUAL ENTITY:
Per 10 CSR 20-6.020(1)(B) &(C), public notification of the issuance of this master general permit was required; however, public notification of issuance to individual applicants under this permit is not required. A public meeting was held March 5, 2013, at the Lewis & Clark State Office Building from 10 a.m. to 11 a.m. No comments were received as a result of this public meeting. The draft Master General Permit renewal was placed on Public Notice for 30 days in accordance with 10 CSR 20-6.020(1)(B) & (C). The first public comment period for that public notice expired on May 6, 2013. Comments were received from the Association of Missouri Cleanwater Agencies, the Metropolitan St. Louis Sewer District and the University of Missouri. The permit was revised as a result of public comments and the permit was public noticed for a second 30-day period from November 1 through December 2, 2013.

Due to changes since the last public notice, which started on October 31, 2014, this permit is being placed on public notice for a fourth time.

PUBLIC NOTICE OF SMALL MS4'S SWMPS:
In addition to this actual operating permit, MS4s applying for coverage under this general permit are required to submit their SWMP as required by this operating permit. The MS4s SWMPs are located at the Department website: http://dnr.mo.gov/env/wpp/stormwater/swmp.htm. SWMPs are subject to the same public notice and hearings as the MS4 general operating permit. SWMPs, under this operating permit, are subject to a review and rating. MS4s have one year from the effective date to submit their updated SWMP, if needed, for a review and rating.

COST ANALYSIS:
The previously public noticed permit established in the Conclusion and Findings that "All regulated MS4s under this permit will incur added costs for monitoring requirements per Section 5. Only certain communities will also incur costs for TMDL plan development per Section 3. The department has determined that costs for monitoring and TMDL plan development are affordable. The monthly household costs are estimated for all scenarios to range from $0.01 to $2.92 per month for the first 2.5 years and then $0.01 - $0.65 per year thereafter depending on the community. This considers that the cost for TMDL plan development is a one-time cost for a period of 30 months and that the cost of plan development may be shared in some scenarios but not others. This does not consider that some MS4s may need to develop more than one TMDL plan. Cost analyses can be revisited if the TMDL plan identifies specific implementation measures beyond current efforts."

Additionally, the department determined in the previously public notice permit that, "…the cost for developing a plan to address the TMDL assumptions and requirements (in addition to annual monitoring requirements) is affordable for affected communities, based on the limitation of this finding to one-time plan development, a reasonable 30-month provision plan completion period and much available guidance. The process to develop a plan is expected to include stakeholder input and to take one staff person an estimated 12 months full-time to research the needed information, coordinate public meetings, and establish a work plan and schedule. Dependent upon salary, contributing partnerships, available information and TMDL assumptions and requirements, the cost of plan development per year might range from $4,000 - $100,000 per community. These costs in addition to an annual monitoring cost of $3,720 results in an estimate of total increased user costs shown as a percentage of MHIs that range from 0.02% to 0.03%. More information is needed to determine a more detailed estimate of plan costs for each affected MS4."

Finally, the previously public notice permit established, "the department has determined the cost for monitoring per Section 5 of the permit is affordable. This paragraph addresses communities that do not also have to develop a TMDL plan. The new sampling requirements are affordable for affected communities, especially for those communities who will be readily able to incorporate these efforts into existing program operations for sampling, analyses and reporting. Monitoring requirements will more than likely be covered through general revenue unless otherwise covered by dedicated stormwater funding. , monitoring may cost up to $3,720 per year per community, depending on proximity to local laboratory services. More information is needed to determine a more detailed estimate of monitoring costs for each affected MS4."

This version of the draft Phase II Small regulated MS4 general permit does not place any requirement beyond that of the previously public noticed permit and is therefore found to be affordable by all regulated Phase II Small MS4s.

SUMMARY OF KEY ISSUES ADDRESSED IN RESPONSE TO OCTOBER 31, 2014 PUBLIC NOTICE INPUT:
Several changes were made to the permit in response to public comments during the most recent public notice period, which started on October 31, 2014. Detailed responses were provided to the commenters. Copies of the comment response letters may be obtained via an Open Records/Sunshine Law request.

SUMMARY OF KEY ISSUES ADDRESSED IN RESPONSE TO THE APRIL 8, 2016 PUBLIC NOTICE INPUT:
The changes made to this operating permit after the April 8, 2016, public notice are in response to comments received from EPA on July 6, 2016 (See Appendix A).

Revised Date of Fact Sheet: July 7, 2016

MICHAEL J. ABBOTT, ENVIRONMENTAL SCIENTIST
MUNICIPAL SEPARATE STORMWATER SEWER SYSTEM (MS4) PROGRAM COORDINATOR
STORMWATER AND CERTIFICATION UNIT
WATER PROTECTION PROGRAM
michael.abbott@dnr.mo.gov
573-526-1139

Appendix A – EPA July 6, 2016 Comments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

06 JUL 2016

Mr. John Madras
Director, Water Protection Program
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102

Dear Mr. Madras:

We have reviewed the draft proposed Missouri General Municipal Separate Stormwater Sewer System (MS4) Permit (MOR040000) that was placed on public notice May 8, 2016. Please find our comments on the permit below:

1. Section 3 – If a permittee is not already meeting an applicable Waste Load Allocation (WLA) and a schedule of compliance is needed, then regulations require that the WLA be met "as soon as possible." The instructions for the *Total Maximum Daily Load (TMDL) Assumptions and Requirement Attainment Plan* (ARAP) should make it clear that all plans, and implementation of plans, should be such that WLAs will be met as soon as possible.

2. Section 3.1.1 –This permit provision requires that the MS4 "…shall implement steps toward the goal of attainment with the applicable WLA …" The language should be modified to be consistent with the CWA requirement that the MS4 must achieve attainment with the applicable WLA, not merely implement steps towards that goal.

3. Section 3.1.3 – Regulations require that water quality based limits be met "as soon as possible." If the Department believes that 30 months of planning is part of a process to meet WLAs as soon as possible, then that should be documented in the Fact Sheet for the permit.

4. Section 3.1.3.2 – After discussing this provision with Department personnel, we understand that any disapproval notice would explain what changes need to be made to a plan and would give a deadline for resubmittal of the TMDL ARAP. The inclusion of deadline for resubmittal, appears to negate the need for provision 3.1.3.3.

5. Section 3.1.7 – It is possible that TMDLs may not specifically name a certain point source even though the narrative of the TMDL makes it clear that there are WLAs that apply to the source. We are concerned that the current language of this provision might allow a permittee to ignore a TMDL in such a case if the TMDL did not specifically name them. Please consider a language change that would close this loophole.

6. New Discharges to TMDL-Limited Waterbodies – It is possible that newly regulated MS4 might discharge to a waterbody with a TMDL does not allow a WLA for the new discharge. One way

Continue to next page.

to deal with this situation is to not allow coverage for such an MS4 under this general permit, but require application for an individual permit.

7. Section 4.1.2 - The provision needs to make clear that the five years for full implementation is only available for MS4s that are being regulated under this permit for the first time. Currently regulated MS4s should already be fully implementing the six minimum control measures.

8. Sections 3.1.2.3 – The provision needs to require that if interim milestones are more than a year apart then progress must be reported on or before a year has passed from the last milestone.

9. Section 4.2.7 references sections of the permit that were in a previous draft but have since been removed.

If you have any questions or would like additional information, please contact either Glenn Curtis at (913) 551-7726, or Mark Matthews at (913) 551-7635.

Sincerely,

Glenn Curtis, Chief
Wastewater and Infrastructure
Management Branch

Enclosure