

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 RSMo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0137910
Owner:	Missouri Department of Transportation
Address:	P.O. Box 270, Jefferson City, Missouri 65102
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Missouri Department of Transportation TS4 and Area Wide Land Disturbance
Facility Address:	105 West Capitol Avenue, Jefferson City, Missouri 65102
Legal Description:	See page two (2)
UTM Coordinates:	See page two (2)
Receiving Stream:	See page two (2)
First Classified Stream and ID:	See page two (2)
USGS Basin & Sub-watershed No.:	See page two (2)

is authorized to discharge from the facility described herein, in accordance with the limitations, inspection, reporting, and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

SIC/NAICS Codes: 9621/921110, 1629

Stormwater discharge from the Missouri Department of Transportation's Separate Storm Sewer System in regulated areas and area-wide land disturbance activities statewide.

This permit authorizes only stormwater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Sections 640.013, 621.250, and 644.051.6 of the Law, and 10 CSR 20-6.020 and 10 CSR 20-1.020

<u>November 1, 2016</u>	<u>November 1, 2019</u>
Effective Date	Modification Date

Edward B. Galbraith, Director, Division of Environmental Quality

<u>October 31, 2021</u>
Expiration Date

Chris Wieberg, Director, Water Protection Program

LEGAL DESCRIPTION (continued):

TRANSPORTATION SEPARATE STORM SEWER SYSTEM VARIOUS OUTFALLS STATEWIDE:

The Missouri Department of Transportation's (MoDOT) Separate Storm Sewer System (TS4) has a vast amount of stormwater outfalls. MoDOT maintains an electronic map of known outfalls and is hereby incorporated by reference. In place of the numerous outfalls, the below locational data is for MoDOT's Headquarters office in Jefferson City, Missouri, which is used to establish at least one outfall.

Legal Description:	Land Grant 2681
UTM Coordinates:	X = 572165.9, Y = 4270280.1
Receiving Stream:	Missouri River (P) 303(d)
First Classified Stream and ID:	Missouri River (P) (0701) 303(d)
USGS Basin & Sub-watershed No.:	10300102 - 1305

LAND DISTURBANCE VARIOUS OUTFALLS STATEWIDE:

As part of the requirements under an area-wide land disturbance permit, active land disturbance project locations can occur at any location statewide on MoDOT properties, established easements, or other areas as appropriate and are to be reported quarterly. The activities covered by this permit do not have a set location for the duration of the permit cycle in most cases. In place of the numerous outfalls, the below locational data is for MoDOT's Headquarters office in Jefferson City, Missouri, which is used to establish at least one outfall.

Legal Description:	Land Grant 2681
UTM Coordinates:	X = 572165.9, Y = 4270280.1
Receiving Stream:	Missouri River (P) 303(d)
First Classified Stream and ID:	Missouri River (P) (0701) 303(d)
USGS Basin & Sub-watershed No.:	10300102 - 1305

I. TRANSPORTATION SEPARATE STORM SEWER SYSTEM (TS4) PERMIT CONDITIONS

A. COVERAGE AND RESTRICTIONS

1. This operating permit authorizes the discharge of stormwater from the Missouri Department of Transportation (MoDOT) Separate Storm Sewer System (TS4) that is located in:
 - (a) Urbanized Areas as determined by the latest Decennial Census by the Bureau of Census;
 - (b) Regulated municipal separate storm sewer systems not located in an Urbanized Area per 10 CSR 20-6.200(5)(C) 24.B;
 - (c) Watersheds subject to an approved and effective Total Maximum Daily Load (TMDL) in accordance with **Part C – DISCHARGES TO IMPAIRED WATERS**;
 - (d) Outstanding National Resource Waters;
 - (e) Outstanding State Resource Waters; and
 - (f) Statewide as established in **Part B – DISCHARGE LIMITATIONS**, item #6.
2. This operating permit also authorizes the discharge of non-stormwater from MoDOT's TS4 provided that the Missouri Department of Natural Resources (Department) has not determined these sources to be substantial contributors of pollutants to the permittee's TS4 that require a separate operating permit. Non-stormwater discharges permitted to discharge are as follows:
 - (a) Water line and fire hydrant flushing;
 - (b) Landscape irrigation;
 - (c) Rising ground water;
 - (d) Uncontaminated ground water infiltration;
 - (e) Uncontaminated pumped ground water;
 - (f) Potable water sources;
 - (g) Foundation drains;
 - (h) Air conditioning condensate;
 - (i) Springs;
 - (j) Water from crawl space pumps;
 - (k) Footing drains;
 - (l) Lawn watering;
 - (m) Flows from riparian habitats and wetlands;
 - (n) Street wash water;
 - (o) Emergency fire-fighting activities;
 - (p) Individual residential car washing;
 - (q) Dechlorinated residential swimming pools.
3. This permit does not authorize discharges that are:
 - (a) Mixed with sources of non-stormwater unless non-stormwater source discharges are:
 - i. In compliance with a separate NPDES permit, or
 - ii. Determined not to be a substantial contributor of pollutants to waters of the state.
 - (b) Associated with industrial activities requiring a separate NPDES operating permit as defined by 10 CSR 20-2.010(42)(A) and required by 10 CSR 20-6.200.
 - (c) Covered under another operating permit.
4. 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.
5. Any pesticide application and potentially discharged into the TS4 by the permittee shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act as amended (7 U.S.C. 136 *ET. SEQ.*) and the use of such pesticides shall be in a manner consistent with its label.

B. DISCHARGE LIMITATIONS

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) from the TS4 for the goal of attainment with Missouri's Water Quality Standards. Specific requirements are listed in **Parts D, E, F, and G**.
2. The permittee shall implement and enforce a Stormwater Management Program and Plan (SWMP) per the requirements listed in this operating permit in accordance with the CWA and corresponding National Pollution Discharge Elimination System (NPDES) regulations, 40 CFR 122.34, and in accordance with the Missouri Clean Water Law and state regulations 10 CSR 20-6.200.
3. The permittee shall comply with the provisions and requirements contained in this operating permit, and in plans and schedules developed in fulfillment of this permit.
4. The Department may require corrective action(s) or require additional applications for alternative general permits if the Department determines this TS4 is causing or creating a significant instream exceedance of Missouri's Water Quality Standards.
5. The permittee shall notify the Department's MS4 coordinator of any new or redevelopment TS4 projects in areas subject to an existing U.S. Environmental Protection Agency (EPA) approved or established TMDL at least 180 days prior to beginning the construction, which may require the permittee to submit an application for modification. The Department will work with the permittee to ensure that Best Management Practices are being implemented via an iterative process for the reduction of pollutants.
6. The items below are statewide requirements. Require actions listed under Part D and E are applicable whether or not the location is listed under **Part A – COVERAGE AND RESTRICTIONS**, item 1.
 - (a) The permittee shall be required to give notification to appropriate local or state agencies of illegal dumping or illicit discharges as soon as practicably possible in accordance with **Part E – MINIMUM CONTROL MEASURES**, item 3;
 - (b) Bridge washing and cleaning activities over waters of the state.
7. The full implementation of this operating permit and the Department approved SWMP, which includes implementation schedules developed by the permittee, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k). However, the permit may be reopened and modified, or alternatively revoked and reissued, to ensure corrective action(s) are being implemented to reduce the discharge of pollutants to the MEP if the Department determines that the permittee is causing or creating significant exceedances of Missouri's Water Quality Standards. If such action is determined appropriate by the Department, a notification will be given to the permittee at a minimum of 30 days prior to the action being conducted.

C. DISCHARGES TO IMPAIRED WATERS

1. The permittee shall develop a TMDL Assumptions and Requirement Attainment Plan (ARAP) if any area of the TS4 is identified in an EPA approved or established TMDL with an applicable Wasteload Allocation (WLA). The permittee shall implement steps toward the attainment of applicable WLA in accordance with 40 CFR 122.44(k)(2) and (3). The TMDL ARAP shall be incorporated into the SWMP and include, at a minimum, the following:
 - (a) A process to identify potential sources of the pollutant(s) within the TS4, actions to be taken to address those sources within MoDOT's jurisdiction, 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 is not limited to the term of this operating permit (i.e., 5 years) as attainment can take years or even multiple permit terms;
 - (b) 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.
 - (c) Measurable goals for each BMP or in conjunction of 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 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.
 - (d) An iterative process to be utilized by the permittee that determines if the BMP is ineffective, the plan to address ineffective BMPs, and the general process used to replace or revise ineffective BMPs.

2. If the permittee is subject to section 1 of **Part C – DISCHARGES TO IMPAIRED WATERS**, then the permittee shall draft and submit the 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 this 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 176, 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. 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.
4. If the Department approves the TMDL ARAP, it will be presumed that the TMDL ARAP is affordable by the permittee. However, if the Department disapproves the 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).
5. If the TMDL ARAP has been submitted to the Department but has not received approval, then the permittee is not required to implement any action listed in their TMDL ARAP and shall notify the Department of this in their MS4 SWMP Report.
6. Once the TMDL ARAP has received Department approval, it shall be implemented in accordance to established and approved schedules. Implementation of 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.
7. If the permittee has an approved TMDL ARAP, then the permittee shall provide a summary of the controls that list the BMPs, the expected result of the BMPs, how the measurable goals are utilized to document the effectiveness of the BMPs, and the status of the measurable goals in the MS4 SWMP Report.
8. The permittee may demonstrate that no additional controls are needed beyond the successful implementation of the six MCMs, which includes modifications to 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 that no additional controls are needed, they shall contact the Water Protection Program's MS4 Coordinator to begin the process.
9. The permittee may submit an Integrated Plan as an approach for the implementation of the TMDL's assumptions and requirements. Review and rating of an Integrated Plan is subject to the same requirements 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.
10. If the EPA approved or established TMDL indicates that the permittee does not cause or contribute to the impairment address by the TMDL, then the permittee is not required to develop and implement any action contain in Part C of this permit.

D. STORMWATER MANAGEMENT PROGRAMS

1. The permittee shall develop, implement and enforce their SWMP. The SWMP shall be designed to reduce the discharge of pollutants to the MEP with the following minimum requirements:
 - (a) The following information for each of the six (6) minimum control measures (MCMs):
 - i. BMPs developed or designed with a purpose of reducing stormwater pollution. Each BMP shall contain a statement containing the description of the BMP, the purpose of the BMP, and the expected result of the BMP;
 - ii. Measurable goals for each BMP or in conjunction of 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 that is quantifiable, then the permittee shall provide justification 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;
 - iii. The person primarily responsible for the SWMP and the person(s) responsible for each MCM if different from the primary person; and

- iv. 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.
 - (b) SWMPs submitted prior to the issuance of this operating permit that do not contain the above minimum requirements shall be revised and submitted to the Water Protection Program's MS4 Coordinator with their first MS4 SWMP Report for review and approval if approval has not already been obtained.
 - (c) The permittee shall operate the SWMP in accordance with this operating permit and conduct annual reviews of their SWMP.
 - (d) The permittee shall begin implementing the SWMP on all new areas, per **Part A – COVERAGE AND RESTRICTION**, added to the TS4 for which the permittee is responsible for as expeditiously as practicable, but no 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. Information on all new additional areas shall be included in the MS4 SWMP Report.
 - (e) Only those portions of the SWMP specifically required as permit conditions shall be subject to the modification requirements of 10 CSR 20-6.200. Addition of components, controls or requirements by the permit holders and replacement of any ineffective or infeasible BMPs implementing a required component of the SWMP with an alternate BMP expected to achieve the goals of the original BMP shall be considered minor changes to the SWMP and not modifications.
2. The implementation of any minimum control measure may be shared with another governmental entity if:
 - (a) The other entity, in fact, implements the minimum control measure or portions thereof;
 - (b) The particular control measure, or component of that measure is at least as stringent as the corresponding permit requirement; or
 - (c) The other entity agrees to implement the control measure on the permittee's behalf. Written acceptance of this obligation is required. This obligation shall be maintained as part of the SWMP. If the other entity agrees to report on the minimum measure on behalf of the permittee, then the permittee shall supply the entity with the reporting requirements contained in **Part F – MONITORING, RECORDKEEPING, AND REPORTING**. The permittee remains liable for any discharges even in the case of the entity failing to implement the control measure.

E. MINIMUM CONTROL MEASURES (MCMs)

The below are the six (6) MCMs that shall be included in the SWMP. The requirements listed below do not supersede or remove any requirement to comply with county or other local ordinances.

1. *MoDOT Community & Public Education and Outreach on Stormwater Impacts Program*: The permittee shall implement a MoDOT community education program to distribute educational material to the community or conduct equivalent outreach activities about the impact of stormwater discharges on waterbodies and steps that MoDOT community can take to reduce pollutants in stormwater runoff. MoDOT shall establish BMPs under this program focused on the general public.
2. *MoDOT Community and Public Involvement/Participation Program*: The permittee shall implement a public involvement/participation program that provides opportunities for both public and MoDOT community involvement in the development and oversight of the permittee's SWMP, and provides opportunities for both the public and MoDOT community involvement of the permittee's renewal application. The public involvement/participation program shall, at a minimum, include the following:
 - (a) A public notice period to allow the public and MoDOT community the opportunity to review the SWMP and renewal application prior to 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;
 - (b) A plan to target potentially affected stakeholder groups with the purpose of allowing the opportunity to provide various viewpoints concerning appropriate stormwater management policies and BMPs.
 - (c) If the permittee utilizes a stormwater management panel/committee, then the permittee shall provide opportunities for input for public and MoDOT Community on the panel/committee;
 - (d) A notice of public hearing, if needed, regarding the SWMP and renewal application. It is recommended that the notice should be at least 72 hours prior to the meeting; and
 - (e) A plan to provide opportunities for citizen volunteers to assist in conducting right-a-way clean-up activities.
3. *Illicit Discharge Detection and Elimination (IDDE) Program*:
 - (a) The permittee shall develop, implement, and enforce a program to detect and eliminate illicit discharges into the TS4. As part of the SWMP, the IDDE shall include, at a minimum, the development and implementation of:

- i. A stormwater sewer map documenting the location of all known outfalls and the names and location of all receiving waters of the state that receive discharges from the TS4. The permittee shall make the map data and its origin available to the Department and EPA upon request;
- ii. To the extent allowable under state or local law, effectively prohibit through regulatory mechanism or equivalent non-stormwater discharges from illicit discharges into the TS4 and implement appropriate procedures or actions. The permittee shall identify in the SWMP the appropriate procedures or actions, if any, used to prohibit illicit discharges into the TS4;
- iii. Notification of appropriate local or state agencies of illegal dumping or illicit discharges, as soon as practicably possible, is an acceptable enforcement procedure or action.
- iv. A plan and schedule to detect and address non-stormwater discharges, including discharges from illegal dumping and spills, to the TS4;
- v. Inform the MoDOT community and the general public of hazards associated with illegal discharges and improper disposal of waste; and
- vi. The permittee shall address the categories of non-stormwater discharges or flows listed under **Part A – COVERAGE AND RESTRICTIONS**, item 2 (a – q) if the permittee identifies them as significant contributors of pollutants to the TS4.

(b) Vehicular accidents are not considered illicit discharges unless the spill enters waters of the state.

4. *Construction Site Stormwater Runoff Control:*

- (a) The permittee shall develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to their TS4 from construction activities on areas owned by MoDOT that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activities disturbing less than one acre must 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. If the NPDES permitting authority waives requirements for stormwater discharges associated with small construction activities on areas owned by MoDOT in accordance with 40 CFR 122.26(b)(15)(i), then permittee is not required to develop, implement, or enforce a program to reduce pollutants discharges from such sites.
- (b) The permittee shall ensure for projects that result in land disturbances of greater than or equal to one acre that the program includes, at a minimum, the development and implementation of:
 - i. A regulatory mechanism or equivalent to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state or local law;
 - ii. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
 - iii. Procedures for plan reviews which incorporate considerations of potential water quality impacts to the receiving waterbody;
 - iv. Procedures for receipt and considerations of information related to stormwater runoff controls submitted by the MoDOT community or general public; and
 - v. Procedures for site-inspections and enforcement of control measures.

5. *Post-Construction Stormwater Management in New Development and Redevelopment:* The permittee shall develop, implement, and enforce a program to address the quality of stormwater runoff from new development and redevelopment projects on areas owned and operated by MoDOT that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale that discharge to the TS4. The program shall include, at a minimum, the following information:

- (a) Strategies to minimize water quality impacts, which includes a combination of structural and/or non-structural BMPs appropriate for the TS4, 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;
- (b) A regulatory mechanism or equivalent to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law; and
- (c) Policies or procedures to ensure adequate long-term operating and maintenance of the BMPs

6. *Pollution Prevention/Good Housekeeping:*

- (a) The permittee shall develop and implement an operation and maintenance program with the goal of preventing or reducing pollutant runoff from MoDOT operations and maintenance located in areas established in **Part A – COVERAGE AND RESTRICTIONS**, item 1. As part of the SWMP, the pollution prevention/good housekeeping program shall include:
- i. BMPs designed or developed with the purpose of reducing floatables or other pollutants into the TS4 or waters of the state;
 - ii. Inspection procedures and schedules ensuring that structural BMPs are being implemented;
 - iii. A list of all MoDOT operations and maintenance areas subject to this program; and
 - iv. MoDOT community training on BMPs to prevent or reduce stormwater pollution from, but not limited to, the following activities:
 - (1) Welcome centers, rest areas, and commuter lots;
 - (2) Fleet and building maintenance;
 - (3) New construction and land disturbances;
 - (4) Stormwater system maintenance; and
 - (5) Bridge washing and cleaning activities.
 - v. Controls for reducing or eliminating the discharge of pollutants from highways and MoDOT owned and operated parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas at MoDOT building and lots.

F. MONITORING, RECORDKEEPING, AND REPORTING

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:
 - (a) All calibrations and maintenance records;
 - (b) All original strip chart recordings for continuous monitoring instrumentation;
 - (c) The date, location, and time of sampling or measurement;
 - (d) The individual(s) who performed the sampling or measurement;
 - (e) The date(s) analyses were performed;
 - (f) The individual(s) who performed the analyses;
 - (g) The analytical technique or methods used; and
 - (h) The result of such analyses.
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 sub-chapters N or O.
3. 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 period 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.
4. The permittee shall retain the most recent version of their SWMP at a reasonable location accessible to the Department.
5. The permittee shall submit the items under **Part F – MONITORING, RECORDKEEPING, AND REPORTING** of this permit, including a copy of the permit, SWMP, or application upon written request by the public.
6. MS4 SWMP Report. It is understood that this permit is specifically for MoDOT's TS4; however, for reporting purposes MoDOT shall submit a MS4 SWMP Report containing, at a minimum:
 - (a) Information regarding progress achieving the statutory goal of reducing the discharge of pollutants to the Maximum Extent Practicable;
 - (b) The status of the TS4's compliance with permit conditions;
 - (c) Assessment(s) of the appropriateness of identified BMPs and corresponding measureable goals for each MCM;
 - (d) A summary of results of information collected and analyzed during the reporting period, including monitoring data or quantifiable values per the TS4's measurable goals;
 - (e) A summary of the TMDL ARAP;
 - (f) If integrated planning is being utilized along with a summary of the status that incorporates the TMDL Attainment Plan.
 - (g) A summary of the stormwater activities the permit holders plan to undertake during the next reporting cycle (including an implementation schedule);
 - (h) Any proposed changes to the permit holders' SWMP, including changes to any identified BMPs or measurable goals that apply to the SWMP; and

- (i) Notice that the permit holders individually or in combination are relying on another government or non-government entity to satisfy some of the permit holders' permit obligations. If applicable, the permit holder(s) shall supply the name of the entity, the name of the entity's primary contact person, and other relevant contact information.
7. The MS4 SWMP Report shall be submitted on **February 28th** every odd year during the life of the permit until this operating permit is renewed, and contain all required information and cover the reporting period of January 1st of the year of the reporting period to December 31st of the 2nd year of the reporting period.
 8. The permit holders shall submit the MS4 SWMP Report on the STORM WATER ANNUAL REPORT – SMALL MS4 PERMITS, form (MO 780-1846) or revisions thereafter. If the permittee determines that report form MO 780-1846 does not appropriately or accurately capture the required data for their TS4, they can utilize an alternative report form. The alternative report form must be approved by the Water Protection Program's MS4 Coordinator before it can be submitted.

II. AREA-WIDE LAND DISTURBANCE STORMWATER PERMIT CONDITIONS

1. The area-wide land disturbance program is for land disturbance projects performed by MoDOT or land disturbance projects under contract by MoDOT within a permitted site. This portion of the permit covers land disturbance activities across the entire State of Missouri, including land disturbance projects in areas listed in the legal description section of this permit. For the purposes of this permit, a permitted site is defined as, at a minimum, the area within a site boundary where work is performed or contracted by MoDOT within MoDOT's temporary or permanent right-of-way. The permitted site must be clearly marked in MoDOT's SWPPP for each site.
2. This permit authorizes the discharge of stormwater and certain non-stormwater discharges from land disturbance sites that disturb one or more acres or disturb less than one acre when part of a larger common plan of development or sale that will disturb a cumulative total of one or more acres over the life of the project.
3. This permit authorizes stormwater and certain non-stormwater discharges from construction support activities associated to land disturbance activities within the permitted site (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided that appropriate stormwater controls are designed, installed, maintained and provided:
 - (a) The support activity is directly related to the construction site covered under this area-wide land disturbance program.
 - (b) The support activity is not a commercial operation; and
 - (c) The support activity does not continue to operate beyond the completion of the construction activity at the project it supports.

The permittee is responsible for compliance with this permit for any construction support activities or outside companies contracted to do work at the permitted site. Any projects contracted by MoDOT with support activities off MoDOT right-of-way or out of the permitted site are considered part of a common plan and are required to be covered under a land disturbance permit but not necessarily this permit.

4. This permit authorizes non-stormwater discharges from the following activities associated to land disturbance activities provided that these discharges are addressed in each site's specific Stormwater Pollution Prevention Plan (SWPPP) required by this permit:
 - (a) Dewatering activities if there are no contaminants other than sediment present in the discharge, and the discharge is treated as specified in requirements 21.o. of this permit;
 - (b) Flushing water hydrants and potable water lines;
 - (c) Water only (i.e., without detergents or additives) rinsing of streets and buildings; and
 - (d) Site watering to establish vegetation.
5. This permit does not authorize land disturbance activity in jurisdictional waters of the United States, unless the permittee has obtained the required Clean Water Act Section 404 Department of the Army permit from the U.S. Army Corps of Engineers and its associated Section 401 Water Quality Certification from the Department. Land disturbance activities may not begin in the affected waters of the United States until the required §404 permit and §401 water quality certification have been obtained. This includes, but is not limited to:
 - (a) placement of fill materials in waters
 - (b) obstruction of water flow,
 - (c) changing the channel of a defined drainage course.
6. Construction of an earthen basin or holding structure may require a construction permit. Instructions on how to apply for and receive a construction permit are located at <https://dnr.mo.gov/env/wpp/permits/ww-construction-permitting.htm>. Questions regarding permit requirements may be directed to Department's Water Protection Program phone line at 573-751-1300, or toll free at 800-361-4827.
7. This permit prohibits any discharge of wastewater generated from air pollution control equipment or the containment of scrubber water in lined ponds to waters of the state.
8. This permit prohibits any discharge of sewage, wastewater, or pollutants to waters of the state including but not limited to:
 - (a) Any hazardous material, oil, lubricant, solid waste or other non-naturally occurring substance from the site, including fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
 - (b) Soaps or solvents used in vehicle and equipment washing;
 - (c) Hazardous substances or petroleum products from an on-site spill or handling and disposal practices;
 - (d) Wash and/or rinse waters from concrete mixing equipment including ready mix concrete trucks. Any such pollutants cannot be discharged to waters of the state. Proper BMPs may be installed to capture wastewater and shall not allow discharge to surface or subsurface waters. Any waste concrete must be properly disposed of;
 - (e) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

- (f) Domestic wastewaters, including gray waters; or
 - (g) Industrial stormwater runoff from an industry other than construction (including support activities described above) or land disturbance.
9. This permit does not authorize discharges which are located in a way to allow water to be released into sinkholes, caves, fissures, or other openings in the ground which could drain into aquifers directly or indirectly (except losing streams) per 10 CSR 20-7.015(7).
 10. The permit does not authorize stormwater discharges from land disturbance activities at sites that have contaminated soils that will be disturbed by the land disturbance activity or where such materials are brought to the site to use as fill or borrow.
 11. This permit does not supersede any requirement for obtaining project approval under an established local authority.
 12. These activities are exempt from Area-Wide Land Disturbance Stormwater Requirements of this permit:
 - (a) Facilities that discharge all stormwater runoff directly to a combined sewer system.
 - (b) Land disturbance activity as described in 10 CSR 20-6.010(1)(B) and 10 CSR 20-6.200(1)(B).
 - (c) Oil and gas related activities as listed in 40 CFR 122.26(a)(2)(ii).
 13. Quarterly Reports: The permittee shall prepare a quarterly report with a list of active land disturbance sites performed or contracted by MoDOT within a permitted site. Submit the following information electronically as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:
 - (a) The name of the project;
 - (b) The location of the project (including the county);
 - (c) The name of the primary receiving water(s) for each project;
 - (d) A description of the project;
 - (e) The number of acres disturbed;
 - (f) The percent of completion of the project. A project may be considered 100% complete when final stabilization has been achieved. After reporting a project as 100% complete, the project need not be mentioned on subsequent quarterly reports;
 - (g) The projected date of completion.

The quarterly report(s) shall be maintained by the permittee and readily available for review by the Department as well as submitted to the Department quarterly via the Department's eDMR system. The permittee shall submit quarterly reports according to Table A.

Table A Schedule for Quarterly Reporting		
Activity for the months of:	Corresponding Quarter:	Report is due:
January, February, March	1st Quarter	April 28
April, May, June	2nd Quarter	July 28
July, August, September	3rd Quarter	October 28
October, November, December	4th Quarter	January 28

14. This area-wide land disturbance program is to ensure the design, installation and maintenance of effective erosion and sediment controls minimize the discharge of pollutants by:
 - (a) Controlling stormwater volume and velocity within the site to minimize soil erosion;
 - (b) Controlling stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion and scour in the immediate vicinity of discharge points;
 - (c) Minimizing the amount of soil exposed during construction activity;
 - (d) Minimizing the disturbance of steep slopes;
 - (e) Addressing factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle size expected to be present on the site to minimize sediment discharges from the site;
 - (f) Providing and maintaining natural buffers around surface waters as detailed below in 21.f.,
 - (g) Directing stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration and filtering, unless infeasible; and
 - (h) Minimizing soil compaction and, unless infeasible, preserve topsoil. Minimizing soil compaction or preserving topsoil is not required where the intended function of a specific area of the site dictates that it be compacted or the topsoil be disturbed or removed.

15. Installation of Best Management Practices (BMPs) necessary to prevent soil erosion at the project boundary must be complete prior to the start of all phases of construction.
16. Install sediment controls along any perimeter areas of the permitted site where stormwater has the potential to leave the site.
 - (a) Remove any sediment from the device per the manufacturer's instructions or before it has accumulated to one-half of the above-ground height of any perimeter control.
 - (b) For sites where perimeter controls are infeasible, other practices shall be implemented to minimize discharges to perimeter areas of the site.
17. BMPs shall be maintained and remain in effective operating condition in disturbed areas during the entire duration of the project, with repairs made within the timeframe specified in requirements 28.g. of this permit, until final stabilization has been achieved. Temporary BMPs may be added and removed as necessary with updates to the SWPPP as specified in the requirements below. The project is considered to be finally stabilized when perennial vegetation, pavement, buildings, or structures using permanent materials cover all areas that have been disturbed and all supporting activities, which are not intended to be permanent, have been removed. With respect to areas that have been vegetated, vegetation cover shall be at least 70% over 100% of the site.
18. Minimize sediment track-out from the site.
 - (a) Restrict vehicle traffic to properly designed exit points.
 - (b) Use appropriate stabilization techniques at all points that exit onto paved roads.
 - (c) Remove any sediment that has been tracked out within the same business day or by the end of the next business day if track-out occurs on a non-business day.
19. **SWPPP Development and Implementation:** A SWPPP shall be developed for each land disturbance site. Development and implementation of a SWPPP shall incorporate site-specific practices to best minimize the soil exposure, soil erosion, and the discharge of pollutants. The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this permit throughout the term of each land disturbance project. The SWPPP shall be updated any time site conditions in the field require adjustments to the project or BMPs. **Each SWPPP must be specific to the land disturbance site and be developed prior to conducting any land disturbance activities at the site.** Either an electronic copy or a paper copy of the SWPPP must be accessible to anyone on-site at all times when land disturbance operations are in progress, or other operational activities that may affect the maintenance or integrity of the BMP structures and made available as specified below.
20. Each site's SWPPP must:
 - (a) List and describe all points of discharge to receiving water(s)
 - (b) Incorporate required practices identified in Good Housekeeping requirement 21 below;
 - (c) Incorporate erosion control practices specific to site conditions;
 - (d) Provide for maintenance and adherence to the plan;
 - (e) Discuss whether or not additional authorizations, such as a Section 404 permit and associated Section 401 Water Quality Certification are required for the project;
 - (f) Name the person responsible for inspection, operation and maintenance of BMPs; and
 - (g) List the names of any sub-contractors responsible for erosion and sediment control, their role at the land disturbance site, and if they utilize offsite support activities.

The following manuals are recommended resources for the selection of appropriate BMPs. *Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*, (Document number EPA 833-R-06-004) published by the United States Environmental Protection Agency (USEPA) in May 2007. This manual as well as other information, including examples of construction SWPPPs, is available at the USEPA internet site at <https://www.epa.gov/npdes/developing-stormwater-pollution-prevention-plan-swppp>; and the latest version of *Protecting Water Quality: A field guide to erosion, sediment and stormwater best management practices for development sites in Missouri*, published by the Department is available on the Department's internet site at <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>.

The permittee is not limited to the use of these guidance manuals. Other guidance publications may be used to select appropriate BMPs. However, all BMPs should be described and justified in the SWPPP of each site.

21. **SWPPP Requirements:** The following information and practices shall be provided for in the SWPPP of each site:
 - (a) **Nature of the Construction Activity:** The SWPPP briefly must describe the nature of the construction activity, including:
 - i. The function of the project (e.g., right-of-way, highway, etc.);
 - ii. The intended sequence and timing of activities that disturb the soils at the site;
 - iii. List of any sub-contractor(s) responsible for erosion and sediment control and their role at the site;
 - iv. Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities including off-site borrow and fill areas; and

- v. A general map (e.g., United States Geological Survey quadrangle map, a portion of a city or county map, or other map) with enough detail to identify the location of the construction site and all waters of the state within one mile of the site.
- (b) Site Map: The SWPPP of each site must contain a legible site map showing the permitted site boundaries, location of public notification sign(s), and points of discharge to receiving water(s) and identifying:
- i. Direction(s) of stormwater flow and approximate slopes for all phases of construction activities;
 - ii. Areas of soil disturbance and areas that will not be disturbed (or a statement that all areas of the site will be disturbed unless otherwise noted);
 - iii. Location of permanent and temporary structural and non-structural BMPs identified in the SWPPP;
 - iv. Locations where stabilization practices are expected to occur;
 - v. Locations of material, waste, borrow, or equipment storage areas;
 - vi. Locations of all waters of the state (including wetlands);
 - vii. Locations where stormwater discharges to a water, including any discharges to waters within and at the perimeter of the permitted site;
 - viii. Locations where stormwater discharges to another regulated MS4; and
 - ix. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
- (c) Site Description: In order to identify the site, the SWPPP of each site shall include facility and points of discharge to receiving water(s) information. The SWPPP shall have sufficient information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs.
- (d) Selection of Temporary and Permanent BMPs: The permittee shall select, install, use, operate and maintain appropriate BMPs for each site and list them in the SWPPP.
- (e) Preservation of Trees and Vegetation: The SWPPP of each site shall require existing vegetation and trees to be preserved where practical.
- (f) Surface Water Buffers: For waters of the state as defined by Section 644.016.1(27), the permittee must comply with i, ii, or iii, except as noted in iv:
- i. Provide and maintain a 50-foot undisturbed natural buffer;
 - ii. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or
 - iii. If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
 - iv. The permittee is not required to comply with i, ii, or iii above if one of the following exceptions apply and documentation is provided in the SWPPP:
 - (1) As authorized per Clean Water Act Section 404 Department of the Army permit and its associated Section 401 Water Quality Certification from the Department. The angle of any crossing shall be as perpendicular as feasible to the water course or natural stream buffer to minimize adverse impacts.
 - (2) If there is no discharge of stormwater to waters of the state through the area between the disturbed portions of the site and waters of the state located within 50 feet of your site. This includes situations where you have implemented permanent control measures that will prevent such discharges, such as a berm or other barrier.
 - (3) Where no natural buffer exists due to preexisting development disturbances that occurred prior to the initiation of planning for the current development of the site. Where some natural buffer exists but portions of the area within 50 feet of the waters of the state are occupied by preexisting development disturbances, you are required to comply with i, ii, or iii above.
 - (4) Where site constraints make it infeasible to implement a buffer or equivalent provided you limit disturbances within 50 feet of any waters of the state and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from earth disturbances within 50 feet of the water of state.
 - (5) For sites less than one (1) acre of total land area that is part of a larger common plan if the larger common plan will disturb equal to or greater than (1) acre; where site constraints make it infeasible to implement a buffer or equivalent provided you limit disturbances within 50 feet of any waters of the state and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from earth disturbances within 50 feet of the water of state.
- (g) Measuring Buffer Width: Where the permittee is retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water:
- i. The ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or
 - ii. The edge of the stream or river bank, bluff, or cliff, whichever is applicable.

- (h) Description of BMPs: The SWPPP of each site shall include a description of both structural and non-structural BMPs used one or more times at the site, providing the following general information for each:
- Physical description of the BMP;
 - Site conditions that must be met for effective use of the BMP;
 - BMP installation/construction procedures, including typical drawings; and
 - Operation and maintenance procedures for the BMP.
- (i) Specific Instance of BMPs: The SWPPP of each site shall provide the following information for each specific instance where a BMP is to be installed:
- Whether the BMP is temporary or permanent;
 - Where, in relation to other site features, the BMP is to be located;
 - When the BMP will be installed in relation to each phase of the land disturbance procedures to complete the project; and
 - Site conditions that must be met before removal of the BMP if the BMP is not a permanent BMP.
- (j) Disturbed Areas: Slopes for disturbed areas must be defined in each site's SWPPP. A site map or maps defining the sloped areas for all phases of the project must be included in the SWPPP.
- For soil disturbing activities that have temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days:
 - The permittee shall construct BMPs to establish interim stabilization; and
 - Stabilization must be initiated as soon as practicable but no later than seven calendar days and completed within 14 calendar days.
 - For soil disturbing activities that have been permanently ceased on any portion of the site, final stabilization of disturbed areas must be initiated as soon as practicable but no later than seven calendar days and completed within 14 calendar days.
 - Allowances to the 14-day completion period for temporary and final stabilization may be made due to weather and equipment malfunctions. In drought-stricken areas where initiating vegetative stabilization measures immediately are infeasible, alternative stabilization measures must be employed. The use of allowances shall be documented in the SWPPP.
 - Interim stabilization shall consist of well-established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area than is normally used during daily operations. These BMPs may include a combination of sediment basins, check dams, sediment fences, and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (three feet horizontal to one foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee shall establish interim stabilization within seven days of ceasing operations on that part of the site.
 - In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.
- (k) Installation: The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in each site's SWPPP.
- Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Note that this requirement does not apply to earth disturbances related to initial site clearing and establishing entry, exit and access of the site, which may require that stormwater controls be installed immediately after the earth disturbance.
 - For phased projects, BMPs shall be properly installed as necessary prior to construction activities.
 - Stormwater discharges from disturbed areas which leave the site shall pass through an appropriate impediment to sediment movement such as a sedimentation basin, sediment traps, silt fences, and/or check dams prior to leaving the land disturbance site.
 - A drainage course change shall be clearly marked on a site map and described in the SWPPP.
 - If vegetative stabilization measures are being implemented, stabilization is considered "installed" when all activities necessary to seed or plant the area are completed.
- (l) Sedimentation Basins: The SWPPP for each land disturbance site shall include a sedimentation basin(s) for each drainage area with ten or more acres disturbed at one time.
- The sedimentation basin(s) shall be sized to a local 2-year, 24-hour storm. A 2-year, 24-hour storm event shall be determined for the project location using the National Oceanic and Atmospheric Administration's National Weather Service Atlas 14, which can be located at <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
 - Accumulated sediment shall be removed from the basin when basin is 50% full.
 - Utilize outlet structures that withdraw water from the surface when discharging from basins and impoundments unless infeasible.
 - Discharges from the basin shall not cause scouring of the banks or bottom of the receiving stream.

- v. The SWPPP shall require the basin be maintained until final stabilization of the disturbed area served by the basin.
 - vi. The SWPPP shall require both temporary and permanent sedimentation basins to have a stabilized spillway to minimize the potential for erosion of the spillway or basin embankment.
 - vii. Where use of a sediment basin is infeasible, the SWPPP shall evaluate and specify other similarly effective BMPs to be employed to control erosion and sediment delivery. These similarly effective BMPs shall be selected from appropriate BMP guidance documents authorized by this permit. The BMPs must provide equivalent water quality protection to achieve compliance with this permit.
- (m) Pollution Prevention Measures: The SWPPP shall include BMPs for pollution prevention measures. At minimum such measures must be designed, installed, implemented and maintained to:
- i. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk or stormwater contamination (such as final products and material intended for outdoor use); and
 - ii. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Included but not limited to the installation of containment berms and use of drip pans at petroleum product and liquid storage tanks and containers.
- (n) Roadways: Where applicable, upon installation of or connection to roadways, all efforts should be made to prevent the deposition of earth and sediment onto roadways through the use of proper BMPs.
- i. Stormwater inlets susceptible to receiving sediment from the permitted land disturbance site shall have curb inlet protection.
 - ii. Where stormwater will flow off the end of where a roadway terminates, a sediment catching BMP such as berm or silt fence shall be provided.
 - iii. Curb inlets shall be cleaned weekly or following a precipitation event that generates a run-off.
- (o) Dewatering: Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. Appropriate controls shall be detailed in the SWPPP, including specific BMPs designed to treat water pumped from trenches and excavations. In no case shall this water be pumped off site without being treated by the specified BMPs.
22. Good housekeeping practices shall be maintained at all times to keep waste from entering waters of the state. Management of solid and hazardous waste includes providing trash containers and regular site cleanup for proper disposal of solid waste such as scrap building material, product/material shipping waste, and food containers and cups, and providing containers and proper disposal of waste paints, solvents and cleaning compounds. Portable toilets for disposal of sanitary sewage and construction material storage areas should be kept away from drainage courses and low areas.
23. All fueling facilities present shall at all times adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers.
24. Hazardous substances that are transported, stored, or used for maintenance, cleaning, or repair shall be managed according to the provisions of the Missouri Hazardous Waste Laws and Regulations.
25. Containers: All paint, solvents, petroleum products, petroleum waste products, and storage containers such as drums, cans, or cartons shall be stored according to BMPs and any applicable regulations. The materials exposed to precipitation shall be stored in watertight, structurally sound, closed containers. All containers shall be inspected for leaks or spillage during the inspection of BMPs.
26. Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as necessary during the term of the land disturbance activity. It is necessary for the permittee to amend the SWPPP, at a minimum, whenever the:
- (a) Design, operation, or maintenance of BMPs is changed, including the installation and removal of temporary BMPs;
 - (b) Design of the construction project is changed and could significantly affect the quality of the stormwater discharges;
 - (c) Department notifies the permittee in writing of deficiencies in the SWPPP;
 - (d) SWPPP is determined to be ineffective in minimizing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes); and/or
 - (e) Department determines violations of water quality standards may occur or have occurred.
27. An individual shall be designated by the permittee as the lead for environmental matters for each site. The lead individual for environmental matters shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control

practices in general. The lead individual for environmental matters or a designated inspector knowledgeable in erosion, sediment and stormwater control principles shall inspect all structures that function to prevent pollution of waters of the state

28. Site Inspections: The permittee (or a representative of the permittee) shall conduct regularly scheduled inspections.
- (a) These inspections shall be conducted by a qualified person who is responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site.
 - (b) Inspections are only required during the project's normal working hours.
 - (c) For disturbed areas that have not been finally stabilized, all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance.
 - (d) All stormwater outfalls shall be inspected for evidence of erosion or sediment deposition.
 - (e) Unless inaccessible, the receiving stream shall also be inspected for 50 feet downstream of the outfall for evidence of erosion or sediment deposition from the land disturbance site.
 - (f) Areas on-site that have been stabilized must be inspected per the following:
 - i. For areas where disturbed portions have undergone temporary stabilization at the same time active construction continues on other areas, inspections shall occur at least once a month while stabilized and when re-disturbed shall follow either frequency outlined in subsection (g) below.
 - ii. For areas where disturbed portions have initiated final stabilization at the same time active construction continues on other areas, inspection frequency may cease on the finally stabilized areas according to the following:
 - (1) After the first monthly inspection, inspect once more within 24 hours of a storm event of 0.25 inches or greater.
 - (2) If there are no issues or evidence of stabilization problems, further inspections may cease.
 - (3) If unstable site conditions or sediment movement are observed, the site must be re-stabilized and monthly inspections shall occur until final stabilization is confirmed following a storm event of 0.25 inches or greater.
 - (g) All BMPs must be inspected in accordance with one of the two schedules listed below, and any changes to the frequency of inspections, including switching between the options listed below, must be documented in the SWPPP:
 - i. At least once every seven-calendar days and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour precipitation frequency has ceased during a normal workday and within 72 hours if the event ceases during a non-work day such as a weekend or holiday. The 2-year, 24-hour precipitation frequency estimates for Missouri may be found at http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mo; or
 - ii. Once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater or the occurrence of runoff from snowmelt. To determine if a storm event of 0.25 inches or greater has occurred on-site, the permittee must either keep a properly maintained precipitation gauge on site, or obtain the storm event information from a weather station near the site.
 - (1) Inspections shall be conducted within 24 hours once a storm event has produced 0.25 inches within a 24-hour period, even if the storm event is still continuing.
 - (2) If the permittee has elected to inspect every 14 calendar days and there is a storm event at the site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, the permittee is required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.
 - (h) Any structural BMP or maintenance problems shall be noted in an inspection report and corrected as soon as possible but no more than seven calendar days after the inspection.
 - i. If weather conditions prevent correction of BMPs within seven calendar days, the reasons for the delay must be documented (including pictures) and there must be a narrative explaining why the work cannot be accomplished within the seven day time period.
 - ii. The documentation must be filed with the regular inspection reports.
 - iii. The permittee shall correct the problem as soon as weather conditions allow.
29. The SWPPP must explain how the person responsible for erosion control will be notified when stormwater runoff occurs.
30. Site Inspections Reports: A log of each inspection and copy of the inspection report shall be kept readily accessible and must be available upon request by the Department. Electronic logs are acceptable as long as reports can be provided in a timely manner. If inspection reports are kept off-site, the SWPPP must indicate where they are stored. The inspection report shall be signed by the permittee or by the person performing the inspection if duly authorized to do so. The inspection report is to include the following minimum information:
- (a) Inspector's name;
 - (b) Date of inspection;
 - (c) Observations relative to the effectiveness of the BMPs;
 - (d) Actions taken or necessary to correct the observed problem; and
 - (e) Listing of areas where land disturbance operations have permanently or temporarily stopped.
31. Notification to All Contractors: The permittee shall be responsible for notifying each contractor or entity (including utility crews and city employees or their agents) who will perform work at the site of the existence of the SWPPP and what action or precautions shall be taken while on-site to minimize the potential for erosion and the potential for damaging any BMP. The

SWPPP shall contain a record of notification; for example, a list of contractors or entities given a copy of the SWPPP or education session sign-in sheet. The permittee is responsible for any damage a subcontractor may do to established BMPs and any subsequent water quality violation resulting from the damage.

32. Public Notification: Each site shall post a copy of the public notification sign in a location that is visible to the public. The sign must remain posted at the site until the construction activity at that site has achieved final stabilization.
33. All record keeping for releases, spills or illegal discharges shall be retained with the SWPPP and made available to the Department upon request. This includes all investigations and enforcement actions. Release of a hazardous substance must be reported to the Department. If the spill occurs outside of normal business hours, or if the permit holder cannot reach regional office staff for any reason, the permit holder is instructed to report the spill to the Department's 24-hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. Leaving a message on a Department staff member voice-mail does not satisfy this reporting requirement.
34. The Department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or other such evidence of contamination from activities at the site. If such an action is needed, the Department will specify in writing any sampling requirements, including such information as location, extent and parameters.
35. The permittee shall retain copies of this permit, the SWPPP and all amendments for the site, results of any monitoring and analysis, and all site inspection records. These may be maintained electronically. The records shall be accessible during normal business hours.
36. The permittee shall provide a copy of the SWPPP to the Department, as requested.
37. The permittee shall provide a copy of the SWPPP to those who are responsible for installation, operation, or maintenance of any BMP. The permittee, their representative, and/or the contractor(s) responsible for installation, operation and maintenance of the BMPs shall have a current copy of the SWPPP with them when on the project site.
38. If the permittee sells any portion of the permitted site to a developer for commercial, industrial, or residential use, this land remains a part of the common sale and the new owner must obtain a permit prior to conducting any land disturbance activity. Therefore, the original permittee must amend the SWPPP to show that the property has been sold and therefore no longer under the original permit coverage.

III. STANDARD PERMIT CONDITIONS (for both TS4 and Area-Wide Land Disturbance Programs)

1. *Electronic Discharge Monitoring Report (eDMR) Submission System.*
Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally-consistent set of data about the NPDES program. The permittee under this permit shall comply with the Department's requirements for electronic reporting.
 - (a) Reporting Requirements.
 - i. Registration to participate in the Department's eDMR system is required as part of the application for permit coverage in order to constitute a complete permit application and may be accessed at dnr.mo.gov/env/wpp/edmr.htm.
 - ii. The permittee must electronically submit required reports via the eDMR system.
 - (b) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:
 - i. Applications/Notices of Intent to discharge (NOIs);
 - ii. Notices of Termination (NOTs);
 - iii. No Exposure Certifications (NOEs); and
 - iv. Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs).
 - (c) Electronic Submissions. To access the eDMR system, use the following web link:
<https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
 - (d) Waivers from Electronic Reporting.
 - i. The permittee must electronically submit reports unless a waiver is granted by the Department in compliance with 40 CFR Part 127.
 - ii. The permittee may obtain a temporary or permanent electronic reporting waiver by first submitting an eDMR Waiver Request Form (Form 780-2692: <http://dnr.mo.gov/forms/780-2692-f.pdf>), by contacting the appropriate permitting office or emailing edmr@dnr.mo.gov. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days of receipt.
 - iii. Only permittees with an approved waiver request may reports on paper to the Department for the period that the approved electronic reporting waiver is effective.
2. *Duty to Comply:* The permit holder shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law (CWL) and the Federal CWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal. It is a violation of the Missouri CWL to fail to pay fees associated with this permit, [RSMo §644.055].
3. *Duty to Mitigate:* The permit holder 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.
4. *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 condition of this permit 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 this permit.
5. *Advanced Notice:* The permit holder shall give advanced notice to the Department of any planned changes which may result in noncompliance with the terms and conditions of this permit.
6. *Inspection and Entry:* The permit holder shall allow the Department or an authorized representative (including an authorized contractor as a representative to EPA or the Department) upon the presentation of credentials and other documents as may be required by law to:
 - (a) Enter the permit holder's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
 - (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - (c) Inspect any facility, equipment (including monitoring and control equipment), practices, or operation regulated or required under this permit; and
 - (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the federal CWA and/or Missouri's CWL, any substance or parameter at any location.
7. *Monitoring Methods:* Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless another method is required under 40 CFR subchapters N or O or unless otherwise specific in this permit or an approved Quality Assurance Project Plan.

8. *Duty to Provide Information:* The permittee shall furnish to the Department, within a reasonable time, any information that 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.
9. *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.
10. *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, termination, or notification of planned changes or anticipated noncompliance does not stay an term or condition of this permit.
11. *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 renewed permit. The renewal application shall be submitted at least 180 days prior to expiration of this permit unless the Department allows a later deadline not to exceed the expiration of this permit.
12. *Signatory Requirement:*
 - (a) All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - (b) The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - (c) The Missouri Clean Water Law provides that 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 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.
13. *Other Information:* Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATEMENT OF BASIS
MO-0137910
MISSOURI DEPARTMENT OF TRANSPORTATION (MoDOT)
AREA-WIDE LAND DISTURBANCE

This Statement of Basis (Statement) gives pertinent information regarding modification(s) to the above listed operating permit. A Statement is not an enforceable part of a Missouri State Operating Permit.

Part I – Facility Information

Facility Type: Construction and Land Disturbance Stormwater

Facility Description: Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading, filling, and other activities that result in the destruction of the root zone and/or land disturbance activity that is reasonably certain to cause pollution to waters of the state).

Part II – Modification Rationale

This operating permit is hereby modified to reflect the addition of the applicable MOR100 Area-Wide Land Disturbance permit requirements to this MoDOT site-specific TS4 permit. This was done at the request of MoDOT. Rather than renew the expired MOR100007 general land disturbance permit, the updated MOR100 land disturbance permit conditions are being incorporated into this site-specific permit. There are no changes made to the TS4 permit requirements or information. The original fact sheet is retained for informational purposes.

Decisions Supporting Modification Rationale:

Relevant Definitions:

Common Promotional Plan: A plan undertaken by one (1) or more persons, to offer lots for sale or lease; where land is offered for sale by a person or group of persons acting in concert, and the land is contiguous or is known, designated or advertised as a common unit or by a common name or similar names, the land is presumed, without regard to the number of lots covered by each individual offering, as being offered for sale or lease as part of a common promotional plan.

Permitted site: At a minimum, the area within a site boundary where work is performed or contracted by MoDOT within MoDOT's temporary or permanent right-of-way. The permitted site must be clearly marked in MoDOT's SWPPP for each site.

Immediately: For the purposes of this permit, immediately should be defined as within 24 hours.

Infeasible: Infeasible means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale: A contiguous area where multiple separate and distinct construction activities are occurring under one plan.

Non-structural Best Management Practice: Institutional, educational or pollution prevention practices designed to limit the amount of stormwater runoff or pollutants that are generated in the landscape. Examples include ordinance development or a training program.

Ordinary High Water Mark: The line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation and/or the presence of litter and debris.

Peripheral: For the purposes of this permit, peripheral should be defined as the outermost boundary of the area that will be disturbed.

Permanently: For the purposes of this permit, permanently should be defined as any activity that has been ceased without any intentions of future disturbance.

Structural Best Management Practice: Physical controls working individually or as a group, appropriate to the source, location, and area climate for the pollutant to be controlled. Examples include moving earth for sedimentation basin and planting vegetation.

Waters of the state: Section 644.016.1(27), RSMo defines waters of the state as, "All waters within the jurisdiction of this state, including all rivers, streams, lakes and other bodies of surface and subsurface water lying within or forming a part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased or otherwise controlled by a single person or by two or more persons jointly or as tenants in common."

Support activities: For the purposes of this permit, support activities are directly related to the construction site covered area-wide land disturbance section of this permit. Support activities are not a commercial operation and do not continue beyond the completion of the construction activity at the project it supports.

Temporary Stabilization: For the purposes of this permit, an area of a project is considered to be temporarily stabilized when BMPs have been installed with the intent to prevent erosion in areas of a project that may or are intended to be disturbed before the whole project has achieved final stabilization. Sediment control BMPs may be installed to supplement any erosion prevention BMPs.

Receiving Stream Information:

Applicable Designations of Waters of the State:

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

Please mark all appropriate designated waters of the state categories of the receiving stream.

- ☒ Missouri or Mississippi River [10 CSR 20-7.015(2)]
- ☒ Lakes or Reservoirs [10 CSR 20-7.015(3)]
- ☒ Losing Streams [10 CSR 20-7.015(4)]
- ☒ Metropolitan No-Discharge Streams [10 CSR 20-7.015(5)]
- ☒ Special Streams [10 CSR 20-7.015(6)]
- ☐ Subsurface Waters [10 CSR 20-7.015(7)]
- ☒ All Other Waters [10 CSR 20-7.015(8)]

Missouri Water Quality Standards (10 CSR 20-7.031) defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses shall be maintained in accordance with 10 CSR 20-7.031(4). The BMP requirement established by this permit are intended to be protective of all streams that fall within the categories of receiving water bodies indicated above. A general permit does not take into consideration site-specific conditions.

Area-Wide Land Disturbance Requirements

The area-wide land disturbance section, Requirement number 3 includes support activities. Those support activities for land disturbance projects performed or under contract by MoDOT within a permitted site are to be included in the acreage calculations, whether the support activities are located adjacent to, on-site, or off-site from the main land disturbance construction area.

For example, if a project performed by MoDOT has a main land disturbance site that is 0.6 acre, and MoDOT disturbs an additional 0.5 acre within their right-of-way or permitted site for the purposes of the same project but physically separated from that project area for ancillary activities such as a borrow material, then the total acreage for this project is 1.1 and is to be included as part of the permitted site. The conditions of this permit apply to both the main construction area and the borrow area.

If MoDOT has a contractor performing land disturbance work within a MoDOT permitted site that is 0.6 acre and the project requires the contractor to get fill from a borrow site specific to this project but outside of the permitted site which equals 0.5 acre, then the total acreage for the MoDOT permit is 0.6 acre and the remaining 0.5 acre borrow area must still be covered by a land disturbance permit. Where MoDOT is limited to the boundary of their right-of-way (marked as the permitted site in the SWPPP), it is the responsibility of the contractor to obtain coverage under an individual land disturbance permit (MORA). The conditions of this permit apply only to the land disturbance within the permitted site and MoDOT must note in the SWPPP who the contractor is, what their role at the site will be, and that they are utilizing an offsite borrow area for any separately permitted activity.

Regarding MoDOT's ability to do work off their right-of-way or any temporary easements identified as such, the Missouri Constitution per Article IV, Section 30(b) prohibits the use of state revenue derived from highway users (e.g., license fees, fuel taxes) for anything other than state highway purposes such as maintenance and construction of state highways. Any use of funds in areas not

owned or secured by MoDOT would be considered a diversion of state funds.
(<http://www.moga.mo.gov/mostatutes/ConstArticles/Art04.html>)

If the proposed project encounters and will potentially affect a species of concern, please report it to the Missouri Department of Conservation and the United States Fish and Wildlife Service. For more information about requirements of the Endangered Species Act, please visit the following links:

1. To determine the potential for species of concern within or near a project, please visit the United States Fish and Wildlife Services' "Information, Planning and Conservation" website at <http://ecos.fws.gov/ipac/>.
2. If there are listed species in the county or township, check to see if critical habitat has been designated and if that area overlaps or is near the project area. Critical habitat designations and associated requirements may also be found at 50 CFR Parts 17 and 226. For additional information, use the map view tool at <http://criticalhabitat.fws.gov/crithab/> to find data specific to the state and county.

The Missouri Department of Conservation's internet site for the Natural Heritage Review may be very helpful and can be found at the following link, <https://naturalheritagereview.mdc.mo.gov/>.

The area-wide land disturbance section, Requirement number 10 was added to cite all state exemptions from permitting requirements, combining several previous cited exemptions into one condition and reference.

The area-wide land disturbance section, Requirement number 10 was also added to cite federal regulations that exclude land disturbance projects related to the installation or maintenance work for oil and gas related activities.

The area-wide land disturbance section, Requirement number 17 is addressing BMPs in general. As long as there is disturbance on the site, there shall be BMPs that appropriately address the disturbance. It does not mean that the same temporary BMPs must be kept in place until the entire site is stabilized. Temporary BMPs may be used as needed in varying degrees of time and space on the site and changes noted in the SWPPP.

Rationale of Technology Based Limitations & Permit Conditions:

305(b) Report, 303(d) List, & Total Maximum Daily Load (TMDL):

Section 305(b) of the Federal CWA requires each state identify waters not meeting Water Quality Standards and for which adequate water pollution controls have not been required. Water Quality Standards protect such beneficial uses of water as whole body contact, 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 normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed which shall include the TMDL calculation. For facilities with an existing general permit before a TMDL is written on their receiving stream, the Department will evaluate the permit and may require any facility authorized by this general permit to apply for and obtain a site-specific operating permit. Requests for coverage of a new facility under this general permit will be evaluated on a case-by-case basis for facilities located within the watershed of an impaired water as designated on the 305(b) Report.

Anti-backsliding:

A provision in the Federal Regulations [CWA Section 303(d)(4); CWA Section 402(c); 40 CFR Part 122.44(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- ☒ Applicable: Backsliding proposed in this permit conforms to the anti-backsliding provisions of Section 402(o) of the CWA and 40 CFR 122.44. The Department has determined that technical mistakes were made in the previous permit [CWA 402(o)(2)(B)(ii)]. The Department has determined that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).

Language stating the permit does not authorize redirection of stormwater across private property not owned or operated by the permittee was removed from the area-wide land disturbance requirements due to lack of regulatory authority.

Antidegradation:

Antidegradation policies ensure protection of water quality for a particular water body on a pollutant by pollutant basis to ensure Water Quality Standards are maintained to support beneficial uses such as fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as an Outstanding National Resource Water or Outstanding State

Resource Water [10 CSR 20-7.031(3)(C)]. Antidegradation policies are adopted to minimize adverse effects on water. The Department has determined that the best avenue forward for implementing the Antidegradation requirements into this permit modification is by requiring the appropriate development and maintenance of a SWPPP. The SWPPP must identify all Best Management Practices (BMPs) that are reasonable and effective, taking into account environmental impacts and costs. This analysis must document why no discharge or no exposure options are not feasible at the facility. 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 project covered under this permit, which undergoes expansion or discharges a new pollutant of concern, must update their SWPPP and select new BMPs that are reasonable and cost effective. New projects seeking coverage under this permit are required to develop a SWPPP that includes this analysis and documentation of appropriate BMPs. Renewal of coverage for a project requires a review of the SWPPP to assure that the selected BMPs continue to be appropriate.

- ☒ Applicable: The main pollutant of concern for land disturbance activities is sediment. Compliance with the technology-based limitations established in this permit for the protection of General Criteria, along with the evaluation and implementation of BMPs as documented in the SWPPP, meets the requirements of Missouri's Antidegradation Review [10 CSR 20-7.031(3), 10 CSR 20-7.031 Table A, and 10 CSR 20-7.015(9)(A)5].

Stormwater Pollution Prevention Plan (SWPPP):

In accordance with 40 CFR 122.44(3)(k) Best Management Practices (BMPs), BMPs are implemented to control or abate the discharge of pollutants when: (1) Authorized under Section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under Section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with Developing Your Stormwater Pollution Prevention Plan, a Guide for Construction Sites (EPA 833-R-06-004; https://www3.epa.gov/npdes/pubs/sw_swppp_guide.pdf) published by the United States Environmental Protection Agency (EPA) in May 2007, BMPs are measures or practices used to reduce the amount of pollution entering waters of the state. BMPs may take the form of a process, activity, or physical structure. EPA developed resources and tools related to construction stormwater along with the BMPs to control and minimize stormwater (<https://www.epa.gov/npdes/stormwater-discharges-construction-activities>). Along with EPA's resources and tools, the International Stormwater BMP database (www.bmpdatabase.org/index.htm) may provide guidance on BMPs appropriate for specific industries.

Additionally in accordance with Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

- ☒ Applicable: A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

The new permit has been revised to allow permittees to store SWPPP documents electronically as long as they can be provided in an expedient manner.

Release of a hazardous substance must be reported to the Department in accordance with 10 CSR 24-3.010. If the spill occurs outside of normal business hours, or if the permit holder cannot reach regional office staff for any reason, the permit holder is instructed to report the spill to the Department's 24-hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. Leaving a message on a Department staff member voice-mail does not satisfy this reporting requirement.

Water Quality Standards:

Per 10 CSR 20-7.031(4), General Criteria shall be applicable to all waters of the state at all times, including mixing zones. Additionally, 40 CFR 122.44(d)(1) directs the Department to include in each NPDES permit conditions to achieve water quality established under Section 303 of the CWA, including state narrative criteria for water quality.

Specific Criteria Considerations:

An evaluation of discharges associated with land disturbance activities has been conducted to determine if any pollutants discharged under the land disturbance section of this permit would have reasonable potential to cause or contribute toward an excursion of specific water quality criterion. Pollutants discharged from authorized land disturbance activities are not commonly associated with pollutants listed as specific criteria in the Missouri Water Quality Standards; therefore, reasonable potential to cause an excursion of a specific criterion does not exist.

General Criteria Considerations:

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into the permit for those pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states that pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect that narrative criterion. It should also be noted that Section 644.076.1, RSMo states that it shall be unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri that is in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule or regulation promulgated by the commission.

The permit writer evaluated general and narrative water quality reasonable potential for this facility. Per the permit writer's best professional judgment, based on available data and full and accurate information on the land disturbance process, activities in compliance with this permit do not demonstrate reasonable potential for excursions from the general or narrative water quality criteria.

Effluent Limitations Determination:

In land disturbance section of this permit, Technology-Based Effluent Limitations are established through the SWPPP and BMP requirements. Effective BMPs may have to be designed on a site-specific basis. The implementation of inspections provides a tool for each facility to evaluate the effectiveness of BMPs to ensure protection of water quality.

Part III – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing. The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

☒ - The Public Notice period for this operating permit is went from September 20, 2019 to October 21, 2019. MoDOT commented twice. No other comments were received.

Comment #1:

Section II – Area Wide Land Disturbance Stormwater Permit Conditions – Section 28(f)(i) – The referenced section outlines a process for inspection requirements for areas that have undergone temporary stabilization while active construction is going on in other areas of the project.

The permit fails to outline what is determined to be considered temporary stabilization. Final Stabilization is defined (Section 17), as well as Interim Stabilization (Section 21 (j)(iv)). Failure to define this element hinders the permit holders ability to ensure compliance with the permit conditions within this section.

Response #1:

The permit does need to address the term temporary stabilization. The definition of temporary stabilization has been added to the Fact Sheet, which reads: "An area of a project is considered to be temporarily stabilized when BMPs have been installed with the intent to prevent erosion in areas of a project that may or are intended to be disturbed before the whole project has achieved final stabilization. Sediment control BMPs may be installed to supplement any erosion prevention BMPs."

Final stabilization is the use of perennial vegetation or permanent structures that prevent erosion from occurring; interim stabilization is the use of BMPs, sometimes more than normal daily operating use, that prevent disturbed sediment from leaving the area; and temporary stabilization is a combination of these two but with an emphasis on erosion prevention.

Temporary stabilization does not need to meet the full criteria of final stabilization; however, it should utilize BMPs that focus on erosion prevention (i.e., annual or biennial vegetation, mulch, blanket, mat, or other cover on bare soil) rather than sediment control measures required by interim stabilization. It may employ BMPs utilized for interim stabilization but that should not be the main focus. Areas that are temporarily stabilized may be disturbed or are intended to be disturbed before the whole project achieves final stabilization and is considered complete. The main difference between temporary and interim stabilization is the prioritization of erosion prevention practices over sediment control measures.

Comment #2:

Section II – Area Wide Land Disturbance Stormwater Permit Conditions – The permit section lacks any reference to what is required to terminate permit conditions for any project site. MOR10007 included a Termination Section (Section H) that indicated when the project could be terminated.

Section II, Subsection 17 (pg13-20) discusses maintenance requirements of BMPs and defines what final stabilization is, but no other references can be found that outline what is required to terminate the remaining permit conditions for a specific project.

Response #2:

Because of the nature of MoDOT's Area Wide Land Disturbance permit, there is no permit termination. There is no time when the conditions of this permit do not apply. The MOR100 general permit does mention that if all projects are stabilized the permit may be terminated with *Form H – Request for Termination of a General Permit*; however, this is not for specific projects, but rather it is for the all projects under the permit. This will not occur for the MoDOT permit.

Part II, conditions 13(f), 21(b)ix., 21(j)v., 21(k)v., 21(l)v., 28(f)ii., and 32 of the permit indicate that BMPs and monitoring are no longer required when active land disturbance has ceased and final stabilization has been achieved.

A project may be considered 100% complete in the quarterly report when final stabilization has been achieved. Language will be added to Part II Condition 13(f) stating, "... (A project may be considered 100% complete when final stabilization has been achieved. After reporting a project as 100% complete, the project need not be mentioned on subsequent quarterly reports.)"

DATE OF FACT SHEET: OCTOBER 22, 2019

COMPLETED BY:

**BILLY HACKETT, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION – STORMWATER AND CERTIFICATION UNIT
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**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF A NEW PERMIT
FOR
MO-0137910
MISSOURI DEPARTMENT OF TRANSPORTATION (MoDOT)
SEPARATE STORMWATER SEWER SYSTEM (TS4)**

The Federal Water Pollution Control Act ("Clean Water Act" 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 "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

A fact sheet gives 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.

PART I: FACILITY INFORMATION

Facility Type: Stormwater Facility SIC Code(s): 9511

FACILITY DESCRIPTION:

The MoDOT Phase II Small TS4 is a system of stormwater sewer conveyances and systems, which include roads with drainage systems, catch basins, curbs, gutters, ditches, man-made channels, and stormwater drainage located in an urbanized area that are owned and operated by MoDOT.

MoDOT TS4 activities were previously permitted under the Phase II Small Municipal Separate Stormwater Sewer System (MS4) permit, MOR040063, which will be terminated upon issuance of this operating permit.

Complete Application Date: 09/21/2015
Expiration Date: Not Applicable

FACILITY PERFORMANCE HISTORY & COMMENTS:

Department records indicate that MoDOT's TS4 under the Small Phase II general permit MOR040063, has not had an inspection or audit conduct by the Department. Upon issuance of this operating permit, Department staff will conduct a comprehensive audit. Due to the nature of MoDOT being a statewide agency, audits and inspections (component focused audits) are to be conducted by the Department's MS4 Program Coordinator.

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.

The permit requires MoDOT to update their stormwater sewer map with the location of all known outfalls and the names and locations of all receiving waters of the state that receive discharge from their TS4 within the permitted area. However, the operating permit only list one permitted feature, which is not a true outfall as it is the location of MoDOT's Headquarters in Jefferson City, Missouri. This is due to the fact that there are too many outfalls to list in this operating permit.

In accordance with 10 CSR 20-6.200, 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 sewer systems, pipes, tunnels or other conveyances which connect segments of waters of the state and are used to convey water of the state.” Basically, an outfall is a point source where a regulated separate storm sewer system discharges to waters of the state; however, there are other types of permitted features that do not clearly fall under the term outfall.

A point source is defined in 10 CSR 20-2.010 as, “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.” Thus, there are locations from regulated MS4s that meet the definition of a point source; however, they do not meet the definition of an outfall.

Thus, MoDOT is required to have a list of stormwater outfalls located in their SWMP; however, in some cases where outfalls are located on the same segment of the TS4 and discharging to the same body of water, MoDOT may use one permitted feature as a designated outfall or representative outfall.

Areas of Missouri – Urban Areas

There are currently nine Urbanized Areas in Missouri, which can be found in the Department’s Stormwater Clearinghouse, Local Government, MS4 Programs webpage: <http://dnr.mo.gov/env/wpp/stormwater/sw-local-gov-programs.htm>. MoDOT’s TS4 through these areas is regulated under this operating permit based on the boundary of the Urbanized Area and not on the political boundary of the local government. Below is a list of nine Urbanized Areas:

Urbanized Areas of Missouri

Cape Girardeau	Columbia	Jefferson City
Joplin	Lee’s Summit	Kansas City
Springfield	St. Joseph	St. Louis

In contrast, MoDOT’s TS4 that crosses or runs through regulated MS4s with a population over 10,000 and a population density of 1,000 people/mi² is based on the political boundary of the local government and not the urban cluster boundary. Below is a list of regulated MS4s not located in one of the nine Urbanized Areas listed above.

Regulated MS4s Not Located in Urbanized Areas

Carthage	Lebanon	Sedalia
Excelsior Springs	Marshall	Sikeston
Farmington	Maryville	Warrensburg
Fort Leonard Wood	Mexico	Washington
Fulton	Moberly	West Plains
Hannibal	Neosho	Eureka*
Kennett	Poplar Bluff	Branson*
Kirksville	Rolla	Bolivar*
Harrisonville*	Troy*	Union*

* - Newly designated regulated MS4s.

Areas of Missouri - TMDLs

In addition to urban areas listed above (i.e., population and population density based TS4 areas), the permit also establishes areas where MoDOT’s TS4 is subject to the terms and conditions of the operating permit are watersheds subject to approved and effective TMDLs. It is the responsibility of MoDOT as the NPDES permit holder to know which TMDLs are applicable or not. For the most part, TMDLs will list permit holders that are known to cause or contribute to the pollutant(s) of concern and the permit holders are not believed to have potential to cause or contribute to the pollutant(s) of concern. In accordance with Part B, item 5 MoDOT may have to implement additional controls for projects located or will be located in areas already subject to existing TMDLs; however, if MoDOT does not implement appropriate action, the Department may modify the operating permit to ensure that pollutants are being reduced to the Maximum Extent Practicable for the specific area.

To determine if any areas of MoDOT’s TS4 is applicable to any existing TMDLs, please go to the Department’s webpage, Total Maximum Daily Loads: <http://dnr.mo.gov/env/wpp/tmdl/wpc-tmdl-epa-appr.htm>.

Below is a list of known approved or established TMDLs that list MoDOT:
Watkins Creek St. Louis County and St. Louis City, Missouri. This TMDL can be found at:
<http://dnr.mo.gov/env/wpp/tmdl/docs/1708-watkins-ecoli-tmdl-final.pdf>

It is also suggested that MoDOT determine if any new (i.e., draft) TMDLs list them as a source of contribution of cause.

Areas of Missouri – Outstanding National Resource Waters and State Resource Waters

Outstanding National Resource Waters are located in 10 CSR 20-7.031 Table D, and Outstanding State Resource Waters are located in 10 CSR 20-7.031 Table E.

Table D of 10 CSR 20-7.031:

Table D Outstanding National Resource Waters		
Water Body	Location	County(ies)
Current River	Headwaters to Northern Ripley Co. Line Sec. 22,32N,07W to Sec. 15,25N,01E	Dent to Ripley
Jacks Fork River	Headwaters to Mouth Sec. 29,28N,07W to Sec. 9/15,29N,03W	Texas to Shannon
Eleven Point River	Headwaters to Hwy. 142 Sec. 32,25N,05W to Sec. 21,22N,02W	Oregon

Table E of 10 CSR 20-7.031

Table E Outstanding State Resource Waters			
Water Body	Miles/Acres	Location	County(ies)
Baker Branch	4 mi.	Taberville Prairie	St. Clair
Bass Creek	1 mi.	in Three Creek Conservation Area	Boone
Big Buffalo Creek	1.5 mi.	Big Buffalo Creek Conservation Area	Benton-Morgan
Big Creek	5.3 mi.	Sam A. Baker State Park	Wayne
Big Sugar Creek	7 mi.	Cuivre River State Park	Lincoln
Big Lake Marsh	150 ac.	Big Lake State Park	Holt
Blue Springs Creek	4 mi.	Blue Spring Creek Conservation Area	Crawford
Bonne Femme Creek	2 mi.	Three Creeks Conservation Area	Boone
Brush Creek	0.7 mi.	Bonanza Conservation Area	Caldwell
Bryant Creek	1.5 mi.	Bryant Creek Natural Area in Rippee Conservation Area	Ozark/Douglas Christian
Bull Creek	8 mi.	Mark Twain National Forest Sec. 24,25N,21W to Sec. 22,26N,20W	Crawford
Cathedral Cave Branch	5 mi.	Onondaga Cave State Park	Putnam-Schuyler
Chariton River	9.8 mi.	Rebels Cove Conservation Area	Mercer
Chloe Lowry Marsh	40 ac.	Chloe Lowry Marsh Conservation Area	Camden
Coakley Hollow	1.5 mi.	Lake of the Ozarks State Park	St. Francois
Coonville Creek	2 mi.	Mouth to Hwy. 8	Crawford
Courtois Creek	12 mi.	Bonanza Conservation Area	Caldwell
Crabapple Creek	1.0 mi.	Rock Bridge State Park	Boone
Devils Ice Box Cave Branch	1.5 mi.	Johnson's Shut-Ins State Park	Reynolds
East Fork Black River	3 mi.	Prairie State Park	Barton
First Nicholson Creek (East Drywood Creek)	2 mi.	Rock Bridge State Park	Boone
Gan's Creek	3 mi.	Mouth to Hwy. 8	Crawford
Huzzah Creek	6 mi.	Mark Twain National Forest	Douglas-Howell
Indian Creek	17.5 mi.	Roaring River State Park	Barry
Ketchum Hollow	1.5 mi.	Mouth to 21,35N,08W	Phelps
Little Pincy Creek	25 mi.	Mud Puppy Natural History Area S22,T24N,R3E to S25,T24N,R3E	Ripley
Little Black River	3 mi.	Bonanza Conservation Area	Caldwell
Log Creek	0.4 mi.	Adjacent to Meramac State Park	Crawford/Franklin
Meramec River	8 mi.	Adjacent to Onondaga and Huzzah State Forest	Crawford
Meramec River	3 mi.	Mark Twain National Forest	Phelps
Mill Creek	5 mi.	Mark Twain National Forest	Ozark
N. Fork White River	5.5 mi.	Above Noblett Lake, Mark Twain National Forest	Douglas-Howell
Noblett Creek	5 mi.	Onondaga Cave State Park	Crawford
Onondaga Cave Branch	0.6 mi.	Hawn State Park	Ste. Genevieve
Pickle Creek	3 mi.	In Little Black Conservation Area	Ripley
S. Prong L. Black River	2 mi.	Bonanza Conservation Area	Caldwell
Shoal Creek	0.5 mi.	Mark Twain National Forest	Douglas
Spring Creek	17 mi.	Mark Twain National Forest	Phelps
Spring Creek	6.5 mi.	Johnson's Shut-Ins State Park Addition S23,T33N,R2E to S5,T33N,R3E	Reynolds-Iron
Taum Sauk Creek	5.5 mi.	In Three Creeks Conservation Area	Boone
Turkey Creek	4.6 mi.	Van Meter State Park	Saline
Van Meter Marsh	80 ac.	Whetsone Creek Conservation Area	Callaway
Whetstone Creek	5.1 mi.		

PART III: RATIONALE FOR PERMIT TERMS AND CONDITIONS

ADDITIONAL FEDERAL ACTS

In accordance with 40 CFR 122.49(b) and (c) the operating permit cites the Endangered Species Act (ESA) and the National Historic Preservation Act (NHPA) and places the permittee on notice that the operating permit does not affect, remove or replace the requirements or compliance determination of NPDES operating permits. It is the responsibility of the permittee to determine if activities conducted within their TS4 or stormwater discharging from their TS4 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.gov/ipac/>.

Assistance in determining applicability to NHPA conditions and requirements can be found in the Department's State Historic Preservation Office Section 106 Review, which is located at: <http://dnr.mo.gov/shpo/sectionrev.htm>. Additionally, the Advisory Council on Historic Preservation Citizen Guide to Section 106 Review, which explains the process, is located at: <http://www.achp.gov/citizensguide.html>. In addition to the ESA and NHPA, this operating permit does not affect, replace or remove the requirements and compliance determinations with respect to substances not otherwise covered under a NPDES permit and regulated by federal law under the Resource Conservation and Recovery Act or the Comprehensive Environmental Response, Compensation, and Liability Act.

ANTI-BACKSLIDING:

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

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), which the permittee was previously covered under. 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, the permittee cannot achieve MEP. Likewise, without knowing the effectiveness of BMPs, the permittee has 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 the SWMP. 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 for TS4s is identical to MS4 general permits, which is by requiring the appropriate development and maintenance of a SWMP. 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, including the requirement to reasonably mimic pre-construction runoff conditions in new development projects, should satisfy 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:

This TS4 is considered a Small MS4 (as defined under 10 CSR 20-6.200) and is required to apply and obtain a site-specific operating permit much like the small MS4 General 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. For entities covered under a NPDES permit, failure to comply with any applicable NPDES permit requirement also constitutes a violation of the Missouri CWL and its implementing regulations.

BRIDGE WASHING ACTIVITIES:

Bridge washing, cleaning, and flushing is a relatively common non-stormwater discharge that occurs when necessary for construction and maintenance activities. Preventative maintenance can extend the life of a bridge by slowing the rate or deterioration of bridge components. Spraying water on bridges is also used to remove inactive bird nests. Bridge washing and cleaning activities potential impact to water quality is to be reduced or prevented with established BMPs, measurable goals, and the iterative process under minimum control measure #6.

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. 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. 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 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 required by this operating permit.

MAXIMUM EXTENT PRACTICABLE (MEP) STANDARD:

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 only 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 64 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. Thus, MEP is first the development and successful implementation of the six (6) Minimum Control Measures. The development and successful implementation of the 6 MCMs is realized through the development/implementation of effective Best Management Practices designed or developed to reduce pollutants directly or indirectly into the MS4. Effective Best Management Practices is realized through their corresponding Measurable Goals. The operating permit requires measurable goals to be developed to evaluate the Best Management Practice. In the event that a Measurable Goal determines that a BMP is not effective, the permittee is then subject to the iterative process where they are required to replace or revise the ineffective BMP with a new or revised BMP.

MEASURABLE GOALS

Measureable goals are 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 permit holder 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 permit holders can establish measureable goals. It is recommended that the below categories are considered when developing goals:

39. **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.
40. **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.
41. **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).
42. **Tracking program/BMP effectiveness** – Measureable 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.
43. **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 hydraulic 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 TS4 permit holder 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 TS4 permit holder, it is recommended that the below criteria is used in selecting measurable goals:

- **Consider the objective for each minimum measure** – The BMP that you 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 TS4 permit holder 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, TS4s 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** - TS4s 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 TS4 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 TS4 permit holder 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, or in this case a TS4, 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 is not a requirement, 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 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 TS4s 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 measurable goals reflect the needs and characteristics of the operator and area the 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.
- The public (i.e., affected stakeholders) may include the following:
 - Commercial businesses,
 - Industrial business
 - Trade associations,
 - Environmental groups,
 - Homeowners associations, and
 - Educational organizations.
- 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 and 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 following:

- 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 following:

- 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 TS4 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-tests 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 TS4 provide appropriate educational and training measures for construction site operators.
- TS4s 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 rates from construction sites are typically 10 to 20 times greater than those of agricultural lands and 1,000 to 2,000 times greater than those from forest lands.

During a short time period, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation and contribution of other pollutants from construction sites can cause physical, chemical, and biological harm to Missouri's waters.

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 TS4 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 TS4 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 TS4 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 TS4 operator enforcement activities should begin. To ensure that the BMPs are properly installed, the TS4 operator is required to develop procedures for site inspection and enforcement of control measures to deter infractions. Procedures can include steps to identify priority sites for inspection and enforcement based on the nature and extent of the construction activity, topography, and the characteristics of soil and receiving water quality. Inspections give TS4s 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 TS4 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 TS4 and recognize the crucial role that public can play in identifying instances of non-compliance.

The TS4 should 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, TS4s should demonstrate acknowledgement and consideration of the information submitted.

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

- BMP – 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 TS4'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 TS4 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 TS4 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 away 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 CFR 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 TS4 stormwater management program. This measure requires the small TS4 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
- Results 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. Encourage 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 #MOG870000 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 MoDOT's TS4's 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 Parts 9, 122, 123 and 124 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 monitoring requirements and 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.

Please see Attachment A – SWMP, which is the permittee's SWMP at the time of public notice.

SWMP ORDINANCES (REGULATORY MECHANISMS):

To the extent allowable under state or local law, regulatory mechanisms are required to be developed, implemented and enforced in accordance with 40 CFR 122.34(b):

1. Construction site stormwater runoff control – to require erosion and sediment controls at construction sites, as well as sanctions designed to ensure compliance; and
2. 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>

SWMP REPORTING FREQUENCY:

The previous version of this operating permit and general permits prior, required annual reporting of the SWMP; however, the reporting frequency is being changed to biennial (2nd and 4th year of the operating permit) in accordance with 40 CFR 122.34(g)(3).

WATER QUALITY STANDARDS

As noted previously, the nature of the MS4 program, in this case the TS4, 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 permit holder 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 but 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 (i.e., 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.

Federal regulation 40 CFR 122.34(a) establishes the requirements applicable to all MS4s, in this case the TS4, 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 permit holder 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 operating permit, integrated planning actions may be considered as actions taken to specifically restore a waterbody's beneficial uses. Regardless, if the MS4 permit holder 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 C) 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, the permit does allow for MoDOT to extend the 30 month period upon request; however, 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.

The exemption to Part C of the operating permit indicates that the TMDL is to indicate that the permittee does not cause or contribute to the impairment addressed by the TMDL. While this language is straight forward, it would be naïve to believe that TMDLs will always include this language verbatim. Therefore, language similar to "does not cause or contribute" may also provide the exemption. If the permittee has any question regarding the language of a TMDL if it means the TMDL is applicable or not, then they recommended to contact the Department's MS4 coordinator. Additionally, it would greatly benefit the permittee to review future draft TMDLs and work with the Department on language so as to avoid any confusion regarding the applicability of a TMDL.

Part IV – Administrative Requirements

COST ANALYSIS FOR COMPLIANCE:

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.

The Department has determined that the cost for developing a plan to address TMDL assumptions and requirements is low burden and should require no tax or utility fee increase for MS4 residents. However, the Department will revisit the specific cost analysis for compliance upon the effective date of a new TMDL and its implementation plan considerations, where applicable.

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.

MoDOT community is defined as MoDOT employees or contractors hired on behalf of MoDOT.

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 site-specific 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.

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 20-2.010 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:

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

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

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

The most recent Public Notice of this permit occurred on August 26 to September 26, 2016. Comments received from MoDOT have been addressed. Comments and responses are as follows:

Comment 1: Please include in the permit language reference to the permit shield law indicating that successful implementation of the terms and conditions of the permit is considered to be in compliance with applicable state and CWA [Clean Water Act] laws.

Response 1: Permit shield language has been added to the permit as requested.

Comment 2: Under Part A 1-a and A 1-b, please provide a GIS [Geographic Information System] shapefile or more detailed maps regarding the specific regulatory boundaries. The maps provided in the Fact Sheet are not inclusive of these areas, and we need more refined data to delineate both regulated MS4s [Municipal Separate Storm Sewer System] and urbanized clusters. As an example, it has come to our attention that two MS4 permits may have been terminated recently. Without a shapefile or specific map denoting updates to the regulated areas, it will be challenging to maintain long term permit compliance.

Response 2: The Department does not have a GIS shapefile showing the specific boundaries of regulated MS4s; therefore, the Department cannot supply the requested GIS shapefile. Additionally, having maps that show all of the regulated MS4s in Missouri in the factsheet located within Urbanized Areas and Urbanized Clusters is not a sensible approach to this issue.

The Department uses two shapefiles, which are the Urban Areas and Municipalities, along with population data and the definition of Regulated MS4s located in 10 CSR 20-6.200(1)(C)(24) to determine if a local government is to be designated as a regulated MS4. If MoDOT desires to have the shapefiles, please note that the Department obtained the shapefiles for Urban Areas and Municipalities from the U.S. Census Bureau's Master Address File/Topologically Integrated Geographic Encoding and Referencing Database.

However, the factsheet will be revised to provide a list of Urbanized Areas and regulated MS4s not located in Urbanized Areas with an explanation on how MoDOT is to determine the appropriate jurisdiction will be given in the factsheet. This should provide sufficient information on how to determine applicable areas of MoDOT's TS4 subject to the permit's requirements.

With respect to the two MS4 general permits that were terminated, the termination of these MS4 general permits does not affect MoDOT jurisdictional area due to the fact that a permit termination does not remove the area from being designated as an Urbanized Area. However, the Department will start updating, as needed, the Stormwater Information Clearinghouse website with any changes to MS4, including terminations. This will start soon after the issuance of the MS4 general permit.

Comment 3: Under Part A-f of the permit, the reference should be to Part B-6, not B-5.

Response 3: The permit has been revised as requested.

Comment 4: Under Part B 5, again, new additions to our TS4 drainage network are accounted for on our end, but how will we be notified when or if there is a change to regulated MS4 boundaries? If a regulated MS4 is suddenly not regulated, how are these changes conveyed to use? Additionally, under what circumstances would the permit require modifications with new additions? Is there a threshold or target?

Response 4: As noted above in Response 2, the Department will start updating their Stormwater Information Clearinghouse webpage to include changes to MS4 including terminations.

Regarding the questions, “under what circumstances would the permit require modifications with new additions? Is there a threshold or target?” If MoDOT starts a new project or even redevelopment of an existing project that is located in an area that is subject to an existing established or approved Total Maximum Daily Load (TMDL), then there is a possibility that MoDOT’s operating permit could be modified due to the fact that the pollutant(s) of concern may be a pollutant typical of MoDOT TS4; however, the existing TMDL does not list MoDOT or an applicable Wasteload Allocation. In these types of circumstances the permit could be modified if MoDOT is determined by the Department to not be applicably implementing Best Management Practices (BMPs) in such a manner to reduce or prevent said pollutant(s) of concern per their existing SWMP.

Additionally, BMPs for the reduction or prevention of the pollutant(s) of concern will need to be implemented at the time of construction or other actions along with long-term strategies with the same purpose. Meaning that the 30 month time period of development of a plan does not apply due to the fact that the TMDL is existing and conditions need to be in place upon start of the project that reduce or prevent the pollutant(s) of concern entering the impaired waterbody causing a load increase of said pollutant.

Comment 5: Under Part E-1a, the requirement seems to suggest that all BMPs are focused on the general public under (i), but (a) refers to an education program for the MoDOT community.

Response 5: Part E.1.a.i of this permit does not require all BMPs be focused on general public, but it does require that BMPs (i.e., more than one) be focused on the general public.

Comment 6: Under Part E-2a(iv), what are the requirements for determining if a public hearing is needed and should this be outlined in the fact sheet?

Response 6: Like a majority of the requirements established in your permit, the responsibility for determining applicable BMPs is placed on the permittee and not the Department. This is due to the fact that when specific BMPs are established in permits, it has the real potential for obstructing the permittee’s flexibility, which has the very real potential of removing the permittee’s ability to implement and meet the technology-based standard of Maximum Extent Practicable (MEP).

Therefore, it is the responsibility of MoDOT to determine the criteria for determining when a public hearing is needed; however, it is strongly suggested that you follow the federal regulation that requires public notice requirements under 40 CFR 122.34(b)(2)(i), which states, “You must, at a minimum, comply with State, Tribal and local public notice requirements when implementing a public involvement/participation program.” If MoDOT does not currently have any regulations or guidance regarding public participation, then MoDOT could essentially follow other state agencies like the Department with regards to public participation as established under 10 CSR 20-6.020, Public Participation, Hearings and Notice to Governmental Agencies.

This comment appears to shed light that MoDOT does not currently have any action planned in the SWMP that addresses this condition of the draft permit. Upon issuance of the TS4 permit, MoDOT will need to update the SWMP to either (1) include the reference to or inclusion of a policy or procedure outlining MoDOT plans to address notices of Public Hearings; or (2) establish MoDOT’s plan on how Public Hearing requests are to be implemented.

Additionally, because this condition appears to not be captured in MoDOT’s SWMP, MoDOT is hereby required to re-submit their SWMP, in accordance with the time scheduled established in the permit, for Department review and rating.

Comment 7: Under Part E-5(iii), can we add “or equivalent” to include Job Special Provisions, Agreements, Specifications, etc.?

Response 7: The definition of Best Management Practices (BMPs) is, per 40 CFR 122.2, “schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of ‘waters of the United States.’...” Thus, a BMP is any action taken that is to prevent or reduce pollution, which in this case, stormwater pollution. Therefore, if Job Special Provisions, Agreements, Specifications, etc. are actions used to prevent or reduce stormwater pollution, then they are BMPs. However, if these items are not items that are used to prevent or reduce pollution, then they are not BMPs. If they are not considered BMPs, then the phrase “or equivalent” cannot be added to the permit as it would go against the technology based standard of MEP.

Comment 8: Under Part E-6(iv), MoDOT does not own or operate parks or open space. It would be more appropriate to say welcome centers, rest areas or commuter lots.

Response 8: The permit has been revised as requested.

Comment 9: On page 2 of the factsheet, last paragraph under Part II: Permitted Features does not list regulated MS4s.

Response 9: The factsheet has been revised to include a list of the nine Urbanized Areas and how this affects MoDOT's TS4. Additionally, the factsheet have been revised to include a list of the regulated MS4s not located in Urbanized Areas and how these local government's jurisdictional boundaries affect the MoDOT's TS4.

DATE OF FACT SHEET: DECEMBER 30, 2015; REVISED MARCH 30, 2016 (AFTER INITIAL PUBLIC NOTICE); REVISED JULY 26, 2016 (AFTER 2ND PUBLIC NOTICE); REVISED 10/04/2016 (AFTER 3RD PUBLIC NOTICE).

COMPLETED BY:
MICHAEL ABBOTT, MS4 COORDINATOR
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION – STORMWATER AND CERTIFICATION UNIT
(573) 526-1139
michael.abbott@dnr.mo.gov

ATTACHMENT A - SWMP

Attachment A contains the most recent copy of the permittee's SWMP prior to public notice and issuance of the operating permit. The Attachment of the SWMP is not to equate to Department approval of the SWMP. In accordance with the operating permit, Item 3 under Part D – STORMWATER MANAGEMENT PROGRAM (SWMP), the permittee has one (1) year of the effective date of the operating permit to revise their SWMP, if necessary, and submit it to the Department. Please see the next pages for the permittee's SWMP.

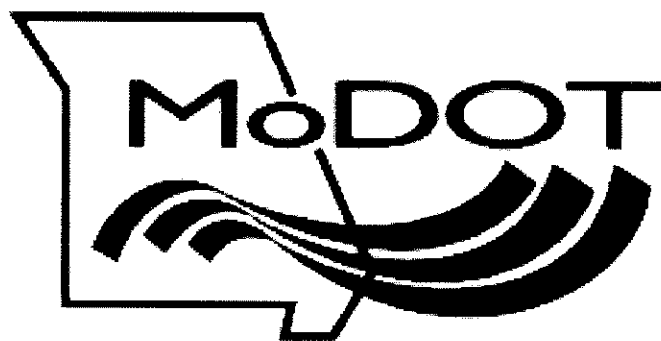
Storm Water Management Plan

Missouri Department of Transportation

RECEIVED

OCT 16 2015

Water Protection Program



Permit covers: 2013-2018

Submitted by: Eric Schroeter, State Design Engineer
Revised October 15, 2015

INTRODUCTION

The Missouri Department of Transportation (MoDOT) developed its first Storm Water Management Plan (SWMP) in July 2006.

The SWMP summarizes MoDOT's intentions to reduce the amount of pollution in storm water runoff from MoDOT's road system by addressing the six categories of concern listed in the MS4 General permit. These categories are as follows:

Public Education and Outreach

Public Involvement and Participation

Illicit Discharge Detection and Elimination

Construction Site Runoff Control

Post-Construction Site Runoff Control

Pollution Prevention/Good House Keeping

As circumstances change, new solutions may be necessary to better control pollution in storm water that flows onto or away from MoDOT's road system. This plan is a continuation in which new and innovative ideas and solutions can be developed in the years to come to protect the water quality of the state's waterways.

MoDOT is unique as an MS4 and is better identified as a TS4, or Transportation Separate Storm Sewer System, for a number of reasons. First, unlike a municipality, MoDOT does not have enforcement capability for measures like illicit discharge detection and elimination. Second, unlike a municipality, MoDOT does not have ordinances, only policies. These are just a few examples of why MoDOT's linear transportation system does not fit well with the requirements of the MS4 permit.

MoDOT's TS4 coverage area is a combination of Phase I MS4s, Phase II MS4s, County MS4s, TMDLs where MoDOT has been identified with a waste load allocation, and Outstanding State and National Resource Waterways (Exhibit 1).

Included in this stormwater management plan are actions with measurable goals to be implemented to control stormwater runoff. This is an iterative process of developing a plan, implementing the plan, and evaluating the plan and the process is dynamic, helping MoDOT achieve the goals of the SWMP.

MODOT INFORMATION

Name of Responsible Public Entity:	Missouri Department of Transportation
Name of Person Responsible for the SWMP:	Melissa Scheperle
MS4 coverage area:	In regulated MS4 areas as defined by MDNR, in established or approved TMDLs, in Outstanding State and National Resource Waters.

MoDOT is identified as the continuing authority within MoDOT right of way and properties owned by MoDOT.

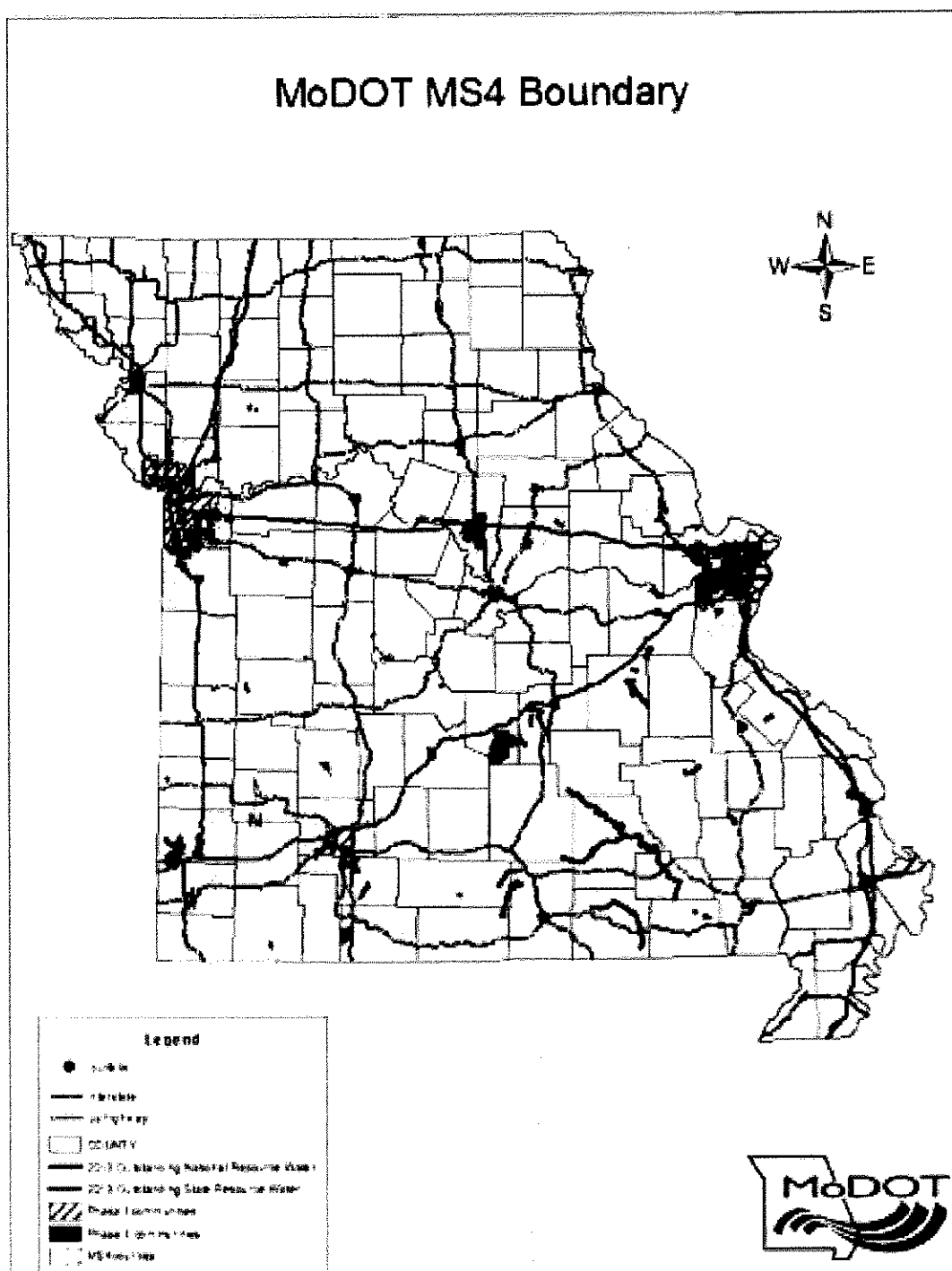


Exhibit 1: Map showing state of Missouri, MS4 area, and major highways.

PUBLIC EDUCATION AND OUTREACH

Through the planning and design phase of its projects, MoDOT holds hundreds of public meetings and hearings around the state each year. While they are primarily held to solicit public opinion on a specific project, those meetings also serve as an excellent way for MoDOT officials to personally respond, one-on-one, to citizen concerns. Surveys have shown that nearly 82 percent of those who attend are satisfied with how their questions/comments were handled.

MoDOT officials also make numerous public appearances, speaking to civic groups, schools, clubs and appearing at other public events. On the Services webpage of the MoDOT home webpage, anyone can request a public speaker by topic or region (<http://www.modot.org/requestaspeaker>).

MoDOT also makes extensive use of the media to communicate with the public. These contacts include news releases, twitter, facebook, radio, e-mail, telephone and written correspondence. MoDOT has also made strides toward communicating directly with the public through a bi-monthly electronic newsletter *ExpressLane*. The distribution list for the newsletter, which debuted in October 2005, has climbed to over 38,000 subscribers.

Sign up for Express Lane!

Express Lane

MoDOT's Express Lane is a bi-monthly e-newsletter that provides you with the latest transportation news and information. It contains all the highlights of Missouri's transportation news. Want to know what your Department of Transportation is doing? Get in the Express Lane today!

Twice a month you'll receive this e-newsletter that's sent conveniently to your e-mail address. It contains all the highlights of Missouri's transportation news. Want to know what your Department of Transportation is doing? Get in the Express Lane today!

Click here to subscribe!
Your e-mail will automatically open. Just hit "send" and you're on the list for updates twice a month.

Express Lane Back Issues
Get caught up on last year's transportation news

Current Issue

Figure 1: *ExpressLane* bi-monthly publication.

MoDOT has also made a commitment to making its Web site – www.modot.mo.gov – an outreach tool and information repository for its customers. Approximately 180,000 persons per month visit the site, with 20 percent of those customers returning more than once. The percentage of repeat visitors has been climbing steadily since MoDOT began tracking the activity in January of 2005 and added interactive features like the Traveler Information map.

Action: MoDOT will educate the public on storm water issues as it relates to operation and maintenance of the state's highway system through public meetings, public events, website and use of media.

Measurable Goal - MoDOT will continue the same level of effort to reach as many persons as in the previous year through all of the above mechanisms, and will use some of these outreach tools to explain storm water quality issues.

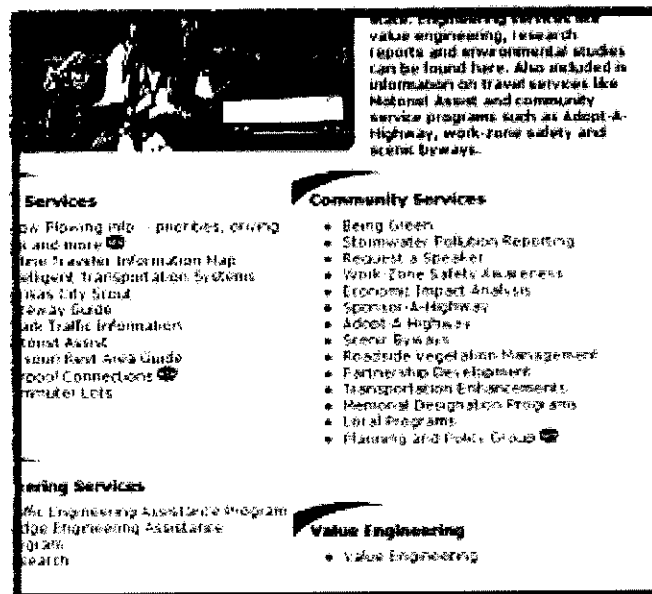


Figure 2: MoDOT "Programs and Services" webpage.

Action: MoDOT will use outreach through its website and other media.

- **Measurable Goal -** MoDOT will track how many visitors have used our storm water webpage each year and continually update the page with the best available information on MoDOT's role as an MS4.
- **Measurable Goal -** MoDOT will report yearly how many visitors have used/submitted the Report a Stormwater Concern form and how many of those were related to MoDOT right-of-way.

Action: Create materials to disseminate at public events and public meetings.

- **Measurable Goal -** In 2013, MoDOT's Stormwater Brochure was available at public meetings and events. MoDOT will track how many are disseminated each year.
- **Measurable Goal -** In 2013, MoDOT's Stormwater tattoo was available at Earth Day and the State Fair. MoDOT will track how many are distributed each year.

- **Measurable Goal** - MoDOT will continue to participate in events such as Earth Day and the State Fair. MoDOT will track participation in these events.

PUBLIC INVOLVEMENT AND PARTICIPATION

MoDOT is committed to involving the public, local officials, transportation stakeholders and other interested parties in the process of evaluating needs, selecting projects and defining the work to be done. The department goes beyond federal guidelines to create a transportation system that is safe, efficient and enjoyable. A transparent planning process helps minimize the impact a project could otherwise have on the natural, social and economic environments.

MoDOT's commitment to involving the public in the transportation decision-making process and to reaching out to its customers about its programs and projects is in keeping with the department's mission: "...to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri."

Public involvement and outreach also support MoDOT's values that are measured through a series of tangible results that are the key component of *The Tracker*, MoDOT's performance-based system that is documented quarterly. *Tracker* is focused on the customer and measures MoDOT's performance in giving customers what they want, such as "provide outstanding customer service;" and "use resources wisely," just to name a few.

Some of those values are:

MoDOT will ...

- Be Safe,
- Be Accountable,
- Be Respectful,
- Be Inclusive,
- Be Bold,
- Be Better, and
- Be One Team

So we can be a great organization.

To reach out to the public, and to be responsive to its needs, MoDOT uses many tools and techniques. Each of these is implemented on statewide and local levels through the department's community relations offices at the Central Office in Jefferson City and the department's 7 district offices. A customer service center is also maintained at each location.

MoDOT tracks the number of customers who contact MoDOT via email, telephone or letter.

Action: Through the above mechanisms, MoDOT will collect and respond to public comments on water quality issues related to storm water management as it relates to expansion or operation and maintenance of the state's highway system.

Action: MoDOT will continue a program to facilitate the public reporting of illicit discharges, including dumping, by providing a venue for the public to submit concerns to MoDOT.

Measurable Goals: MoDOT will report yearly how many visitors have submitted the Report a Stormwater Concern form and how many of those were related to MoDOT right-of-way or facilities from the website.

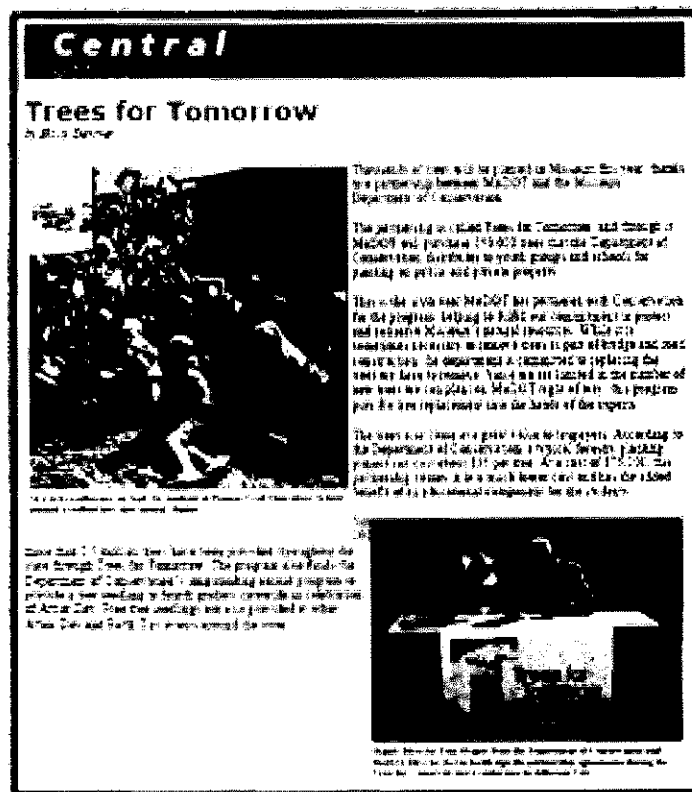


Figure 3: October 4, 2012 *Connections* publication for Central Office.

Action: MoDOT will continue to promote public awareness campaigns including the No More Trash Bash, Trees for Tomorrow, adopt a highway and sponsor a highway programs.

Measurable Goal - MoDOT will report annually how many of these types of events were carried out.

Action: MoDOT will continue to participate in watershed activities when appropriate including the Hinkson Creek Collaborative Adaptive Meeting Team and others as requested.

Measurable Goal - MoDOT will report annually how many events were participated in.

ILLCIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

MoDOT has a program to educate MoDOT employees regarding proper management and disposal of toxic materials discovered on the right of way.

Outfalls

Nearly every MoDOT highway includes one or two drainage ditches that carry runoff water to the nearest down gradient water body at the location of a crossroad culvert or bridge. In some cases the parallel MoDOT ditch may discharge to a drainage swale that simply flows away from the right of way in the direction of a nearby water body. If a typical one-mile section of a MoDOT highway involves three hydrologic conveyance structures (pipe or bridge), then the average number of "storm water outfalls" (points where storm water is flowing from a parallel road ditch into a pipe or water feature that flows under a bridge) would be approximately 12 per mile. Thus MoDOT's Municipal Separate Storm Sewer System (MS4) would include approximately 400,000 outfalls. While MS4s are usually required to identify and map "storm water outfalls," such a task would be daunting and resource exhaustive or of questionable value for a DOT.

MoDOT has used resources available, GIS data, to provide a UTM point at every intersection of MoDOT's roadway layer and the streams and rivers layers statewide. This GIS effort has provided over 25,791 data points statewide. For each data point, it can be assumed that there are 4 outfalls bringing the total to over 103,000 outfalls (Exhibit 2). This is an approximate estimation using best available tools and does not constitute all outfalls. UTM locations of these can be provided upon request.

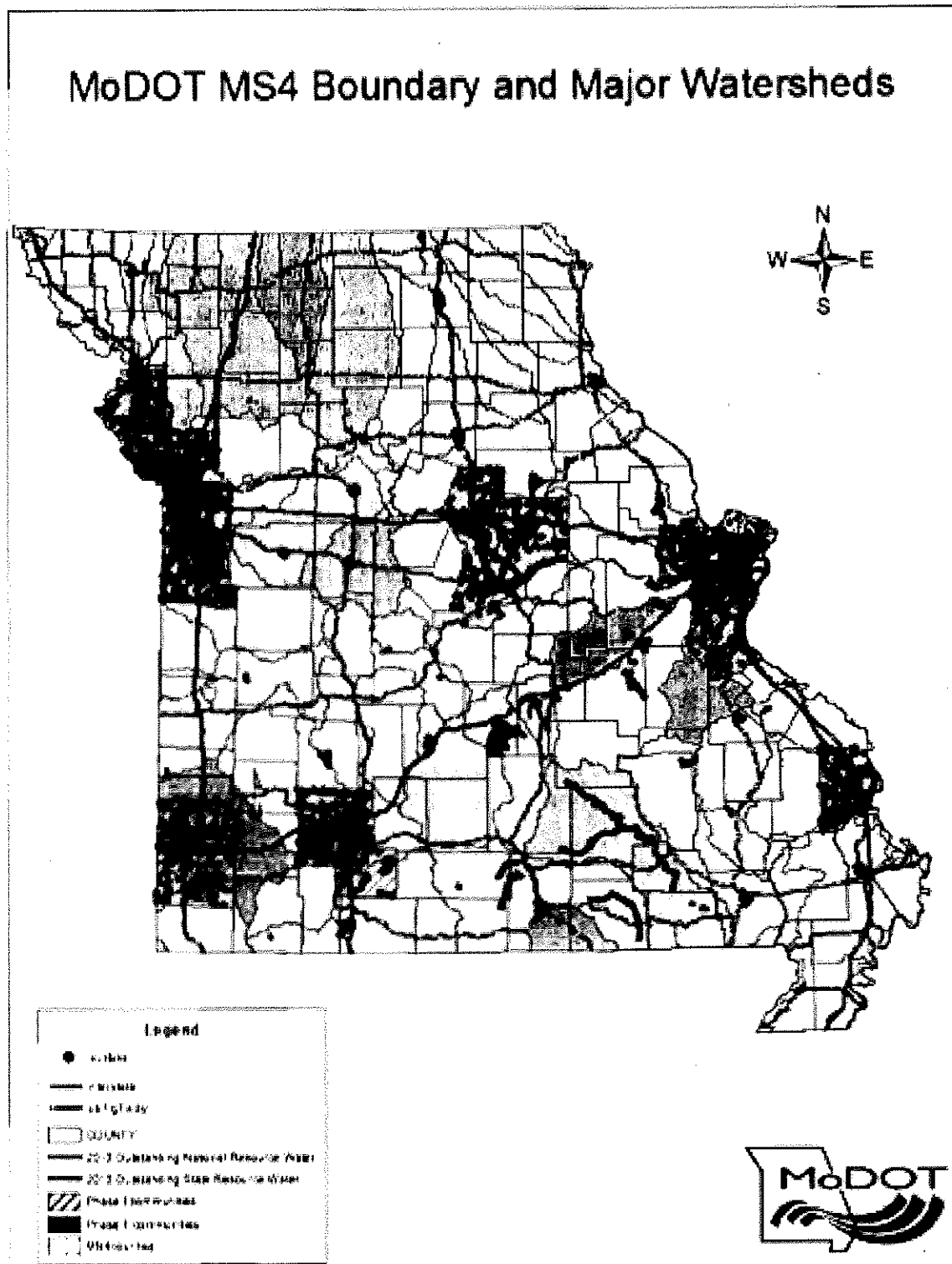


Exhibit 2: MoDOT Outfalls using GIS data.

For new construction, all project plans show the location of these outfalls. Persons who are interested in the locations of specific storm water outfalls may request individual project plans from the appropriate district office or from MoDOT's Central office in Jefferson City. "As-constructed" plans for existing facilities, many of which may be on microfilm, may also be obtained from district offices or the MoDOT Central office.

Discovery of IDDE's

MoDOT currently has a process in place to detect and eliminate illicit discharges but does not possess the legal authority under state law to prevent illicit discharges and improper disposal of waste or wastewater. Case law has, in fact, established precedent in this area. Unpermitted discharges are referred to the appropriate regulatory authority for follow-up. MoDOT will perform a preliminary investigation of any illicit discharges, to the extent allowed by MoDOT's authority, prior to notifying the existing regulatory authority.

127.25.8.3.1 Industrial and Domestic Waste Waters on Right of Way

Sewage and waste shall be disposed of by discharging into a sewer system regulated pursuant to chapter 644 RSMo, or shall be disposed of by discharging into an on-site sewage disposal system operated as defined by rules promulgated pursuant to sections 191.025 to 191.059 RSMo. Any person installing on-site sewage disposal systems shall be registered to do so by the Missouri Department of Health and Senior Services.

Private home sewers are regulated by the Missouri Department of Health and Senior Services. The Missouri Department of Health and Senior Services is to be contacted when wastewater discharge from private home sewers is found on right of way. If a property owner requires assistance in containing effluent, they should be directed to the Department of Health for assistance.

Commercial businesses and industries are regulated by MDNR. When wastewater discharge from a regulated entity is discovered on MoDOT right of way, the Environmental Specialist will contact MDNR to determine if the commercial business or industry has a valid operating permit issued by MDNR to discharge effluent.

The Environmental Specialist will request MDNR to take whatever legal action necessary concerning any business or industry that does not have a valid permit from MDNR to discharge effluent to the highway right of way.

For additional information see EPG 127.25.8.1 Road Area Closures, EPG 127.25.8.2 Sewage Disposal System, and EPG 127.25.8.3.2 System Attachments by Others.

Repealed for Policy 07/11, 191.0

Effective Dates: 6/1/99

Revision Dates: 12/2/12

127.25.8.3.2 System Attachments by Others

MoDOT's policy, under the Engineering Policy Guide (EPG) 127.25.8.3.1 (See attached), outlines how discoveries of illegal effluents will be handled. MoDOT typically contacts the local departments of health when the presence of wastewater from single-family residences appears to be a health or water quality concern deserving regulatory

Figure 4: Engineering Policy Guide 127.25.8.3.1.

intervention.

Public reporting of the presence of illicit discharges or water quality impacts associated with storm water discharges is possible by contacting any of MoDOT's Customer Service Centers, Central Office, or MoDOT's website including the Report a Stormwater Concern form.

Trash as an IDDE

MoDOT has an Adopt-A-Highway program, where volunteer groups periodically pick up the trash and debris along the sides of state highways. See MCM 2, Public Involvement and Participation, for details.

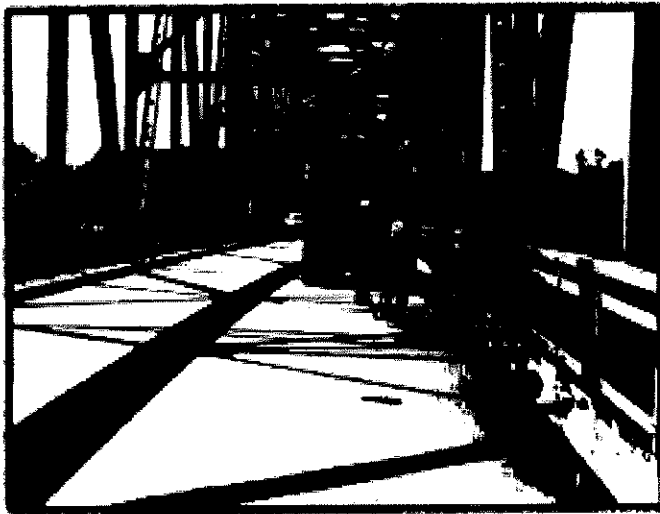


Figure 5: Street sweeping and bridge washing.

Other Occasional, Non-Stormwater Discharges

Bridge washing, cleaning and flushing is a relatively common non-stormwater discharge that occurs when necessary for construction and maintenance activities. Preventative maintenance can extend the life of a bridge by retarding the rate of deterioration of bridge components. Spraying of water on bridges is also used to remove inactive bird nests. MoDOT is currently working on guidance for this activity in

regards to spread of zebra mussels and rock snot. All state and federal requirements are met when accomplishing this task (EPG: 771.2 Bridge Cleaning and Flushing)(See attached).

Action: MoDOT will continue a program to facilitate the public reporting of illicit discharges, including dumping, by providing a venue for the public to submit concerns to MoDOT. Hazardous material spills will be reported within 24 hours upon discovery. Reporting will be made to the Missouri Department of Natural Resources (MDNR) Environmental Emergency Response (EER) – 573-634-2436 – in accordance with MoDOT procedures and Missouri RSMo 260.500 through 260.555.

Measurable Goal: Illicit discharge reports will be tracked and mapped using information obtained through the website reporting form and by MoDOT staff.

Action: MoDOT will educate and cross-train maintenance staff to assist with identification of illicit discharges that discharge into the MoDOT drainage system on MoDOT right of way.

Measurable Goal: MoDOT will educate staff on identification of illicit discharges that discharge into the MoDOT drainage system at least once annually.

Measurable Goal: MoDOT will continue to update the EPG to define illicit discharge and identify the process of elimination.

Measurable Goal: Develop a statewide online training module for MoDOT personnel that explains illicit discharges and the proper sequence of reporting illicit discharges by the end of the permit cycle.

Action: MoDOT is working with the Bridge Division and Maintenance Division to come up with an inspection schedule that coincides with biannual bridge inspections, annual mowing inspections, and frequent culvert and ditch inspections after rain events.

Measurable Goal: Develop aspects of the existing system to proactively inspect for illicit discharges.

Measurable Goal: Develop maps based on existing bridges and multi-cell box culverts for the inspection schedule.

Action: MoDOT plans to better align with other state DOTs in changing the coverage area from statewide to occurring where there are other MS4s. This is consistent with the intent of the permit as being a "municipal" permit.

Measurable Goal: Continue to work with MDNR to modify our permit coverage area.

Measurable Goal: Focus on other areas that are MS4s for compliance with MCM.

CONSTRUCTION SITE RUNOFF CONTROL

Storm water Permits

Provisions of the federal Clean Water Act and related state rules and regulations require storm water permits where construction activities disturb greater than one acre over the life of a project as part of a common plan or sale. MoDOT has a general permit, obtained from the Missouri Department of Natural Resources (MDNR), which allows road construction activities and the associated land disturbance. The permit stipulates that MoDOT will follow certain erosion and sediment control guidelines and install temporary erosion control measures. Locally sponsored federal aid projects that are performed on MoDOT right of way and are using MoDOT's land disturbance permit are required to comply with MoDOT Standard Specifications, and therefore, must follow the Storm Water Pollution Prevention Plan (SWPPP). Cities, counties and other government entities may already possess their own National Pollutant Discharge Elimination System (NPDES) permit and, in that case, must comply with their own SWPPP.

Design Considerations

MoDOT has provided a few guidelines for the development of erosion and sediment control plans. First the designer is responsible for the plans and

therefore should develop the plan during the design phase. The designer shall also study and inspect the future construction site and plans to determine what areas have potential erosion hazards. Once this information has been reviewed and all necessary data is obtained, the following recommended guidelines should be followed:

- Determine limits of clearing and grading.
- Divide the site into drainage areas.
- Divert clean runoff around the construction area.
- Erosion and sediment control shall be used whenever possible to reduce erosion at the site and prevent offsite damage.

As part of the storm water control measures, the contractor shall take certain management measures into consideration when preparing a work schedule. Such contractor measures include, but are not limited to:

- Install appropriate perimeter erosion control measures prior to grading.
- Sequence and stage construction so that no area remains exposed for unnecessarily long periods of time, and disturbed areas should be stabilized before other areas are disturbed.
- Stabilization Best Management Practices (BMPs) should be implemented as soon as practical after grading.
- Develop and carry out a regular maintenance schedule for erosion and sediment control practices.
- Utilize spill prevention and containment measures at storage sites.
- Develop and follow a plan for regular collection and disposal of waste material as well as designate a site for disposal.
- Designate the responsibility for implementing and maintaining the erosion and sediment control measures to one person.

Erosion, sediment and pollution control and storm water management will be a priority discussion point at all appropriate project pre-construction conferences. Monitoring and inspection of the features of the erosion control plans will be carried out and documented by the resident engineer and contractor for the construction project. Any items of concern regarding BMPs should be brought to the attention of the contractor for immediate correction.

Construction Requirements

The engineer will limit the surface area of erodible earth material exposed by clearing and grubbing, or excavation, borrow and fill operations, and may direct the contractor to provide immediate permanent or temporary erosion control measures to prevent contamination of adjacent streams or other watercourses, wetlands, lakes, ponds and other water impoundments.

The contractor shall be required to incorporate all permanent erosion control measures into the project at the earliest practicable time. Temporary erosion

control measures shall be used to correct conditions that develop during construction which were not foreseen during the design stage. Temporary erosion control shall also be used when needed prior to installation of permanent erosion control measures or when needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control measures on the project.

Clearing and grubbing operations shall be scheduled and performed so that grading operations and temporary and permanent erosion control measures will follow immediately thereafter. The surface area of erodible earth material exposed at one time by clearing and grubbing, by excavating, by fill or by borrow, shall be minimized to prevent runoff. The engineer may limit the total acreage of erodible earth material to be exposed at one time as determined by an analysis of project conditions. In such cases the engineer will identify specific BMPs and controls that have been, or will be installed in order to exceed the specified maximum disturbed acreage threshold.

Unless otherwise approved, construction operations in rivers, streams, wetlands and impoundments shall be restricted to those areas which must be entered for the construction of temporary or permanent structures. Rivers, streams, wetlands and impoundments shall be promptly cleared of all false work, piling, debris or other obstructions placed therein or caused by the construction operations. Frequent fording of live streams or wetlands with construction equipment is not permitted.

Site-specific erosion and sediment controls above and beyond MoDOT standard specifications shall be discussed with the contractor at a preconstruction conference. Special conditions may be developed which can include limitations on the amount of surface area that can remain unprotected at one time or special water quality or stream protection requirements.

In the event of a conflict between these requirements and pollution control laws, rules, or regulations of other federal, state or local agencies, the more restrictive laws, rules or regulations shall apply.

Control Measures (SWPPP)

MoDOT has prepared a Storm Water Pollution Prevention Plan (SWPPP) that has been provided to all construction offices as part of each construction contract. The SWPPP describes several BMPs that may be used to control runoff from land disturbance activities of one acre or more. The following BMPs may be used together or separately in order to ensure that contaminants do not leave MoDOT right of way.

Temporary Controls

Temporary water pollution control measures are required on all contracts awarded by MoDOT. The contractor shall exercise best management practices throughout the project to ensure that contaminants do not leave MoDOT right-of-way. Construction of permanent drainage facilities and other activities, which may contribute to the control of siltation, shall be accomplished at the earliest practicable time. This work shall consist of furnishing, installing, maintaining and removing temporary control measures as shown on erosion control plans or as ordered by the engineer. The control of water pollutants will be accomplished through the use of berms, slope drains, ditch checks, sediment basins, seeding and mulching, straw bales, silt fences and other erosion control devices or methods. Pollutants such as chemicals, fuels, lubricants, bitumens, raw sewage or other harmful materials shall not be discharged from the project. No work shall be started until the erosion control timetable and methods of operation have been approved.

Temporary erosion and sediment control measures shall be coordinated with permanent erosion control measures to assure economical, effective and continuous erosion control. Temporary erosion and sediment controls shall be kept in place and maintained until revegetation has occurred to an extent sufficient to prohibit the formation of gullies by runoff. The engineer shall routinely inspect the condition of erosion controls and shall notify the contractor immediately if any controls are found to be in disrepair or are not functioning at the desired level of effectiveness. Inspection records and directives to the contractor shall be noted in the Inspector's Project Records, which shall be available for review by Missouri Department of Natural Resources (MDNR) upon request. Temporary Measures include:

- Temporary Berms (Type A, Type B, Type C)
- Temporary Slope Drains
- Ditch Checks (Type 1, Type 2)
- Sediment Traps
- Temporary Seeding
- Temporary Mulching
- Straw Bales
- Silt Fence
- Surface Roughening
- Mulching and Crimping
- Brush Piles
- Sediment Basins

Permanent Controls

The contractor shall be required to incorporate all permanent erosion control measures into the project at the earliest practicable time. Permanent Measures include:

- Sediment Basins
- Sediment traps
- Permanent Seed and Mulch
- Type C Berms
- Rock Blanket
- Rock Ditch Checks

Erosion and Sediment Containment Inspections

Erosion Control Inspection Records and an inspection report log are required for projects with one acre or more of total land disturbance. All disturbed areas and installed Best Management Practice items (BMPs) are inspected for proper location, installation, operation and maintenance. Points of storm water egress are inspected for evidence of erosion or sedimentation.

Reports are required within seven calendar days of a previous inspection or within 48 hours of any reportable precipitation event (1/2" over 24 hours)

The report is to be signed by the MoDOT representative who performed the inspection. Information required on the form includes:

- 1) Contract/Job identification number;
- 2) County and Route location;
- 3) Name of MoDOT inspector completing report;
- 4) Date of inspection;
- 5) Areas requiring installation of new BMPs;
- 6) Existing BMPs requiring corrective action;
- 7) Corrective actions taken on previously listed deficiencies;
- 8) Areas where land disturbance operations have temporarily or permanently ceased.

The inspection report is signed by the resident engineer or by the person performing the inspection if authorized to do so. The contractor's Erosion Control Supervisor receives a copy of each week's report for prompt corrective action, if necessary.

Audits and Training

MoDOT has assigned one employee the responsibility of performing statewide audits of construction sites to ensure that SWPPPs are being followed to the

extent that off-site contamination does not occur. The individual usually will visit every construction site at least once per year and meet with MoDOT resident engineers, inspectors or contractors to evaluate the land disturbance elements of the project.

MoDOT shall continue to require training for construction inspectors, resident engineers and other personnel. It is anticipated that such training shall continue through the annual Environmental Compliance class, currently held routinely at each of the seven MoDOT districts. The Environmental Compliance class has also been delivered and is available to contractors and other private or public organizations as requested. Training may also occur on a less formal basis as deemed necessary by MoDOT.

Contractor Compliance

MoDOT has the authority to stop work on any construction job when the contractor does not perform work in compliance with contract provisions. In cases where the contractor is causing water quality problems, or creates conditions with the potential to contaminate waters of the state, the engineer will take appropriate disciplinary action to ensure proper control measures are in place. Actions possible include: issuance of an Order Record (this is a non-compliance notification that negatively affects a contractor's performance rating; a poor rating could result in removal from the list of MoDOT approved contractors), suspension of payments to the contractor, or suspension of work on the project.

Contractors are evaluated on project performance each year. One of the elements of the Performance Rating system involves erosion control compliance. Low ratings may cause disciplinary action to be taken against poorly performing contractors. Disciplinary actions range from being placed in a probationary status to disqualification from bidding on MoDOT construction contracts for a period of three years.

Protection of Streams, Lakes, Ponds, and Reservoirs

In compliance with the Missouri Clean Water Law (Section 644.051), neither MoDOT nor MoDOT's contractors shall pollute any waters of the state, or place, cause, or permit to be placed any water contaminant in a location where it is reasonably certain to cause pollution of any waters of the state. Also, they shall not discharge water contaminants into any waters of the state, which reduce the quality of these waters below the state's water quality standards. These water quality standards include the following (MO10 CSR 20-7):

(a) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.

(b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.

(c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.

(d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.

(e) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.

(f) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200–260.247.

MoDOT personnel or contractors performing work for MoDOT shall comply with these and any other federal, state and local laws and regulations that serve to control pollution of the environment. To ensure that these general criteria are met, the following guidelines will be observed:

1) Machinery shall be kept out of the waterway as much as possible.

2) Fuel, lubricants, debris and other water contaminants shall not be stored in areas that are subject to flooding or contact with water (such as adjacent to stream banks) or where contaminated runoff from the storage areas can enter waters of the state.

3) Refueling and maintenance (e.g., oil changing) of machinery shall not take place in, or directly alongside, any water body.

4) Clearing of vegetation/trees shall be kept to the minimum required to accomplish the activity.

5) Riparian areas and banks shall be restored to a stable condition through recontouring and revegetation of the area, as necessary, as soon as possible (normally within three working days of final contouring).

6) Work shall be conducted during periods of low flow whenever possible.

7) Wetland areas shall be avoided to the greatest extent practical.

8) Work shall conform to all conditions that are part of the United States Army Corps of Engineers (USACE) Section 404 permit and the ancillary MDNR Section 401 Water Quality Certification.

Action: Continue to comply with provisions of NPDES "land disturbance" permit.

Action: Continue training of MoDOT personnel through an annual Environmental Compliance class.

Action: Conduct classes and train MoDOT employees who deal with construction erosion annually.

Measurable Goal: Report how many MoDOT employees and how many non-MoDOT employees have taken the training.

Action: Perform statewide audits of construction sites to ensure that specifications and SWPPP are being followed.

Measurable Goal: Evaluate erosion control elements of 90% of all land disturbance sites that involve 1 acre or more of land disturbance.

Action: Continue Contractor Performance Rating System for project to measure or recognize contractors' outstanding performance as well as those being disciplined for less than satisfactory performance. Disciplinary action results from unacceptable rating in the categories of quality, prosecution & progress, contract compliance, and overall. The contractor performance questionnaire (see attached) includes a section of six questions related to Section 800, Roadside Development to rate the contractor on items such as seeding, erosion inspection reports, correction of deficiencies within the 7-day requirement, etc. For more information refer to EPG 102.2 (See attached).

Measurable Goal: Utilize the existing performance rating system to notify contractors when erosion control elements of the project are less than desirable as determined by elements of the SWPPP yearly per project.

POST-CONSTRUCTION SITE RUNOFF CONTROL

Developers are informed that if their project will involve disturbance of one acre or more of ground surface, then they will most likely require an NPDES permit from MDNR. Before MoDOT issues an entry or access permit to perform work on MoDOT right of way, the developer must provide proof that they have obtained the appropriate permit from MDNR, or some type of proof that the activity is exempt from MDNR's NPDES requirements.

MoDOT will consider additional New Development and Redevelopment Program requirements as MoDOT projects are initiated. The evaluation shall consider comprehensive planning procedures and controls to reduce the discharge of pollutants after construction is complete, from areas of new highway

development and significant redevelopment and associated drainages. The program will consider non-highway facilities that would prevent or minimize water quality impacts. This program does not apply to maintenance activities that do not change storm water impacts to state waters.

MoDOT shall continue to implement a program that ensures that new highway projects and significant highway modifications are reviewed for the need to include permanent storm water BMPs, and the results from that review implemented. As part of the program, MoDOT will define as "significant," highway modifications that disturb greater than or equal to one acre of existing vegetation.

MoDOT shall select and implement BMPs whenever applicable for those projects that have the potential to discharge storm water conveying pollutants of concern into sensitive waters. "Sensitive waters" primarily include those waters that are listed on MDNR's most recent 303(d) list or a total maximum daily load (TMDL) has been developed that limits the amount of the specified pollutant that is likely to be present in discharges from MoDOT.



Figure 6: Permanent detention basin on Route 54 expressway.

MoDOT is working toward a formal program for incorporation of water quality elements into developments or significant redevelopments. No statewide policy exists regarding permanent water quality structural and source controls. Water quality facilities associated with new highway development and redevelopment are incorporated into the design upon request of the resource agencies and MoDOT.

There are no policies, procedures or regulations that address water quality impacts from operating highways. Compliance with any physically connected city's New Development criteria will be done on a courtesy basis if possible considering budget, timing, and statutory constraints.

MoDOT will evaluate existing mechanisms that ensure long-term maintenance and operation of permanent BMPs and determine whether a need exists to improve the current mechanisms. If it is determined that changes are needed to MoDOT's existing policies that ensure long-term maintenance and operation of permanent BMPs, MoDOT will identify and consider alternatives for improving the existing practices and/or developing additional mechanisms. If necessary,

MoDOT will select and implement the preferred alternative mechanism to ensure the long-term maintenance and operation of permanent water quality BMPs.

Under EPG 748.1.2 Hydraulic Impacts of Roadway, MoDOT mimics pre-construction runoff quality in all new development and to the MEP in

748.1.2 Hydrologic Impacts of Roadway

Development such as a highway project can affect the hydrologic characteristics of a watershed. Such development typically increases the amount of impervious area within the watershed, and may also decrease the time of concentration of the watershed. Both of these effects tend to increase both the volume and peak rate of runoff from the watershed. The magnitude of this increase is generally dependent on the ratio of the developed area (pavement and right of way in the case of highway projects) to the total watershed drainage area. When the developed area is a large percentage of the total drainage area, the impacts can be significant. The degree of hydrologic impact shall be subjectively evaluated for all highway projects, when the impacts are estimated to be of concern, a detailed analysis shall be performed. Significant increases in peak flow rates shall be mitigated through the use of detention storage or other appropriate measures.

Figure 7: EPG 748.1.2

redevelopment projects by evaluating how significant an increase is for a project regarding peak flows and therefore mitigation through detention storage or other various measures.

Action: Create a Stormwater Team to develop policy regarding post-construction bmps.

Measurable Goal: Team created with personnel from Design, Maintenance, and Construction.

Action: Consider post-construction BMPs where needed and report the number constructed.

Measurable Goal: The number of post-construction bmps should increase as the number of new construction projects increase. Reported annually.

Action: MoDOT will develop a feasibility checklist or flow chart to evaluate the needs of post-construction bmps on projects.

Measurable Goal: By permit year 3 MoDOT will develop a process to evaluate the needs and feasibility of post-construction bmps.

Measurable Goal: By permit year 4 MoDOT will develop a policy in the EPG that address post-construction bmps.

Pollution Prevention/Good House Keeping

Roadway maintenance activities conducted by district maintenance forces, that impact storm water quality include: snow and ice control on state and interstate

highways, roadway surface maintenance, roadside facility maintenance, roadway appearance, miscellaneous MoDOT facilities, and tunnel maintenance.

Cities and counties perform the maintenance work on some state roadways for MoDOT. This is accomplished through a formal maintenance agreement signed by the Missouri Highways and Transportation Commission and the city or county. The maintenance agreements contain standard requirements that the city or county maintain the facilities in accordance with Commission-approved standards.

The following manuals are to be used for maintenance of roadway facilities. Most manuals can be found in the Engineering Policy Guide:

1. Maintenance Division Policy Manual – EPG 171: Maintenance Policy and Operations.
2. Roadside Vegetation Management Manual – EPG 171.6.4: Vegetation Management.
3. Herbicide Manual – EPG 821: Herbicides and Roadsides
4. Maintenance Function Planning Guidelines – EPG 822: Maintenance Planning Guidelines for Mowing Operations.
5. Preventive Maintenance Guidelines for Bridges – EPG 171.7 Bridge Maintenance.
6. Operator's Guide for Anti-Icing – EPG 133: Snow and Ice Control
7. Missouri Standard Specifications for Highway Construction.

Structure Maintenance

MODOT drainage facilities such as detention ponds, storm drains, inlets and catch basins are inspected on an as-needed basis. In all areas a close inspection of problematic storm drain inlets (selected inlets known to flood) occurs during rainstorms or if complaints are received to ensure proper operation. Documentation pertaining to the inspections is limited and may normally contain only the date and time of the inspection. Each district currently inspects water drainage facilities (retention ponds and other structures) on an as-needed basis to ensure that the facility operates as designed. The frequency of inspection can vary depending on the design of the structures.

Currently, MODOT has not located all of its structural controls. Location of major structural controls (primarily large detention basins) will be stored in a database and may be identified in a GIS system as part of the implementation of the permit.

The District Maintenance Engineer (or his designee) or the State Bridge Maintenance Engineer approves improvements to channels, and any addition of riprap immediately adjacent to the roadway or structure. All work to improve

channels that requires additional environmental clearance must be cleared with the Design Division Environmental Unit and the proper permits obtained.

Ditches

All open ditches are to be maintained to preserve their full depth and cross section. Surplus material from ditch cleaning is used in other tasks such as widening shoulders and fills, repairing erosion and filling wash outs. Where appropriate or necessary, maintenance occurs on ditches and waterways as needed.

Street Sweeping

Mechanical sweeping of sand, dirt and debris from paved surfaces, shoulders, curbs and gutters and median barriers is performed to assure roadway drainage. Sweeping maintains the environmental and aesthetic quality of the roadway, and is accomplished for safety concerns. Sweeping is MoDOT's responsibility on Interstate Highways, National Highway System Routes and Commission-owned roadways within the state highway system unless covered by a maintenance agreement (EPG 127.25.1.4 See attached).

Snow and Ice Control

One of MoDOT's high priorities is the removal of snow from state highways. Anti-icing operations to prevent the formation or development of packed and bonded snow or bonded ice to the pavement surface is the first priority on continuous treatment routes during a winter weather event. Snow and ice control operations begin as soon as weather conditions warrant and continue on a 24-hour-per-day basis until all major highways and all minor highways are returned to a wet or dry condition and all minor highways are open to two-way traffic. The removal of snow and ice from the roadway and the application of abrasives or de-icing products take precedence over all other maintenance work. MoDOT's Operator's Guide For Anti-icing (EPG 133.5) and the snow-and-ice section of the Maintenance Policy Manual are both used to clarify the department's official procedure (EPG 133: Snow and Ice Control)(See attached).

All abrasives and de-icers are to be applied in accordance with the Operator's Guide For Anti-icing and the snow-and-ice section of the Maintenance Policy Manual. These directives include the following:

- Chemicals and stockpiles of treated abrasives are to be stored in a manner to prevent loss of material and minimize damage to state or private property.
- All bulk salt shall be stored inside covered storage structures.
- Asphalt pads are installed under and in front of storage facilities.

- Mixed materials shall be covered when not in use and between storm events.

Required maintenance practices which have a side benefit to water quality include:

- Application of only the amount of salt or salt/abrasive mix material necessary to provide safe driving.
- Use of clean snow and ice control abrasives (sand or 3/8 crushed aggregate) that contain only 0-10 percent passing a No. 10 sieve.
- Use of snow and ice control chips only when needed to provide traction.
- Sweeping or flushing of the bridges as soon as possible after a storm event.

MoDOT uses a database to track information on how much winter abrasives, calcium chloride, or sodium chloride was applied in the different maintenance areas during a snowfall event. This information is contained in the Winter Events Database Report.

Roadside Management

MoDOT's roadside management program keeps the roadsides safe and attractive. The program establishes and maintains appropriate vegetation to control erosion and limits undesirable vegetation. Specific guidance updated in 2012 is provided in the Roadside Vegetation Management Manual (http://epg.modot.org/files/a/ae/822_2012.pdf) (See attached). This includes herbicides, fertilization, mowing, brush control and litter removal.

Mowing Operations

Mechanical and chemical vegetation management is done to maintain sight distance, improve aesthetics and control undesirable vegetation. At a minimum, mowing occurs to a distance of at least one mower width from the edge of the traveled way per the guidance contained in the Roadside Vegetation Manual.

Roadside Facilities

Drainage facilities within the rights of way owned by MoDOT include cattle passes, collection ditches, shoulder drains, side ditches, under drains, outlet ditches, contour ditches and culverts (includes structures that span 20 feet or less). These facilities are maintained to be able to handle runoff from rainfall events. Maintenance includes removing trash, debris and sediment that has collected in the facility. All drainage facilities statewide are inspected periodically; minor defects are repaired as necessary; and major defects are reported to the Maintenance Superintendent responsible for that geographic area. Natural watercourses and streams that pass within the right of way are kept clean so water can flow freely.

Any slope associated with roadside facilities is maintained to keep erosion to a minimum. The only required modification to this program is the review of the Federal Highway Administration's document dealing with bridge runoff, for potential additions to MoDOT's Preventive Maintenance Guidelines for Bridges (EPG 171.7.1 Bridge Maintenance)(See attached).

Herbicide Program

MoDOT uses a variety of techniques to manage roadside vegetation. Herbicides provide effective and efficient vegetation control. Specific guidance for herbicide use is provided in MoDOT's Herbicide Manual. Operators and their supervisors are required to read and follow the label. Only non-restricted herbicides are used. Employees are encouraged to obtain and maintain a public operator's license certified by the Missouri Department of Agriculture. Detailed recordkeeping is required. Spray equipment is clean, in good operating order and properly maintained. Operators are instructed to not apply herbicides to standing, running or open water. Only approved aquatic herbicides are used to control undesirable vegetation in or near water. Care is taken to avoid drift, runoff, leaching and spills.

Procedures to Prevent, Contain and Respond to Spills

Procedures to prevent, contain and respond to spills are found in MoDOT's Guide to Hazardous Material Spill Response on State Highways. All vehicles carrying hazardous materials must be identified by the distinct diamond shaped symbol. The following are guidelines taken from MoDOT's Guide to Hazardous Material Spill Response on State Highways:

- Avoid contact with and breathing vapors of the spilled material.
- No smoking allowed in the spill area.
- If a state waterway is involved in the spill the Missouri Department of Natural Resources must be contacted along with the MoDOT District Hazardous Materials Spill Coordinator.
- Obtain facts and information on the spill for the emergency team and maintenance supervisor.
- Call the Missouri State Highway Patrol for help and notify the maintenance supervisor.
- Coordinate with emergency response personnel.
- An "Incident Commander" should coordinate with other agencies and handle direct reporting of the spill.
- Use appropriate traffic control to isolate the spill area from public contact.
- Wait for instructions and do not clean up the spill or contaminated area.
- If private property or waterways are threatened, containment of spill should be coordinated with Missouri Department of Natural Resources, Missouri State Highway Patrol and the appropriate maintenance supervisor.

Spill Prevention and Response Procedures at Maintenance Facilities

MoDOT has implemented Spill Prevention Control and Countermeasure (SPCC) plans at maintenance facilities to prevent oil spills from occurring, and to perform safe, efficient and timely response in the event of a spill or leak. In accordance with United States Environmental Protection Agency (EPA) regulations (40 CFR 112), MoDOT must prepare and implement an SPCC plan for facilities that could reasonably be expected to discharge petroleum or hazardous material into or upon navigable waters or adjoining shorelines; that meet one of the following conditions:

Above-ground oil storage capacity exceeds 1,320 gallons; or

Underground oil storage capacity exceeds 42,000 gallons, unless the underground tanks are subject to all of the technical requirements of 40 CFR 280 or a state program approved under 40 CFR 281. (Missouri's approved program is 319.100 – 319.139, RSMo and 10 CSR26-1 thru 10 CSR26-5 Rules for Underground Storage Facilities.)

As defined by 40 CFR Part 112, oil includes all grades of motor oil, hydraulic oil, lube oil, fuel oil, gasoline and diesel, automatic transmission fluid (ATF), used oil and transformer mineral oil. The definition also includes non-petroleum oils such as animal or vegetable oils and synthetic oils.

Action: Continue to educate maintenance staff and MoDOT general staff on SPCC and NEPA. Evaluate the effectiveness of housekeeping activities and identify those processes and/or procedures that are impacting waters of the state using semi-annual inspections of all MoDOT facilities to assess compliance.

Measurable Goal: SPCC training and NEPA training every other year.

Action: Continue dialogue with the Environmental Steering Committee (ESC) to evaluate the effectiveness of housekeeping processes and procedures.

Measurable Goal: Document how many times and what topics regarding the MS4 are discussed at the quarterly ESC meetings.

Action: Develop and test new housekeeping processes and procedures to add to current available resources and techniques.

Measurable Goal: Report any new processes' or procedures that are adopted.

Action: MoDOT will work to develop online training modules.

Measurable Goal: MoDOT will develop modules in year 5 of permit cycle.

Action: MoDOT will develop and maintain a guidance document listing BMPs utilized to minimize the spread of zebra mussels and rock snail.

Measurable Goal: MoDOT will develop the document by year 5 of the permit cycle.

Action: Bridge cleaning and flushing are used to remove de-icing chemicals from the bridge deck, drains, expansion device drains, piers, abutments, and lower truss chords; thereby prolonging the life of the structure. Bridge cleaning activities use dry methods and equipment (scraping, sweeping, and vacuuming), to prevent debris, sediment, and other substances from entering waters of the State. Bridge flushing and cleaning shall adhere to the process and procedures outlined in the EPG 771.2 and the beneficial use requirements outlined in EPG 127.25.1.4 (See attached). Bridge inspections are not considered a bridge flushing or cleaning activity.

Measurable Goal: MoDOT will ensure the appropriate BMPs are being implemented prior to and during such activities and report approximately how many bridges are flushed/cleaned in a reporting cycle.

