MoDOT

105 West Capitol Avenue
P.O. Box 270
Jefferson City, Missouri 65102

Missouri Department of Transportation
Patrick K. McKenna, Director

1.888.ASK MODOT (275.6636)

February 26, 2020

Ms. Erin Meyer-Heidolph
Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, Missouri 65102

Subject: Design - Environmental Section
State Operating Permit MO-0137910
TS4 Annual Report

Dear Ms. Meyer-Heidolph,

In accordance with 40 CFR 122.34(d)(3), MoDOT is submitting its annual report for permit MO-0137910 along with MS4 Stormwater Management Plan (SWMP) Report for 780-1846. MoDOT's last SWMP update was submitted to DNR on August 6, 2019. A "No Additional Controls Demonstration for Total Maximum Daily Load Attainment" was approved by DNR on March 9, 2017 for the TMDLs MoDOT has been assigned Waste Load Allocations (WLA). The plan is still appropriate, and this annual report continues to support that demonstration.

If you have any questions regarding the report, please do not hesitate to contact me at (573) 526-2909 or Brian Williams at (573) 751-2790.

Sincerely,

Richard Moore
Environmental and Historic Preservation Manager

Enclosure

RM/bw

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) STORMWATER MANAGEMENT PLAN REPORT

FOR OFFICE USE ONLY
PROJECT ID NUMBER
DATE RECEIVED

Part A – MS4 PERMIT HOLDER INFORMATION

1. MS4 NAME	2. NPDES PERMIT NUMBER	3. MS4 UNIQUE ID NO.	
Missouri Department of Transportation	Mo-0137910		
4. ADDRESS	**5. CITY**	**6. STATE**	**7. ZIP CODE**
P.O. Box 270	Jefferson City	Mo	65102
8. TELEPHONE NUMBER WITH AREA CODE	**9. EMAIL**		
573-751-2790	Brian.Williams@modot.mo.gov		

10. NAME OF MS4 CONTACT PERSON

Brian Williams

11. Have any areas of the MS4 been added or removed from the MS4 jurisdiction due to annexation or other legal means since the most recent permit application (renewal, new, modification), or most recent MS4 stormwater management plan report?

☐ Yes ☑ No

If yes, please include a map along with a brief description as an attachment.

Part B – REPORTING PERIOD

1. Is your MS4 subject to a TMDL?

☑ Yes ☐ No

If yes, you are required to submit the MS4 report annually. Reports are due Feb. 28 each year. For the first reporting period, the beginning date will be June 13, 2016, and the ending date will be Dec. 31, 2016. All other annual reports shall cover the reporting period of Jan. 1 to Dec. 31 each year.

2. Is your MS4 new permitted (i.e., is this your first MS4 permit)?

☐ Yes ☑ No

If yes, you are required to submit the MS4 stormwater management plan report annually. Reports are due Feb. 28 each year. For the first reporting period, the beginning date will be the date of issuance of the permit and the ending date will be Dec. 31, 2016. All other annual reports shall cover the reporting period of Jan. 1 to Dec. 31 each year.

3. Is your MS4 a previously permitted MS4 and not subject to a TMDL?

☐ Yes ☑ No

If yes, you are required to submit the MS4 stormwater management plan report biennially (i.e., once every two years). Reports are due Feb. 28 every odd year. The first report will be due February 2017, and will cover the reporting period from June 13, 2016, to Dec. 31, 2016. All other reports shall cover the reporting period of Jan. 1 of the first year to Dec. 31 of the second year.

4. If you are part of a co-permitted MS4 permit, submit combined MS4 stormwater management plan reports, and one or more of the co-permitted MS4s have annual reporting based on the above criteria, then submit your MS4 stormwater management plan report annually by Feb. 28 of each year.

IF you are part of a co-permitted MS4 permit and do not submit combined MS4 stormwater management plan report, then each MS4 co-permittee will submit their MS4 stormwater management plan report based on the above criteria.

5. Reporting Period:

BEGINNING: January 1, 2019 ENDING: December 31, 2019

Part C – STORMWATER MANAGEMENT PLAN REPORT PROGRESS AND COMPLIANCE

As an attachment, please provide information for each of the items below. Provide informative data, success stories, and experiences that support the successful implementation of your stormwater management plan report.

1. Describe the status of compliance with permit conditions for the permitted MS4.
2. Provide information regarding the progress toward achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable to the MS4.
3. If another governmental entity implements any best management practice or minimum control measure, please provide the following:
    a. Name of the government entity;
    b. Name of the primary contact for the government entity;
    c. Contact information (i.e., address, city, ZIP code, state, and phone number); and
    d. Specific best management practices or minimum control measures being implemented by the government entity.

It is the responsibility of the permittee to provide all information under this report regardless if best management practices or minimum control measures are being implemented by another governmental entity. If a complete minimum control measure is being implemented by an alternative governmental entity, then only indicate the best management practice under the minimum control measure.

4. Provide a summary of any stormwater activities and known construction activities that will be covered under the authority of the MS4 permit that are scheduled to begin during the next reporting period.
5. Provide a description of any changes to the stormwater management plan report, best management practices, measurable goals, and the iterative process that have occurred during the covered reporting period.
6. Provide a list of best management practices that were evaluated during the covered reporting period, and provide information on how the best management practice was determined effective.
    a. If any of the best management practices were determined to be ineffective, provide a summary on how the ineffective best management practice was resolved.
7. If any water samples were collected and analyzed during the covered reporting period by the permitted MS4 or on behalf of the permitted MS4, please complete Part D – Water Sample(s) Analysis.

Part D – WATER SAMPLE(S) ANALYSIS

PARAMETER OR INDICATOR	FREQUENCY	RESULT	DRY WEATHER SAMPLE?	WET WEATHER SAMPLE?
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No

1. Are any of the parameters being sampled due to the MS4 being subject to an established or approved Total Maximum Daily Load?
☐ Yes ☑ No
If yes, please indicate the parameter/pollutant.
N/A

2. Does the data support water quality attainment or support trend data toward water quality attainment?
☐ Yes ☑ No
If yes, please describe.
N/A

Part E – TOTAL MAXIMUM DAILY LOAD (TMDL) ASSUMPTIONS AND REQUIREMENTS ATTAINMENT PLAN

1. Is your MS4 subject to an established or approved TMDL? If no, please indicate "No" below and do not complete any other portion of the TMDL Assumptions and Requirements Attainment Plan portion of this report.

☑ Yes ☐ No

2. Has your TMDL Assumptions and Requirements Attainment Plan been completed and submitted? If no, please provide a summary as an attachment on the progress toward submitting and implementing the TMDL Assumptions and Requirements Attainment Plan.

☑ Yes ☐ No

3. Has your TMDL Assumptions and Requirements Attainment Plan received approval from the department? If yes, please provided a summary of the status of the plan and include implementation status of identified best management practices and measurable goals along with any changes to best management practices or measurable goals (if applicable)..

☑ Yes ☐ No

4. Does the TMDL Assumptions and Requirements Attainment Plan incorporate Integrated Planning? If yes, please provide a summary of the status of the Integrated Plan.

☐ Yes ☑ No

PART F – SUBMIT REPORT TO:

Missouri Department of Natural Resources
Water Protection Program
MS4 Program Coordinator
P.O. Box 176
Jefferson City, MO 65102-0176

PART G - CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE OR PERMITTEE (LEGALLY RESPONSIBLE PERSON)	DATE SIGNED
Richard Moore	2/26/2020
NAME (PRINTED OR TYPED)	TITLE
Richard Moore	Environmental & Historic Preservation Manage

MO 780-1846 (10-16)

2019 Annual Report

Missouri Department of Transportation

February 26, 2020

INTRODUCTION

This annual report outlines the implementation status of each control measure, measurable goals, and a summary of activities that were achieved in the 2019 reporting cycle for each of the measures.

Measure 1: Public Education and Outreach

Action: MoDOT will educate the general public and MoDOT community on storm water issues primarily related to sediment and litter as it relates to the state's highway system through public meetings, public events, website, email and use of media and materials. 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 outreach tools to explain storm water quality issues.

Measurable Goal - MoDOT will track how many external visitors have used our storm water webpage (www.modot.org/stormwater) and content on the webpage each year and continually update the page with the best available information on MoDOT's role as a TS4.

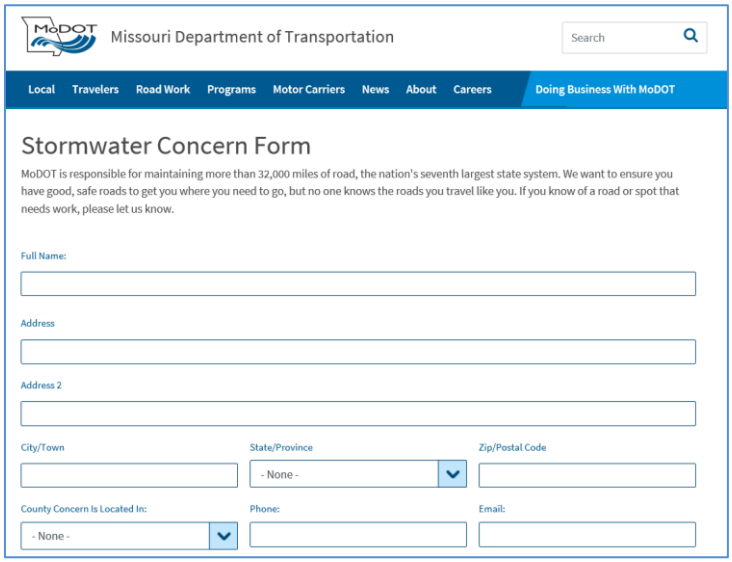
- ⇒ The Stormwater webpage had 1,037 unique visitors during this permit year (2019). http://www.modot.org/stormwater/.
- ⇒ From this webpage:
  - The stormwater concern form was viewed 370 unique times.
  - The stormwater brochure was viewed 19 unique times.
  - The stormwater snow removal fact sheet was viewed 0 unique times.
  - The Permit was viewed 22 unique times.
  - The SWMP was viewed 24 unique times.

Iterative Process: MoDOT is working on improving its web site with regard to stormwater as an effort to improve external education and promote more traffic to the page.

Measurable Goal – MoDOT will track use of its stormwater email (stormwater@modot.mo.gov).

- ⇒ The stormwater email address received 7 emails during the reporting timeframe. stormwater@modot.mo.gov.

Iterative Process: Email traffic has been down over the last few years. MoDOT is evaluating the email traffic for this measure. With improvements to the website, improved email traffic is expected.



Measurable Goal - MoDOT will track how many visitors have used/submitted the Report a Stormwater Concern form and how many of those were related to permit measures.

⇒ There were 92 forms submitted in the reporting cycle. Of those, 15 were applicable to IDDE measure.

Iterative Process: 2019 was the first year of MoDOT's new web site and new Stormwater Concern Form. Use of this site are slightly down from 2018 but future changes to the Stormwater Page are expected to help this effort.

Measurable Goal - MoDOT will track how many stormwater brochures are disseminated each year.

⇒ The brochure is on the stormwater webpage and disseminated during out-reach opportunities at Earth Day and the State Fair. A total of 524 stormwater pamphlets were given away at Earth Day and the Missouri State Fair.

Iterative Process: MoDOT is encouraged with the direction of this measure. This number from this measurable goal has increased 210 percent from 2018. Continued improvements to the program will promote additional success of this goal.

Measurable Goal – MoDOT will track and report on education components related to litter prevention through its participation in No More Trash events statewide and other media outlets.

⇒ The April 2019 No More Trash! Bash campaign had 131 educations events around the state with 9,975 bags of trash picked up.

⇒ Missouri Natural Resources Conference 2019 booth.

⇒ Signage is used to communicate with the general public. There are 654 No More Trash signs in place across the state. These are primarily used in roadside parks, rest areas, welcome centers, truck parking areas, commuter lots and areas of targeted issues. There are 80 Littering signs across the state. There are 24 No Dumping signs across the state. There are used for targeted location issues. The signage numbers remain stable from year to year since signs can last 10-15 years.

⇒ Missouri State Fair 2019 and Earth Day. The stormwater bean bag toss was run all 7 days of the fair.

Iterative Process: Numbers from this goal are down from 2018 but are more than what was reported from 2017. MoDOT is encouraged that this program is successful and is a great program for reducing pollution.

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

⇒ Earth Day at the State Capitol and the Missouri State Fair were attended in 2019 employing the bean bag toss and litter pledge.

Iterative Process: Involvement in these events helps promote MoDOT's efforts for public education and outreach. MoDOT will continue to attend these events.

Measure 2: Public Involvement and Participation

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

Measurable Goal: MoDOT will report how many individuals are involved in programs MoDOT offers related to the TS4 permit including events like No More Trash Bash, Trees for Tomorrow, adopt a highway and sponsor a highway programs.

⇒ Adopt-A-Highway program. Volunteers pick up litter a minimum of four times a year. There are 5,329 volunteer groups who cover 6,419 miles of roadway.

- ⇒ Sponsor-A-Highway program. 17 miles of roadway are sponsored in the Kansas City District and 65 miles are sponsored in the St. Louis District.
- ⇒ "Trees for Tomorrow" program. This is the last year of a 5-year commitment spanning from 2014-2019. MoDOT committed to purchasing up to 250,000 seedlings each year, over a five-year period and MDC distributes the trees to youth groups throughout the state. The total breakdown of seedlings purchased in 2019 were as follows:
  - Arbor Day 94,000
  - MoDOT orders 1,250
  - Mo Department of Conservation 66,445
  - FFA orders 16,645
  - Stream Team Orders 8,690
  - Promo Demo Orders 29,820
  - 4-H Orders 3,330
  - Outdoor Classroom 2,910

  223,090 Total seedlings

- ⇒ No More Trash Bash. There were 131 educational events and 9,975 bags of trash collected.

Iterative Process: Participation numbers are up slightly from 2018. MoDOT will continue to monitor this measure.

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 permit components on MoDOT right-of-way or facilities.

- ⇒ Report a Stormwater Concern (See Measure 1 for numbers).

Iterative Process: See iterative process for Measure 1.

Measurable Goal: Additionally, MoDOT will report how many reports came from internal personnel or other methods.

- ⇒ Internal reports (See Measure 3 for numbers).

Iterative Process: See iterative process for Measure 3.

Action: MoDOT will continue to promote public awareness campaigns through the website and other media outlets.

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

- ⇒ **Facebook** 2 posts on 4/15 (KC & SW), 4/17, 4/18, 3 posts on 4/22 (2-Adopt-a-Highway & 1-Earth Day), 9/27
- ⇒ **Express Lane publication** on 4/12, 6/21.
- ⇒ **Weekly News:** 1/14, 4/15
- ⇒ **News Releases** on 4/2, 4/10.
- ⇒ **MoDOT Connections** on 1/11, 4/4, 2- 4/18 (Litter Pick up & No MOre Trash), 5/2, 10/31.
- ⇒ **E-Updates** 4/17
- ⇒ **MoDOT Guidance Center** 7/25, 9/20.
- ⇒ Beanbag Toss on Earth Day and the State Fair.

Measurable Goal: MoDOT will report how many times it used media to promote awareness of stormwater issues.

- ⇒ MoDOT used media in at least 23 separate times to promote awareness of stormwater issues.

Iterative Process: Media usage was down slightly from 2018 but are equal to media usage reported in 2017. MoDOT will continue to monitor the measurable goal in the future.

Action: MoDOT will continue to participate in watershed activities and coordination with other MS4 communities when appropriate including the Hinkson Creek Collaborative Adaptive Management (CAM) -Action Team.

Measurable Goal - MoDOT will report annually how many times MoDOT collaborated with other MS4s.

- ⇒ SL District collaborated with St. Louis Metropolitan Sewer District for the I-270 Design Build Project.
- ⇒ Hinkson Creek Collaborative Adaptive Management – MoDOT is an on-going participant on the Action Committee. The action committee meets monthly.
- ⇒ General Conferences for Outreach:
  - IECA Great Rivers Chapter 2019 fall conference in Omaha, NE 11/4-11/5.
  - Missouri Water Seminar 2019.
- ⇒ MSD Steering Committee Meeting, 7/17/2019, 12/17/2019.
- ⇒ Colorado DOT Peer Exchange – 8/20–8/21.
- ⇒ EPA Region 7 Peer Exchange – 9/9-9/11

Iterative Process: MoDOT is seeing benefits from the partnering efforts with other MS4 communities. MoDOT will continue to monitor this measurable goal.

Measure 3: Illicit Discharge Detection and Elimination (IDDE)

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 and then forwarding confirmed instances to the proper authorities. Hazardous material spills will be reported within 24 hours upon discovery and 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: MoDOT will report how many illicit discharge reports are received and investigated using information obtained through the website reporting form and by MoDOT staff.

⇒ MoDOT investigated a total of 71 instances of reports of illicit discharges, stormwater concerns, drainage issues, and/or illegal dumping; a majority of which were received through the website links (see Measure 1) and another 22 were through contacts with our Hazardous Waste specialists, other internal employees or other reports (MDNR/MSD/etc.).

Iterative Process: See iterative process for Measure 1.

Measurable Goal: MoDOT will report how many spills on right of way were reported to MDNR's EER System, including vehicular accidents. Cleanup is generally directed by MDNR, MoDOT, or Highway Patrol.

⇒ Approximately 223 spills were reported on MoDOT ROW, as reported to MDNR's EER system, including vehicular accidents. Vehicular accidents were included because it is impossible to determine from the EER reports whether the spill reached a waterway. Cleanup is generally directed by MDNR, MoDOT, private entity or Highway Patrol.

Iterative Process: Number from this measurable goal are up from last year. MoDOT will continue to track this goal and determine if there is a better way to track illicit discharges.

Action: MoDOT will educate and cross-train maintenance staff to assist with identification of illicit discharges on MoDOT right of way.

Measurable Goal: MoDOT will report the number of staff educated on the identification of illicit discharges that discharge into the MoDOT drainage system at least once annually through regular training or the refresher training.

- ⇒ A total of 543 employees were trained in the SPCC/IDDE training.
- ⇒ A total of 473 employees were trained in the SPCC/IDDE refresher training.

Iterative Process: MoDOT is evaluating its training program as it relates to MCM 3. MoDOT's current turnover rate is 25 percent overall. MoDOT is evaluating training numbers and looking for more efficient ways of addressing the training process.

Action: MoDOT will continually inspect, through daily work and routine maintenance, the outfalls on MoDOT's system.

Measurable Goal: MoDOT will report how many bridges/outfalls have been inspected annually.

- ⇒ MoDOT inspected a total of 780 outfalls in 2019. There are 50 outfalls pending evaluation that failed due to unusual conditions. MoDOT's Environmental Section is working on determining if the pending outfalls are actually failed for illicit discharges.

Iterative Process: MoDOT's process of dry weather screenings is very efficient based on the number of MoDOT staff available to conduct the inspections. MoDOT has taken steps to improve the evaluation processes related to these inspections and are looking forward to an increased responsiveness to any outfall concerns.

Measure 4: Construction Site Runoff Control

Action: Continue training of MoDOT personnel through an annual Consent Decree training and Erosion and Sediment Control Training. MoDOT continues to conduct annual training of its design, construction and maintenance employees and contractors and consultants to ensure implementation of the SWPPP and compliance with the Land Disturbance permit.

- ⇒ MoDOT has training material (2014 Land Disturbance Refresher Course as well as the 2012 Land Disturbance Full Course) posted in three locations for ease of use to employees and contractor/consultants. The 2014 Land Disturbance Full Course is available in these same locations as well.
  - EPG: 806.8 Storm Water Pollution Prevention Plan (SWPPP) - In the box on the right, under "Additional Information".

- Construction and Materials (CM) Intranet, under "Erosion Control".
- MoDOT Internet: http://www.modot.org/Land Disturbance - for MoDOT land disturbance items as a resource for MoDOT, contractors and consultants.
- MoDOT U: Consent Decree Recertification Training (2019)

Iterative Process: MoDOT is evaluating its training program as it relates to MCM 3. With the issuance of MoDOT's new Stacked Statewide Operating Permit MO-0137910, additional training is being incorporated to support MCM 4. This measurable goal is still viable and will continue to be monitored.

Measurable Goal: MoDOT will report how many MoDOT employees and how many non-MoDOT employees have taken the training classes.

⇒ Online training was the primary training vehicle in 2019. This training reinforced the elements of construction erosion and sediment control techniques and practices, elements of the consent decree, MoDOT's general operating NPDES permit, and MoDOT's Storm Water Pollution Prevention Plan. 79 individuals were trained through MoDOT U online training in 2019. There were 37 MoDOT employees who took the on-line training and 42 contractors, consultants, or city/county officials took the on-line training.

Iterative Process: MoDOT is evaluating its training program as it relates to MCM 3. With the issuance of MoDOT's new Stacked Statewide Operating Permit MO-0137910, additional training is being incorporated to support MCM 4. This measurable goal is still viable and will continue to be monitored.

Action: Perform statewide audits of construction sites to ensure that specifications and SWPPP are being followed. In addition to site inspections conducted weekly and following significant rainfall events, MoDOT continues to conduct quality control audits of each project covered by the Land Disturbance permit. These audits are generally conducted at a minimum once a year per construction site to ensure consistent inspections and implementation of the SWPPP.

Measurable Goal: Evaluate erosion control elements of 90% of all land disturbance sites that involve 1 acre or more of land disturbance and report how many were done annually.

⇒ MoDOT conducted 68 audits on 72 construction sites that were subject to Land Disturbance permit requirements (statewide).

Iterative Process: MoDOT has submitted a new Stormwater Management Plan to MDNR for consideration that adjusts this measurable goal. MoDOT has been forced to adjust this measurable goal due to staffing numbers. MoDOTs

proposal meets the permit obligation and ensures continued support of the quality assurance program.

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

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. A numeric goal is not desirable for this action due to the sensitive nature of the process of evaluating contractors. From EPG 102.2.1-The reporting period for the annual performance project evaluation is the calendar year, January 1 through December 31 with the report for each active project due on February 1 of the following year. Final reports on projects completed during the calendar year are due 30 days after project acceptance. From EPG 102.2.7-The resident engineer must discuss performance with the contractor. If performance deficiencies exist, the contractor needs the time during the remainder of the season to provide the opportunity to improve their ratings for the year. The department does not want a contractor disciplined at the end of a construction season without assurances efforts were made to timely communicate any poor performance. It is not MoDOT's intent or desire to disqualify contractors, but we must insist on quality construction and timely completion of projects.

Iterative Process: MoDOT has submitted a new Stormwater Management Plan to MDNR for consideration that adjusts this measurable goal. MoDOT still utilizes this process to evaluate contractors but due to it sensitive nature, MoDOT feels there are better measurable goals that can be used that can meet the permit requirements.

Action: MoDOT will continue to advance personnel knowledge of state-of-the-art practices and policies by attending events and conferences.

Measurable Goal: At least one annually.

- ⇒ 3 MoDOT personnel attended a peer exchange with the Colorado Department of Transportation in September.
- ⇒ One MoDOT employee attended a Peer Exchange between Nebraska, Kansas, Iowa, and Missouri and Federal Highway Administration in

October 2019 to discuss MS4 and Land disturbance best management practices in Lincoln, NE.

- ⇒ One MoDOT employee attended the IECA Great River Chapter Conference in Nebraska in November 2019.
- ⇒ One MoDOT employee attended a TRB webinar for "Complying with TMDL Requirements Related to Roadway Stormwater Runoff" on October 30, 2019.
- ⇒ One MoDOT employee attended AASHTO CEE Stormwater COP Webinar "Construction to Maintenance Handoff" on November 19, 2019.
- ⇒ One MoDOT employee attended a webinar for "Modernizing Compliance: Best Practices and Technologies for Performance-Based Stormwater Management" on September 27, 2019.

Iterative Process: Training part of MoDOT's Strategic Vision and is a vital tool for the success of the stormwater program. MoDOT will continue to monitor the effects of this measurable goal.

Measure 5: Post-Construction Site Runoff Control

Action: Create a Stormwater Team to assist in development of policy regarding post-construction bmps and other MCMs. MoDOT's stormwater team is made up of construction, maintenance, design, and environmental personnel to assist in development of policies.

Measurable Goal: Report policy changes or additions in the reporting cycle.

- ⇒ EPG Article 127.25 and Article 806.6 were updated on 1/10/2019 to address guidance for minor spills in support of MCM 6 Pollution Prevention/Good House Keeping.
- ⇒ EPG Article 107 and Standard Specifications Sec. 107 were updated on 1/28/2019 to address oil distributor truck and tanker storage reqirements in support of MCM 6 Pollution Prevention/Good House Keeping.
- ⇒ Standard Specification 806.10 was updated to clarify rock size used in temporary crossings to meet meet Sec 404 permit requirements in support of MCM 4 Construction Stormwater Runoff Control.
- ⇒ Stormwater Database quick reference guides located in EPG 101 were updated on 4/1/2019, 7/11/2019, and 12/4/2019 due to system upgrades in support of MCM 4 Construction Stormwater Runoff Control.
- ⇒ Updated MoDOT's SWPPP form on 11/7/2019 and 12/13/2019 to meet requirements of the amended State Operating Permit MO-0137910 in support of MCM 4 Construction Stormwater Runoff Control.

Iterative Process: MoDOT's Engineering Policy Guide is the sole location for all MoDOT engineering policies. Continual improvement in policy updates shows efforts to improve MoDOT process to support the permit goals. MoDOT will continue to track this measure.

Action: Train MoDOT personnel to consider post-construction BMPs where required by policy definitions of new development and redevelopment in the STIP process. Proceed through the process of tracking and officially inspecting permanent BMPs on an every other year basis. They are inspected regularly during routine maintenance activities.

Measurable Goal: Report how many projects were evaluated in the reporting cycle. MoDOT evaluates and documents these considerations through the Request for Environmental Services (RES) process. RES's are submitted multiple times in the project development process and may have the same response.

- ⇒ In 2019, staff reviewed 2790 individual RES's.
  - 345 of those were in regulated TS4 areas.
    - 6 of those were potentially new development
    - 104 of those were potentially redevelopment
    - 235 of those were maintenance
  - 516 projects did not meet the one acre threshold for BMP consideration.
  - 1929 projects were outside the TS4 area.

Iterative Process: Tracking of RES submittals shows MoDOT's commitment to the permit obligation and MoDOT's program for MCM 5. MoDOT will continue to monitor this measurable goal.

Measurable Goal: The number of post-construction bmps constructed during the reporting cycle.

- ⇒ In 2019 MoDOT constructed 14 BMPs within the TS4 area.
  - Detention basin constructed under job 5S3000 (Christian County Route 14 in Ozark).
  - Five detention basins constructed under job 6I2423 (St.Louis County Route 141 and Route 44 near Fenton).
  - Under ground detention basin constructed under 8P3101 (Christian County Route 65 in Springfield)
  - Grassy swale under job 6S3100 (St Charles County Route 364).
  - Detention Basin under job 8P0588H (Christian County Route 14 in Springfield).
  - Two detention basins constructed under job 8P0588I (Christian County Route 14 in Ozark).
  - Two bioretention basins under job 6S3141D (St. Louis County Route 109 in Wildwood)

- Bioretention basin under 6S3141B (St. Louis County Route 109 in Wildwood).

Iterative Process: Tracking of post-construction BMPs constructed in the reporting year shows MoDOT's commitment to the permit obligation and MoDOT's program for MCM 5. BMPs constructed in 2019 were down from the previous year but this number will have slight variations depending on projects planned in the state's improvement program. MoDOT will continue to monitor this measurable goal.

Measurable Goal: How many BMPs are inspected during the reporting cycle and if any fail inspection.

⇒ 45 BMPs were inspected in 2019. Five of the 45 BMPs inspected were marked faild due to maintenance needs. Maintenance needs varied from litter to overgrown vegitation and trees. MoDOT's Maintannce Division was contacted in the respective districts for the necessary maintenance.

Iterative Process: Tracking of post-construction BMP inspections shows the progress of MoDOT's maintenance program. Staffing changes have assisted in improving this measurable goals progress numbers. MoDOT will continue to monitor this measurable goal.

Measureable Goal: Train design staff at least every other year and report how many where trained in the reporting cycle.

⇒ 2019 was an off training year.

Iterative Process: Training part of MoDOT's Strategic Vision and is a vital tool for the success of the stormwater program. MoDOT will continue to monitor the effects of this measurable goal.

Action: MoDOT's system crosses other regulated MS4s. Coordination and partnering with other MS4 communities provides opportunties to work together to facilitate compliance with like goals.

Measureable Goal: MoDOT will report what types and how many coordination events are occuring.

⇒ MoDOT has been in contact with the following MS4s during this reporting cycle:

- City of Columbia – Hinkson CAM meetings.
- Metropolitan St. Louis Sewer District – Steering Committee Meetings.
- Metropolitan St. Louis Sewer District coordination meetings for the 270 North Design Build project.

Iterative Process: MoDOT is seeing benefits from the partnering efforts with other MS4 communities. MoDOT will continue to monitor this measurable goal.

Measure 6: Pollution Prevention/Good House Keeping

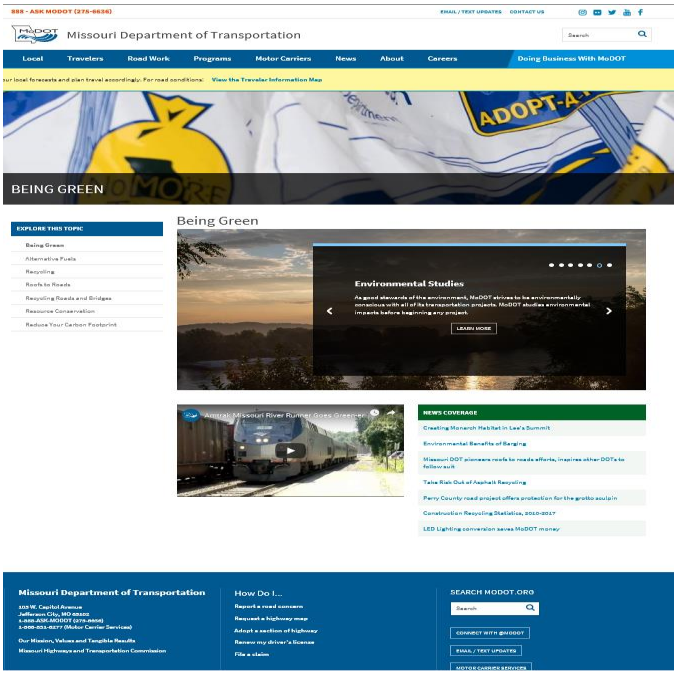
Action: Continue to educate maintenance staff and MoDOT general staff on SPCC and NEPA. Evaluate the effectiveness of housekeeping activities and identify those processes and/or procedures that are impacting waters of the state using semi-annual inspections of all MoDOT facilities to assess compliance.

Measurable Goal: SPCC, IDDE, MCM6, and various other trainings at least every other year.

- ⇒ Winter Operations Training – approximately 3,500 employees state wide participated in the training November 7, 2019. This effort focuses on winter operation rolls from the emergency operations centers to snow plow operators. Proper equipment function and plowing techniques are outlined. Guidance on beat juice, salt, sand, and brine applications are reviewed.
- ⇒ SPCC/IDDE Training
  - A total of 109 maintenance employees were trained in SPCC Gear Up OJT training.
  - A total of 183 maintenance and 11 non-maintenance employees were trained in SPCC Spill Drill.
  - A total of 588 maintenance and 64 non-maintenance employees were trained in Spill Drill refresher training.
- ⇒ Good Housekeeping Training
  - A total of 2 maintenance employees were trained in the Good Housekeeping training.
- ⇒ FRCP inspections
  - All facilities (Table 1) that have FRCPs were inspected in 2019.

Iterative Process: MoDOT is evaluating its training program as it relates to MCM 6. MoDOT's current turnover rate is 25 percent overall. Training numbers have declined in the last couple of years and are not sufficient to promote a successful program. MoDOT is working to improve this program for 2020.

Action: Continue dialogue with the Environmental Steering Committee (ESC) to evaluate the effectiveness of housekeeping processes and procedures. Formed in 2007, the ESC was established to provide a venue to discuss storm water issues and other environmental topics as they come up for the department. The ESC meets three times a year. The ESC has additionally provided guidance on issues concerning compliance with the consent decree with EPA and DOJ action regarding NOVs, and wastewater facility permits and compliance. Ongoing inspections of maintenance facilities found that not only storm water control has improved but all aspects of environmental compliance over the last several inspection cycles. Under direction of the ESC, MoDOT will continue to evaluate existing maintenance operation policies that have potential to impact water quality. Many of the implemented and proposed changes in MoDOT's winter operations have had, or may have, a positive impact on water quality:



Measurable Goal: Document how many times and what topics regarding the TS4 are discussed at the quarterly ESC meetings.

⇒There only one meeting in 2019 of the ESC. MoDOT is looking at revamping the ESC meeting to better serve the intended task of the group. Updates to MoDOT's TS4 and Land Disturbance Permit program were discussed at the May 14, 2019 meeting. Updates to the new stacked statewide operating permit were provided as well as improvements to the Stormwater Database were outlined.

Iterative Process: MoDOT is evaluating the Environmental Steering Committee charter and goals for the team. The team direction has evolved away from its original intent and has not been an effective tool for promoting innovative solutions to water quality and other environmental challenges.

Action: MoDOT uses chemicals and abrasives during winter operations to facilitate the safe travel of motorists using state roads. MoDOT's control of winter operations is governed by EPG 133.

Measurable Goal: Report materials used for statewide winter operations for calendar year 2019:

- ⇒ Beet Juice usage: 689,735 gallons.
- ⇒ Salt Usage:
  - Calcium chloride, dry flake and pellet – 839,501 lbs. and 221,659 lbs., respectively
  - Liquid calcium chloride – 109,187 gallons
  - Salt brine – 4,301,950 gallons
  - Salt, sodium chloride – 183,358 tons
  - Ice Ban (magnesium chloride) – 181,130 gallons
- ⇒ Other types of materials include aggregate chips, aggregate sand, etc.
  - Aggregate sand – 55,405 tons
  - Aggregate clean cinders – 4,943 tons
  - Aggregate limestone chips – 24,268 tons
  - Aggregate snow & ice abrasives – 47,278 tons

Iterative Process: Winter operations is one of MoDOT's critical roles to protect the safety of the traveling public. Tracking the use of chemical usage is not only an environmental concern but also a financial exercise. Efficient use of material helps the environment but also documents good stewardship of taxpayer's money. MoDOT will continue to monitor this measurable goal.

Action: Develop and test new housekeeping processes and procedures to add to current available resources and techniques including ways to minimize or prevent the spread of exotic/invasive plants, or pollutants.

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

⇒ MoDOT has focused on ways to minimize the impact to the environment due to winter operations. The one common denominator in this effort is to look at ways to minimize the amount of chlorides used in response to winter events. One method of minimizing chlorides is the use of beet juice which is an alcohol based agricultural by-product. Beet Juice can be directly applied to road surfaces and bridges as a treatment in advance of a winter event or it can be applied to road salt to help prevent scatter and make it more effective. Another method of reducing chlorides is the use of corrosion inhibited magnesium chloride as an additive to road salt. This increases the effectiveness of the road salt, thus allowing us to use less. A final method of reducing the use of chlorides is the use of brine applications in advance of winter events rather than road salt. This can reduce the amount of sodium chloride to a fourth of what is used if road salt is applied.

In addition to these methods, MoDOT partners with the National Weather Service and has a contract with a private weather forecasting service to assure that the most accurate forecasts are used. This can help MoDOT provide the most practical but still effective response to winter events.

Iterative Process: MoDOT is seeing benefits in evaluating current processes and searching for new process and procedures to assist in efforts to reduce pollution. MoDOT will continue to monitor this measurable goal.

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.

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.

⇒ 5,422 bridges flushed/cleaned in 2019.

Iterative Process: Bridge flushing and cleaning is an effective way to protect one of MoDOT's critical assets, its bridges. Tracking this effort identifies the potential conflict points of this critical operation and potential for pollution. MoDOT will continue to monitor this measurable goal.

1

FID	NAME	DISTRICT	COUNTY_NAM	TYPE	TEXT_DIREC	Adjacent MS4 Operator	Name of Receiving Water Body
1	ST. JOSEPH COMMUTER LOT	1	BUCHANAN	Commuter Lot	IS 29 AND US 169 (S)	St. Joseph	Trib. Candy Creek
2	ST JOSEPH	1	BUCHANAN	Shed	1/4 mile East of I-29 at the South US 169 exit	St. Joseph	Trib. Candy Creek
3	ST. JOSEPH DISTRICT OFFICE	1	BUCHANAN	Complex	3602 N. Belt hwy	St. Joseph	Trib. Missouri River
4	HANNIBAL COMPLEX	2	MARION	Complex	US 61 S, 1 Mile south of Rt MM 1.2 miles	Hannibal	Trib. Bear Creek
5	LEES SUMMIT DISTRICT COMPLEX	3	JACKSON	Complex	Exit 10A from IS-470 S turn right, turn right on first road right 1 mile up Independence Ave, Shed on right	Lee's Summit	Trib. Unity Lake #2
6	18TH AND INDIANA	3	JACKSON	Shed	18TH AND INDIANA (Motorist Assist)	Kansas City UA	Kansas City sewer system to treatment facility
7	BELTON	3	CASS	Shed	West Outer road South of US 71 and south of MO 58 interchange	Kansas City UA	East Creek
8	INDEPENDENCE	3	JACKSON	Shed	West Outer Rd of MO 291 1/2 mile N of US 24	Kansas City UA	Trib. Mill Creek
9	LEES SUMMIT STROTHER RD	3	JACKSON	Shed	West of 291 and south of Strother Rd	Lee's Summit	Trib. Lakewood Lakes
10	MARSHALL	3	SALINE	Shed	.25 miles West of Hwy 65 on Hwy 20	Marshall	Trib. North Fork Finney Creek
11	MULBERRY	3	JACKSON	Shed	650 Mulberry St, Kansas City	Kansas City UA	Kansas City sewer system to treatment facility
12	NORTHMOOR	3	PLATTE	Shed	take Riverside exit to 69 go left to Rt AA then left, building on westside of road	Kansas City UA	Line Creek
13	SEDALIA	3	PETTIS	Shed	2200 South Limit, off 65 South by Mo State Fairgrounds	Sedalia	Trib. Flat Creek
14	SKILES	3	CLAY	Shed		Kansas City UA	Trib. Missouri River
15	STADIUM	3	JACKSON	Shed	SE outer rd of I-70 and Blue Ridge Cutoff Behind Holiday Inn	Kansas City UA	Little Blue River
16	JEFFERSON CITY DISTRICT COMPLEX	4	COLE	Complex	DISTRICT 5 COMPLEX	Jefferson City	Wears Creek
17	COLUMBIA	4	BOONE	Shed	Paris Rd - Rt B North of US 63 1/4 miles north, on the northside of the road	Columbia	Trib. Hinkson Creek
18	FULTON	4	CALLAWAY	Shed	.2 off US 54, Rt F exit Over overhead to 1st st on left, 1st on drive rt	Fulton	Trib. Stinson Creek
19	JEFFERSON CITY	4	COLE	Shed	Off Big Horn and 50 West next to CDL site	Jefferson City	Trib. Binder Lake
20	LEBANON	4	LACLEDE	Shed	Off 127 exit. From LP44(Elm St) across from Case knife Outlet	Lebanon	Trib. Goodwin Hollow
21	BALLAS	5	ST. LOUIS	Shed	Northeast corner of I-64/40 & Ballas road (Call Ahead)	Town & Country-MSD	Trib. Deer Creek
22	BELLEFONTAINE	5	ST. LOUIS	Shed	1/2 mile S of 270 off 367. Turn off S367 to R go up hill by CDL site	St. Louis UA	Trib. Maline Creek
23	BROADWAY	5	ST. LOUIS CITY	Shed	from 55 take Park Ave or 7th street exit turn east on Park take it to Broadway go north 2 blocks	St. Louis UA	
24	CEDAR HILL	5	JEFFERSON	Shed	Off of MO 30 on Local Hillsboro Road	St. Louis UA	Trib. Big River
25	EUREKA	5	ST. LOUIS	Shed	On North Outer Rd, take 109 from I-44, turn left 1 mile down on right	Eureka	Flat Creek
26	FESTUS	5	JEFFERSON	Shed	1000 Airport Rd. Take U.S. 61 approximately 0.5 miles south of U.S 67 to Airport Rd.	St. Louis UA	Plattin Creek
27	HAMPTON	5	ST. LOUIS CITY	Shed	HAMPTON	St. Louis UA	River Des Peres
28	LEMAY	5	ST. LOUIS	Shed	Near I-55 & Bayless. From I-55 go W on Bayless to Union, left on Union cross I-55 go left on Hoffmeister until you reach shed	St. Louis UA	Gravois Creek
29	NORMANDY	5	ST. LOUIS	Shed	Southwest corner of I-70 at Bermuda Road	Normandy-MSD	Marlene Creek
30	BARRETT STATION	5	ST. LOUIS	Shed	BARRETT STATION	St. Louis UA	
31	SPECIAL-MOTORIST ASSIST-CHESTERFIELD	5	ST LOUIS	Shed	CHESTERFIELD	Town & Country-MSD	Trib. Creve Coeur Creek
32	ST CHARLES	5	ST. CHARLES	Shed	Old 94 and Muegge Rd. Hwy 94 to Pralle, left on old 94	St. Louis UA	Dry Creek
33	SUNSET HILLS	5	ST. LOUIS	Shed	on Rt 30 between 270 and 141 on Rahning Rd, 1/4 on left	Sunset Hills-MSD	Trib. Meramec River
34	WENTZVILLE	5	ST. CHARLES	Shed	0.75 miles North of Rt. A	St. Louis UA	Trib. Dry Branch Creek
35	BARNHART	5	JEFFERSON	Shed	Barnhart	St. Louis UA	Glaize Creek
36	SPRINGFIELD COMPLEX	6	GREENE	Complex	off Mo 744, .4 mile west of 65, then .2 mile north on Fairview west side of road	Springfield	Trib. South Dry Sac River
37	BOLIVAR	6	POLK	Shed	Rt 32, 1/2 mile East of Rt 13	Boliver	Branch Creek
38	CARTHAGE	6	JASPER	Shed	Corner of 171 & 96 one mile West of town	Carthage	Trib. Spring River
39	JOPLIN	6	JASPER	Complex	.8 mile East of Bus 71 off Rt FF	Joplin	Trib. Silver Creek
40	NEOSHO	6	NEWTON	Shed	From Jct 60 & 59 Go N on Bus 60 1 mile on left next to Meeks	Neosho	Trib. Hickory Creek
41	OZARK	6	CHRISTIAN	Shed	Rt F exit off 65, East to to 2nd stoplight, right 300 yards	Springfield	Trib. Elk Valley
42	KENNETT	7	DUNKLIN	Shed	412 West ti Rt O, Right on O, 1 mile on right (white fence)	Kennett	Ragland Slough
43	POPLAR BLUFF	7	BUTLER	Shed	Outer road of US 60 @ North end of Poplar Bluff	Poplar Bluff	Trib. Black River and Trib. Pike Creek
44	SIKESTON	7	SCOTT	Shed	I-55 S to exit 67, left, East on E Malone 1.5 miles, N side Edwards	Sikeston	Trib. St. Johns Ditch

TS4_facilities

Table 1: MoDOT facilities within the TS4 coverage area that have operations activities and are required to have a FRCP.