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KANSAS DEPARTMENT OF TRANSPORTATION

STORMWATER MANAGEMENT PLAN

Permit Effective: February 1, 2024 to December 31, 2028

Submitted by
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State Transportation Engineer




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M-KDOT-SU01
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KSR410051

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 of Permittee:
(Legally Responsible Person)



Date: 2/25/2025

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Introduction

The Kansas Department of Transportation (KDOT) is committed to protecting and improving the quality of stormwater runoff by implementing a **Stormwater Management Program** in compliance with the requirements of 40 CFR 122.34. This **Stormwater Management Plan** describes the program by outlining the policies, procedures, and actions KDOT implements to meet or exceed the requirements of the **Transportation Separate Storm Sewer System (TS4) Permit** during the permit term, which spans from February 1, 2024 to December 31, 2028. The TS4 Permit is issued and regulated by the Kansas Department of Health and Environment (KDHE).

Both the Stormwater Management Program and Plan was designed to:

- Reduce the discharge of pollutants from the TS4 to the Maximum Extent Practicable.
- Continue the implementation of **best management practices** (BMPs) for each of the six **minimum control measures** (MCMs).
- Satisfy the requirements of the TS4 Permit, the Clean Water Act, and the Kansas surface water quality statutes and regulations.

KDOT implements a combination of BMPs, consistent with the descriptions included in this Stormwater Management Plan and the provisions of the TS4 Permit, that result in meeting or exceeding the minimum point total each calendar year as required per TS4 Permit. In doing so, KDOT demonstrates compliance with the standard of reducing pollutants, including TMDL regulated pollutants, to the Maximum Extent Practicable.

Minimum Control Measures

The six MCMs described in this plan, and KDOT's approach to them, are summarized as follows:

- **MCM 1: Public Education and Outreach.** By engaging both the KDOT Community and the general public, KDOT aims to raise awareness about stormwater issues and promote behaviors that protect water quality. Key BMPs include maintaining an informative stormwater webpage, distributing educational materials, providing training sessions, and running the Adopt-a-Highway Program. Each BMP is designed to meet the community where they are, making KDOT's efforts both effective and widely supported.
- **MCM 2: Public Involvement and Participation.** By actively engaging with the community and encouraging public input, KDOT aims to foster a collaborative environment where stakeholders can contribute to the development and implementation of effective stormwater management practices. This plan outlines the various programs and initiatives designed to solicit feedback, promote involvement, and enhance public awareness about the importance of protecting water quality.
- **MCM 3: Illicit Discharge Detection and Elimination.** By implementing a comprehensive program to detect and eliminate illicit discharges, KDOT aims to proactively prevent non-stormwater discharges from entering waters of the state. Key BMPs include maintaining spill response plans, continually inspecting the stormwater system, and reviewing construction plans to prevent illicit connections. Each BMP is designed to make KDOT's stormwater management efforts effective and proactive.

- **MCM 4: Construction Site Stormwater Runoff Control.** By implementing a robust program to manage stormwater runoff from construction activities, KDOT aims to minimize pollutants at project construction sites. Key BMPs include requiring erosion and sediment control plans, developing and adopting a design manual for erosion and sediment control BMPs, reviewing construction plans for potential water quality impacts, and developing written procedures for site inspections.
- **MCM 5: Post-Construction Stormwater Management.** By implementing a comprehensive program to address stormwater runoff from completed construction projects, KDOT aims to minimize long-term water quality impacts. Key BMPs include developing and implementing a custom design manual for post-construction stormwater management and creating a list of structural and non-structural BMPs for department projects.
- **MCM 6: Pollution Prevention and Good Housekeeping.** By reducing stormwater pollution from department activities, KDOT aims to protect water quality during normal department operations. Key BMPs include providing employee training on minimizing stormwater pollution, protecting outdoor storage areas for salt and de-icing chemicals, and enacting good housekeeping and material management procedures.

This Stormwater Management Plan includes a section describing each MCM and the BMPs KDOT implements in detail. Each section addresses:

- How KDOT meets the minimum permit requirements of the TS4 Permit.
- Table of BMPs which are described in this Stormwater Management Plan.
- Detailed descriptions of each BMP, including the measurable goal, how KDOT implements the BMP, what supporting documentation KDOT maintains, and the metric which KDOT will track in the Annual Report. Additionally, some BMPs include an improvement goal, which are items KDOT plans to improve during the permit period.

Total Maximum Daily Load Regulated Pollutants

Included in this Stormwater Management Plan is a section addressing the requirements for total maximum daily load (TMDL) regulated pollutants per Part II of the TS4 Permit. This section describes the BMPs which KDOT implements to reduce TMDL regulated pollutants, a description of KDOT's record keeping requirements, and a plan to evaluate the effectiveness of the implemented BMPs.

Reporting

KDOT submits an Annual Report to KDHE by February 28th each calendar year. This report is a separate document from this Stormwater Management Plan and includes a listing of all implemented BMPs for the year, the supporting documentation KDOT maintains on file, and a metric to track progress of implementation. For each MCM, the available points for each BMP are totaled to demonstrate that the implemented BMPs equal or exceed the minimum point requirement. Additionally, the Annual Report summarizes any changes made to BMPs and an update on their evaluated effectiveness.

MCM 1: Public Education and Outreach

Minimum Permit Requirements

The minimum permit requirements for the public education and outreach minimum control measure (MCM 1) per Section C.1 of KDOT's TS4 Permit are as follows:

Implement an education program that focuses on stormwater topics relevant to transportation and steps that the KDOT Community and the general public can take to reduce pollutants in stormwater runoff.

- The KDOT Community is comprised of KDOT staff and external partners including contractors and consultants.
- The general public is comprised of users of KDOT's facilities or services that are not defined as members of the KDOT Community.

KDOT implements an education program as described in this Stormwater Management Plan and tracked in the Annual Report. Specifically, the program educates the KDOT Community through multiple trainings (described in Lbmp P Ed & O – 03 and Lbmp P P/G H – 05), and by posting informative signage at KDOT facilities (described in Lbmp P Ed & O – 06). The program educates the general public by maintaining a stormwater webpage which provides specific steps on how they can reduce pollutants in stormwater runoff (described in Lbmp P Ed & O – 01), making regular social media posts about stormwater pollution (described in Lbmp P Ed & O – 02 and Lbmp P Ed & O – 09), and operating the Adopt-a-Highway Program (described in Lbmp P Ed & O – 08 and Lbmp P I/P - 04).

Best Management Practices

KDOT implements a combination of public education and outreach BMPs, consistent with the descriptions included in this Stormwater Management Plan and the provisions of the TS4 Permit, that result in meeting or exceeding the minimum point total required per calendar year which constitutes compliance with the standard of reducing pollutants, including TMDL regulated pollutants, to the Maximum Extent Practicable.

Public education and outreach BMPs that KDOT typically implements are described in the following sections. The BMPs follow the naming and numbering convention of the BMPs listed in the TS4 Permit (Lbmp P Ed & O – #).

Table 1.1 – Public Education and Outreach BMPs

Lbmp P Ed & O	Included in SMP?	BMP Description
01	Yes	Maintain a stormwater webpage for the permittee
02	Yes	Distribute educational materials addressing various pertinent stormwater education topics
03	Yes	Provide training to the KDOT community covering various stormwater topics
04	Yes	Post the TS4 Permit and SMP document to the webpage
05	Yes	Operate an information booth at public events... (See TS4 Permit for full details)
06	Yes	Create informative signage or an infographic to display on digital or physical signage at KDOT facilities to disseminate information about stormwater related topics with the intended audience being the KDOT Community
07	No	Create informative signage or an infographic to display on digital or physical signage within the permit area to disseminate information on stormwater related topics with the intended audience being the general public.
08	Yes	Operate an adopt a highway program to utilize public volunteers to clean road right-of-way
09	Yes	Develop or participate in ongoing public awareness campaigns on pertinent stormwater public education topics through the department’s website, social media and/or other social media outlets

Refer to KDOT’s Annual Report for a listing of the BMPs KDOT has successfully implemented in a given calendar year to meet the required point total of the TS4 Permit.

Lbmp P Ed & O – 01

Maintain a stormwater webpage for the permittee.

Measurable Goal: Maintain the webpage with up-to-date information with all links effective and valid information. Check all links and update website at a minimum annually.

The KDOT Stormwater Management Program webpage hosts multiple links, documents, maps, and topics that explain, illustrate, and support KDOT's efforts to reduce pollutants in stormwater runoff.

- Link to homepage: <https://www.ksdot.gov/programs/stormwater-management>

The links and content on the webpage include, but are not limited to:

- Stormwater Management is the homepage with direct links to the latest Stormwater Management Plan, Annual Report, and TS4 permit. Additionally, a feedback form is included inviting users to submit ideas on how to improve the Stormwater Management Program, or to report concerns such as suspected illegal discharges.
- Construction Stormwater and Pollution Control is where users will find resources to minimize the impact of stormwater from highway projects. This includes, but is not limited to, the KDOT Erosion Control Manual, a guide for construction sites, a link to KDOT's certified weed free forage and mulch program, and a checklist for a contractor's SWPPP.
- Stormwater Control Measure Manual includes a downloadable version of the manual, forms for SCM Requirements and Maintenance, and frequently asked questions.
- Pollution Prevention explains illicit discharge, provides outfall maps (required per/described in Lbmp P I/P – 06 and described under the Minimum Permit Requirements of MCM 3), and offers ways contractors, consultants and the public can help detect and eliminate illicit discharges.
- Stormwater Management Resources is where the public can read KDOT's Stormwater Permit, learn about our Best Management Practices (BMPs), review the archived annual reports and see the TMDL maps.

Supporting Documentation: Link to webpage

Annual Report Metric: Date of review/update

Lbmp P Ed & O – 02

Distribute educational materials addressing various pertinent stormwater public education topics.

Measurable Goal: Materials are to be distributed in at least two separate batches.

- *Track any physical materials printed for distribution. This should include the topic, number of copies printed, and distribution method.*
- *Track any digital educational materials distributed. This should include the topic, number of people reached in distribution, and distribution method (i.e. email, inclusion in KDOT newsletter, website post, or social media post).*

Digital Materials

KDOT distributes at least three educational stormwater messages annually via social media, described in Lbmp P Ed & O – 09. Topics may include car washing, litter prevention, Adopt-A-Highway participation, vehicle maintenance and more.

Physical Materials

KDOT supports an agency booth at the Kansas State Fair held each September in Hutchinson, KS, described in Lbmp P Ed & O – 05 with a video illustrating the benefits of the Adopt-A-Highway program and inviting visitors to participate.

Improvement Goal: Post at least six social media messages annually

Supporting Documentation: Social media campaign summary; refer to Lbmp P Ed & O - 05 for State Fair materials

Annual Report Metric: State Fair: number of attendees; Social Media: number of posts, number of people reached

Lbmp P Ed & O – 03

Provide training to the KDOT Community covering various stormwater topics.

Measurable Goal: Track training, including topic and number of courses offered per year.

KDOT implements an operation and maintenance program that includes KDOT community training to prevent and reduce stormwater pollution from department activities. The following table identifies training courses with stormwater-related content provided by KDOT. Each training is described in detail in Lbmp P P/G H – 05.

Training Name	Intended Audience	Availability
Construction Stormwater	KDOT Employees, Consultants, Contractors	Online year-round with in-person field trainings offered in spring and fall
Stormwater Awareness	KDOT Employees	Online year-round
Facility Safety	KDOT Maintenance Facility Employees	In-person as needed following site inspections
Spill Prevention, Control, and Countermeasure (SPCC)	KDOT Maintenance Facility Employees	In-person once annually
Snow Fighters	Manager-specified KDOT Employees	In-person once annually

Supporting Documentation: Refer to Lbmp P P/G H – 05 for training summaries or outlines and training logs

Annual Report Metric: Number of people who received each training

Lbmp P Ed & O – 04

Post the department's TS4 Permit and SMP document on the department's webpage.

Measurable Goal: The two documents must be posted for at least six months of the year to claim one point.

The TS4 Permit and current Stormwater Management Plan are posted on KDOT's Stormwater Management Program homepage: <https://www.ksdot.gov/programs/stormwater-management>

Supporting Documentation: Link to KDOT Stormwater Management Program webpage

Annual Report Metric: Date of TS4 Permit posting; date of Stormwater Management Plan posting

Lbmp P Ed & O – 05

Operate an information booth for at least 50% of the days an event occurs to provide stormwater topics.

Measurable Goal: Provide information about stormwater topics of current interest.

KDOT staffs an agency booth at the Kansas State Fair held each September in Hutchinson, KS. Among the materials made available to the public is video presentation illustrating the Adopt-A-Highway program and inviting visitors to participate. KDOT's booth is open for the duration of the event, which is typically ten days.

Supporting Documentation: Copy of digital materials

Annual Report Metrics: Date of event; dates of staff attendance; number of attendees

Lbmp P Ed & O – 06

Create informative signage or an infographic to display on digital or physical signage at KDOT-owned facilities to disseminate information on stormwater related topics with the intended audience being the KDOT Community.

Measurable Goal: Post digital or physical signage in at least one location.

KDOT developed a poster that outlines the importance of protecting Kansas waterways. This poster is physically posted at all KDOT maintenance yards throughout the state. The poster describes the process of stormwater runoff, provides steps that employees can take to reduce stormwater pollution, and defines key terms relating to the Stormwater Management Program.

Improvement Goal: Update poster with improved language and messaging

Supporting Documentation: Picture of signage

Annual Report Metric: Location of signage

Lbmp P Ed & O – 08

Operate an Adopt-a-Highway Program to utilize public volunteers to clean road right-of-way.

Measurable Goal: The volunteers shall clean at least a two-mile segment of road within permit area or adjacent to the permit area, at least once per year.

KDOT's Adopt-a-Highway program invites Kansans to volunteer to pick up litter and trash along state highways. Volunteer groups agree to pick up litter at least three times annually for a two-year period along a one-, two- or three-mile segment of a state highway. KDOT offers an incentive stipend of \$190 per highway section. Groups submit a request for payment after completing a highway cleanup event.

Link: <https://www.ksdot.gov/programs/local-opportunity-programs/adopt-a-highway-program>

Improvement Goal: Increase participation with updated Adopt-a-Highway materials and targeted public outreach

Supporting Documentation: Log of Adopt-a-Highway reimbursement requests

Annual Report Metric: Number of miles; number of events

Lbmp P Ed & O – 09

Develop or participate in ongoing public awareness campaigns on pertinent stormwater public education topics through the department's website, social media and/or other social media outlets.

Measurable Goal: Publish or share content at least three times per year. Record post topic, the number of impressions, and engagement for each post. Include link to permittee's stormwater education website.

KDOT posts at least three educational stormwater messages each year in different seasons on its Facebook and X (Twitter) channels. Each post includes a link to the Stormwater Management Program webpage. Educational topics may include car washing, litter prevention, Adopt-A-Highway participation, vehicle maintenance and more.

The post topic, number of impressions, and engagement for each post made in the year will be recorded in a social media campaign summary document. This summary differentiates between *impressions*, which are the total number of times the post is displayed no matter if it is clicked or not, *reach*, which is the total number of unique users who see the post, and *engagement*, which is the total number of times users interact with a post, including likes, comments, shares and clicks.

Improvement Goal: Post at least six messages annually

Supporting Documentation: Refer to Lbmp P Ed & O – 02 for social media campaign summary

Annual Report Metric: Number of posts; number of total impressions; engagement

MCM 2: Public Involvement & Participation

Minimum Permit Requirements

The minimum permit requirements for the public involvement and participation minimum control measure (MCM 2) per Section C.2 of KDOT's TS4 Permit are as follows:

Continue to implement a public involvement and participation program to solicit public comments and recommendations regarding the BMPs and measurable goals utilized by the permittee to comply with the permit.

KDOT implements a public involvement and participation program, as described in this Stormwater Management Plan and tracked in the Annual Report. Specifically, KDOT's Stormwater Management Program webpage includes contact information for KDOT staff responsible for implementing the Stormwater Management Program to receive comments and recommendations. Any public comments received will be provided with the Annual Report.

Comply with State and local public notice requirements when implementing a public involvement and participation program.

Typical activities for the Stormwater Management Program do not have any public notice requirements.

Best Management Practices

KDOT implements a combination of public involvement and participation BMPs, consistent with the descriptions included in this Stormwater Management Plan and the provisions of the TS4 Permit, that result in meeting or exceeding the minimum point total required per calendar year which constitutes compliance with the standard of reducing pollutants, including TMDL regulated pollutants, to the Maximum Extent Practicable.

Public involvement and participation BMPs that KDOT typically implements are described in the following sections. The BMPs follow the naming and numbering convention of the BMPs listed in the TS4 Permit (Lbmp P I/P – #).

Table 2.2 – Public Involvement and Participation BMPs

Lbmp P I/P	Included in SMP?	BMP Description
01	Yes	Post the Stormwater Management Program on the department’s website and allow for public comments regarding the SMP
02	Yes	Provide a stormwater hotline, either telephone or web based, for public reporting of stormwater issues
03	Yes	At project meetings, incorporate TS4 permit related discussions into the overall presentation about the project
04	Yes	Provide opportunities for the general public or the KDOT community to engage in cleanup activities and improve water quality in the permit area
05	Yes	Hire an intern (either paid or unpaid) high school or college age to work on stormwater related tasks
06	Yes	Make updated online storm sewer map accessible to the public

Refer to KDOT’s Annual Report for a listing of the BMPs KDOT has successfully implemented in a given calendar year to meet the required point total of the TS4 Permit.

Lbmp P I/P – 01

Post the Stormwater Management Program on the department’s website and allow for public comments regarding the SMP.

Measurable Goal: Track the number of comments received annually. Retain copies of any public comments received.

The Stormwater Management Plan remains posted on KDOT’s Stormwater Management Program homepage. The homepage features a Stormwater Management Feedback Form to receive public comments regarding the Stormwater Management Program. The webpage also includes contact information for the Stormwater Program Manager and the Stormwater Compliance Engineer to receive public comments. This information is posted year-round.

Link: <https://www.ksdot.gov/programs/stormwater-management>

Supporting Documentation: Link to webpage; copy of comments received

Annual Report Metric: Number of comments received

Lbmp P I/P – 02

Provide a stormwater hotline, either telephone or web based, for public reporting of stormwater issues.

Measurable Goal: Track how many reports are received annually. Respond to any reports within 10 business days.

KDOT's Stormwater Management Program webpage features a Stormwater Management Feedback Form to receive reports of illegal dumping, illicit discharge and other stormwater concerns. The KDHE Spill Reporting Hotline number is also listed on the Pollution Prevention webpage. This information is posted year-round.

- KDOT [feedback form link on homepage](#)
- KDHE Spill Reporting Hotline number: 785-291-3333

Supporting Documentation: Link to webpage; copy of reports received and responses

Annual Report Metric: Number of reports received

Lbmp P I/P – 03

At project meetings, incorporate TS4 permit related discussion into the overall presentation about the project.

Measurable Goal: Track the date presented and approximate number of attendees.

Applicable KDOT projects within the TS4 permit area that implement post-construction stormwater management (per Section C.5 of the TS4 permit and following KDOT's implementation of Lbmp P-C S M – 01 and Lbmp P-C S M – 02) incorporate TS4 permit related discussions at project meetings, which may include but are not limited to, field check and office check meetings. The TS4 permit related discussion includes the applicability, selection, and design of stormwater control measures per KDOT's Stormwater Control Measure Manual.

Supporting Documentation: Copy of meeting/calendar invitations showing date, attendees, and agenda

Annual Report Metric: Date presented; number of attendees

Lbmp P I/P – 04

Provide opportunities for the general public or the KDOT Community to engage in cleanup activities and improve water quality in the permit area.

Measurable Goal: Provide opportunities for at least two cleanup events to occur annually in the TS4 permit area. The opportunities can be environmental restoration events, litter cleanups, stream cleanups, tree plantings, or stream monitoring.

Adopt-A-Highway

KDOT's Adopt-a-Highway program invites Kansans to volunteer to pick up litter and trash along state highways. Volunteer groups agree to pick up litter at least three times annually for a two-year period along a one-, two- or three-mile segment of a state highway. KDOT offers an incentive stipend of \$190 per highway section. Groups submit a request for payment after completing a highway cleanup event.

Link: <https://www.ksdot.gov/programs/local-opportunity-programs/adopt-a-highway-program>

Sponsor-A-Highway

KDOT's Sponsor-a-Highway program invites businesses to advertise their company name and logo within view of travelers. In return, the money collected from these sponsorships funds litter removal on state highways. With the sponsorship funds, KDOT contracts with litter removal companies in urban areas to complete cleanups every other month.

Link: <https://www.ksdot.gov/programs/local-opportunity-programs/adopt-a-highway-program>

Improvement Goal: Increase participation with updated Adopt-a-Highway materials and targeted public outreach

Supporting Documentation: Log of Adopt-a-Highway reimbursement requests; Sponsor-a-Highway cleanup reports

Annual Report Metric: Number of events

Lbmp P I/P – 05

Hire an intern (either paid or unpaid) high school or college age to work on stormwater related tasks.

Measurable Goal: Intern(s) must receive the same stormwater related training a new full-time employee would receive, within the first six months of the full-time employee's employment, during their internship.

Either directly or through a partnership with Burns & McDonnell, KDOT aims to hire an intern to work directly on the Stormwater Management Program. The internship typically lasts 8 to 12 weeks. The intern position completes all stormwater related training that a full-time KDOT employee receives.

Supporting Documentation: Record of employment; record of training

Annual Report Metric: Dates of internship; date of training

Lbmp P I/P – 06

Make updated online storm sewer map accessible to the public.

Measurable Goal: Map shall cover the entire TS4 within the permit area, showing the location of all outfalls and the names and location of all streams or lakes receiving discharges from those outfalls.

The KDOT Stormwater Pollution Prevention webpage includes an outfall map of each urban area that is included in the TS4 permit area showing the location of all outfalls and the names and location of all streams or lakes that receive discharge from these outfalls. Refer to the Minimum Permit Requirements of MCM 3 for further description and assumed definitions used to create the outfall maps.

Link: <https://www.ksdot.gov/programs/stormwater-management/pollution-prevention>

Supporting Documentation: Link to webpage

Annual Report Metric: Date of posting/update

MCM 3: Illicit Discharge Detection & Elimination

Minimum Permit Requirements

The minimum permit requirements for the illicit discharge detection and elimination minimum control measure (MCM 3) per Section C.3 of KDOT's TS4 Permit are as follows:

a. Continue to implement and enforce a program to detect and eliminate illicit discharges into the TS4.

KDOT implements a program to detect and eliminate illicit discharges, as described in this Stormwater Management Plan and tracked in the Annual Report.

b. Maintain a storm sewer system map of the permittee's TS4, showing the location of all outfalls and the names and location of all streams or lakes receiving discharges from those outfalls. A copy of the map shall be submitted to KDHE with the annual report if requested by KDHE.

KDOT maintains an outfall map for each urban area that is included in the TS4 permit area showing the location of all outfalls and the names and location of all streams or lakes receiving discharge from those outfalls. With the adoption of this Stormwater Management Plan, KDOT adopts the following definitions:

- **Storm Sewer System** is any pipe, ditch, swale, or gutter intended to convey runoff from rainfall.
- **Waters of the State** includes any order 3 or greater stream as defined by the U.S. Geological Survey (USGS) National Hydraulic Database (NHD).
- **Outfall** is any instance where the storm sewer system flows into a water of the state. When multiple individual storm sewer system components outfall into a water of the state at the same general location, only one outfall point will be mapped to represent the multiple instances.
 - Any instance where KDOT's storm sewer system connects to an adjacent MS4's storm sewer system is not considered an outfall.
 - Any instance where stormwater runoff leaves KDOT property via sheet flow is not considered an outfall.
- **Storm Sewer as Managed by Others** includes any storm sewer system that is adjacent or under KDOT property that is owned and operated by another MS4, agency, municipality or other entity.

c. Maintain, implement, and enforce an ordinance, a resolution, or other enforceable requirement, if the permittee has the authority to do so, to prohibit non-stormwater discharges into the storm sewer system and implement appropriate enforcement procedures and actions. A copy of the ordinance, resolution, or requirement shall be submitted to KDHE with the annual report if requested by KDHE.

KDOT does not have the authority to implement and enforce ordinances and resolutions as a municipality would. KDOT prohibits non-stormwater discharges into the storm sewer system in a variety of ways, including:

- Requiring any individual, firm, municipality or other entity seeking to perform work within the KDOT right-of-way to submit a Highway Use Permit, known as Form 304. The permit requires the permittee to provide detailed plans for proposed utility installations to KDOT for their review and approval. This allows KDOT to prevent any cross-connections between sanitary sewer and storm sewer within the right-of-way from being created. The Highway Use Permit is also described in Lbpm I D D & E – 03.
- Requiring contractors disturbing KDOT property, either for a KDOT project or another entity’s project approved through a Highway Use Permit, to adhere to Section 901 of the Special Provision to the 2015 Edition of KDOT’s Standard Specifications for State Road & Bridge Construction (known as Section 901 of KDOT’s Standard Specifications). Section 901 requires construction projects to implement erosion and sediment controls, construction waste controls, and waste disposal procedures. Section 901 is further described under MCM 4 of this Stormwater Management Plan.
- Requiring staff to follow procedures in the Highway Maintenance Manual and in the Stormwater Awareness Training for waste disposal, pesticide application, vehicle and equipment washing, salt management, and vehicle and equipment maintenance. The procedures and training on the procedures are further described under MCM 6 of this Stormwater Management Plan.

d. Inform the KDOT community of hazards associated with illegal discharges and improper disposal of waste.

KDOT informs the KDOT community and the general public about the hazards associated with illegal discharges and improper disposal of waste on the Pollution Prevention section of the Stormwater Management Program webpage.

- Link: <https://www.ksdot.gov/programs/stormwater-management/pollution-prevention>

The KDOT community is provided training on various types of illegal discharges and improper disposal of waste, as described in Lbpm P P/G H – 05 and Lbpm I D D & E – 04.

e. Develop and implement a plan to detect/inspect for and address prohibited non-stormwater discharges, including illegal dumping, to the storm sewer system.

KDOT’s plan to detect/inspect for and address prohibited discharges includes three components:

1. Detect proposed illicit connections by reviewing Highway Use Permit applications and prevent them from being built, as described in Lbpm I D D & E – 03.
2. Inspect for prohibited non-stormwater discharges from construction sites as required by KDOT Construction Project Stormwater Compliance Plan and Section 901.3c of KDOT’s

- Standard Specifications, as described in Lbmp C S S R C – 06. Detected illicit discharges are addressed by requiring corrective actions to be completed by the contractor.
3. Inspect for prohibited non-stormwater discharges from the stormwater system, as described in Lbmp I D D & E – 02. Detected illicit discharges may be addressed either by:
 - a. Assigning work orders to appropriate staff when the discharge is found to be originating from KDOT property, is not spill related, and is considered minor in effort. This includes removing items illegally dumped on KDOT property.
 - b. Scoping as a disconnection project to be completed by KDOT or a consultant when the discharge is found to be originating from KDOT property, is not spill related, and is considered major in effort.
 - c. Contacting the local first responders if the discharge is found to be originating from KDOT property and is spill related. Large spills are also reported to KDHE.
 - d. Contacting the local jurisdiction, either municipal or county level, when the discharge onto KDOT property is from an adjoining MS4 system or adjacent private property.

Best Management Practices

KDOT implements a combination of illicit discharge detection and elimination BMPs, consistent with the descriptions included in this Stormwater Management Plan and the provisions of the TS4 Permit, that result in meeting or exceeding the minimum point total required per calendar year which constitutes compliance with the standard of reducing pollutants, including TMDL regulated pollutants, to the Maximum Extent Practicable.

Illicit discharge detection and elimination BMPs that KDOT typically implements are described in the following sections. The BMPs follow the naming and numbering convention of the BMPs listed in the TS4 Permit (Lbmp I D D & E – #).

Table 3.3 – Illicit Discharge Detection and Elimination BMPs

Lbmp I D D & E	Included in SMP?	BMP Description
01	Yes	Develop a spill response plan for facility management and, if appropriate, coordinate emergency response with other agencies or organizations.
02	Yes	Implement a program to continually inspect the stormwater system, assessing condition and identifying unknown connections.
03	Yes	Reduce the risk of illicit connections between sanitary sewer and storm sewer by requiring department review and approval of construction plans for any construction within the permit area.
04	Yes	Train the KDOT community to recognize illicit discharge activities and communicate observations to appropriate department staff

Refer to KDOT's Annual Report for a listing of the BMPs KDOT has successfully implemented in a given calendar year to meet the required point total of the TS4 Permit.

Lbmp I D D & E – 01

Develop a spill response plan for facility management and, if appropriate, coordinate emergency response with other agencies or organizations.

Measurable Goal: The plan shall include, at a minimum, explanation of appropriate spill response activities for spills associated with at grade or above ground storage tanks, and vehicle fluids from mechanical equipment such as construction equipment, cars, or trucks. The written plan shall be maintained on file.

Each KDOT Sub-Area Office implements a Spill Prevention Control and Countermeasure (SPCC) Plan, which is kept on file at each facility. KDOT first began implementing SPCC Plans in 1994, when the EPA finalized revisions to the Clean Water Act that directed facility owners or operators to prepare and submit facility response plans. The SPCC Plans are reviewed annually as part facility inspections described in Lbmp P P/G H – 05, under Facility Safety Training. An SPCC Plan Template is provided to Sub-Area Offices annually to update as needed. The main item that typically requires updating is the contact information.

All KDOT SPCC Plans follow the same outline and protocols, with potentially some tailored guidance for unique conditions at different facilities. As applicable, each SPCC Plan describes appropriate spill response activities for spills associated with:

- Unleaded fuel tanks
- Diesel fuel tanks
- Used oil tanks
- Asphalt tanks

Vehicle fluid spills are addressed using spill kits, which are described in the SPCC Plan. Emergency contacts are listed at the beginning of each SPCC Plan for in the event coordination is needed with other agencies or organizations, including the KDHE Spill Reporting Hotline, the Kansas Division of Emergency Management, and the National Response Center. Additionally, each SPCC Plan includes requirements for tank marking and labeling, requirements for fuel hoses, and requirements for training on the topic of spills. The SPCC Training is further described in Lbmp P P/G H – 05.

Supporting Documentation: SPCC Plan Template

Annual Report Metric: Date of plan implementation agency-wide

Lbmp I D D & E – 02

Implement a program to continually inspect the stormwater system, assessing condition and identifying unknown connections.

Measurable Goal: Document location of stormwater system inspected. Use a standard form or method for documenting the inspection.

KDOT implements a program to continually inspect the stormwater system. The inspection program evaluates outfalls through bridge inspections that KDOT regularly conducts. Unknown connections are prevented through the Highway Use Permit process, described in Lbmp I D D & E – 03. Additionally, other storm sewer system components are inspected through the Maintenance Quality Assurance (MQA) program and by conducting weekly windshield surveys.

Outfall Inspections

Outfall inspections are completed as part of regular bridge inspections. Every KDOT bridge is inspected at a minimum of every 2 years – bridges previously rated as being in poor condition are inspected annually. Inspection dates are logged in the outfall data spreadsheet. Each inspection is documented on a bridge inspection form. Completed forms are then converted to bridge inspection reports and are logged in the KDOT Reports Portal. For the outfall portion of the inspection, the condition of the outfall (erosion, scour) is assessed, and notes are made if any suspected illicit discharge is identified.

Storm Sewer System Inspections

Each year as part of the MQA Program, 30 sample segments of right-of-way per maintenance subarea are randomly selected and inspected in October. Each sample segment is 0.1 mile. The inspection includes curb and gutter, ditches, erosion control devices, culverts, pipes, edges, underdrains, and inlets, as applicable. To pass inspection, each element must meet the following level of service:

- Ditches - 80% of the ditch length must be free of scour more than six inches, blockage, standing water, and obstructions
- Culverts and pipes - 75% of opening is unobstructed, functions as intended (is not impeded by erosion, scour, or settlement at structure inlets and outlets)
- Inlets - 75% of cavity per structure is free of debris and operates as intended, the inlet grate and access cover are present, where applicable, and the unit is structurally sound

Inspections are documented through the MQA inspection form. Upon completion, copies of these forms are sent to District MQA committee members and the Area Superintendents. Inspection results are logged in the MQA Database. Original copies of the form are maintained for one year. Summaries of the MQA inspection results are included in the KDOT Reports portal.

Additionally on a weekly basis, KDOT staff drive the routes included in their subarea to identify any potential issues that require maintenance attention. Issues that are identified, including those that are relating to the stormwater system, are logged as a work order and addressed.

Supporting Documentation: Outfall data spreadsheet; example bridge inspection form; MQA summary; copy of the MQA inspection form

Annual Report Metric: Number of outfalls inspected

Lbmp I D D & E – 03

Reduce the risk of illicit connections between sanitary sewer and storm sewer by requiring department review and approval of construction plans for any construction within the permit area.

Measurable Goal: Track the number of plans reviewed or permits issued in the calendar year.

Any individual, firm, municipality or other entity seeking to perform work within the KDOT right-of-way must submit a Highway Use Permit, known as Form 304, to KDOT. The permit requires the permittee to provide detailed plans for proposed utility installations to KDOT for their review and approval. This allows KDOT to prevent any cross-connections between sanitary sewer and storm sewer within the right-of-way from being created.

Highway Use Permits are managed via the KDOT Utility Permit System (KUPS). This web-based service is a streamlined system that tracks utility installation and facility maintenance requests within KDOT right-of-way. Permittees are able to submit all required information online, view a workflow of the status and progress of a permit from submission to approval, and receive automated email alerts on the status and actions taken in response to a permit request.

Supporting Documentation: Copy of the Highway Use Permit/Form 304

Annual Report Metric: Number of Highway Use Permits issued

Lbmp I D D & E – 04

Train the KDOT community to recognize illicit discharge activities and communicate observations to appropriate department staff.

Measurable Goal: Provide training or distribute training materials to participants at least once annually.

KDOT provides multiple trainings to the KDOT community that teaches them to recognize illicit discharge activities and communicate observations to appropriate department staff or adjacent MS4 communities. KDOT implements an operation and maintenance program that includes KDOT community training to prevent and reduce stormwater pollution from department operational activities. The following table identifies training courses provided by KDOT that address various types of illicit discharges and how to respond to them. Each training is described in detail in Lbmp P P/G H-05.

Training Name	Intended Audience	Availability	Illicit Discharges Addressed
Construction Stormwater	KDOT Employees, Consultants, Contractors	Online year-round with in-person field trainings offered in spring and fall	Sediment and construction waste
Stormwater Awareness	KDOT Employees	Online year-round	Vehicle and equipment fluids, wash wastewater, salt, fertilizer, pesticides, spills from hazardous, liquid, and granular materials, and unidentified illicit discharges to storm drains
Facility Safety	KDOT Maintenance Facility Employees	In-person as needed following site inspections	Any identified illicit discharges or potential stormwater pollution
Spill Prevention, Control, and Countermeasure (SPCC)	KDOT Maintenance Facility Employees	In-person once annually	Fuel, oil, and other hazardous materials
Snow Fighters	Manager-specified KDOT Employees	In-person once annually	Salt and deicing materials

Additionally, there are illicit discharge awareness tips posted on the KDOT Stormwater Management Program webpage. A link to the webpage is shared with each social media post made by KDOT (see Lbmp P Ed & O – 02 and 09).

- Link: <https://www.ksdot.gov/programs/stormwater-management/pollution-prevention>

The webpage lists the following actions all audiences can take to recognize and report illicit discharge activities:

- **Understand the impact:** Recognize the environmental damage caused by illicit discharges and the importance of preventing them. Inform family, friends, and coworkers about the harm caused by illicit discharges and proper disposal methods.
- **Stay alert:** Watch for signs of illicit discharges, such as stains, unusual odors, or abnormal water flow near storm drains and outfalls. Look for evidence like empty containers, pipes, or hoses leading into storm drains.
- **Report suspicious activity:** Note the date, time, and location of any suspected illicit discharges and report them to either the local jurisdiction or to a KDOT supervisor. If possible, document suspicious discharges with photos to aid in reporting. Cooperate with local authorities to eliminate illicit discharges.
- **Avoid hazardous materials:** Do not touch or pick up unknown containers, boxes, or bags that could be hazardous. Avoid direct contact with potentially hazardous materials and report them instead.
- **Dispose of waste properly:** Use trash cans for solid waste, sanitary sewers for sanitary waste, and hazardous waste facilities for hazardous materials. Never dispose of trash, chemicals, or liquids into storm drains or roadways.
- **Monitor outfalls:** During outfall inspections, look for dry weather flow, discoloration, foam, or unusual smells, and report any issues.

Supporting Documentation: Refer to Lbmp P P/G H – 05 for training summaries or outlines and training logs; refer to Lbmp P Ed & O – 02 for social media campaign summary; link to website

Annual Report Metric: Number of people who received each training

MCM 4: Construction Site Stormwater Runoff Control

Minimum Permit Requirements

The minimum permit requirements for the construction site stormwater runoff control minimum control measure (MCM 4) per Section C.4 of KDOT's TS4 Permit are as follows:

Continue to maintain a program to reduce pollutants in any stormwater runoff to the TS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Projects disturbing more than one acre must be included in the program if that activity is a part of a larger construction plan that will disturb one acre or more of the permit area.

Section 901.3.a of the Special Provision to the 2015 Edition of KDOT's Standard Specifications for State Road & Bridge Construction (known as Section 901 of KDOT's Standard Specifications) requires that both KDOT and local projects receive a Kansas Water Pollution Control General Permit and Authorization to Discharge (KDHE CSGP) for construction projects that disturb one acre or more of land. Section 901.3.a also states that construction projects that result in less than one acre of disturbance and do not require permit coverage must comply with Section 901.3.b and implement BMPs to minimize stormwater pollution.

- a. Maintain, implement, and enforce a resolution, contract, or other enforceable requirement, to require erosion and sediment controls. An updated copy of erosion and sediment controls required by KDOT (currently included as Section 901 of KDOT's Standard Specifications) shall be submitted to KDHE with the annual report, if changes are made.**

Section 901 of KDOT's Standard Specifications requires all construction projects to implement erosion and sediment controls. Section 901 is further described in Lbmp C S S R C – 01.

- b. Implement and maintain requirements for construction site operators to implement appropriate erosion and sediment control best management practices.**

The KDOT Temporary Erosion Control Manual, described in Lbmp C S S R C – 02, provides guidance for construction site operators to implement appropriate erosion and sediment control best management practices. Section 901 of KDOT's Standard Specifications requires that the manual be used by construction site operators.

- c. Maintain 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 are likely to cause adverse impacts to water quality.**

Section 901.3.c of KDOT's Standard Specifications provides requirements for control and disposal of waste materials on construction sites in the permit area. These specifications are accompanied by measures to control stormwater runoff, as well as managing and removing waste materials from worksites. These requirements are further described in Lbmp C S S R C – 05.

- d. Maintain procedures for construction plan review which incorporate consideration of potential water quality impacts.**

Procedures for construction plan reviews with consideration of potential water quality impacts are included in the Erosion Control Position Guidance Manual, Eisenhower Legacy Transportation Program (IKE) Erosion and Sediment Control Review Checklist, and IKE Local Projects Plan Review Checklist. These documents outline and provide guidance for reviewing KDOT and local construction projects per the requirements of Section 901 of KDOT's Standard Specifications. The review process is further described in Lbmp C S S R C – 04.

e. Maintain procedures for receipt and consideration of information submitted by the public.

KDOT's Stormwater Management Program webpage features a stormwater hotline phone number and email to receive reports of illegal dumping, illicit discharge and other stormwater concerns. This stormwater hotline is further described in Lbmp P I/P – 02.

KDOT Area, District, and Construction Offices may also receive public input via phone or email directly. If a Construction or Area Office receives information requiring resolution, they will resolve on their own if able. If they are unable to resolve a request, they will elevate it to the District Office or Headquarters. In general, requests are routed to the respective District or Area Office to be addressed.

f. Maintain procedures for site inspection and corrective actions.

Sections 901.3.c, 901.3.e, and 901.3.g of KDOT's Standard Specifications provide procedures for site inspections and for a Stormwater Compliance Disincentive Assessment and potential fines if deficiencies noted during site inspections are not corrected within seven (7) calendar days of the inspection. Inspection procedures are further described in Lbmp C S S R C – 06.

Best Management Practices

KDOT implements a combination of construction site stormwater runoff control BMPs, consistent with the descriptions included in this Stormwater Management Plan and the provisions of the TS4 Permit, that result in meeting or exceeding the minimum point total required per calendar year which constitutes compliance with the standard of reducing pollutants, including TMDL regulated pollutants, to the Maximum Extent Practicable.

Construction site stormwater runoff control BMPs that KDOT typically implements are described in the following sections. The BMPs follow the naming and numbering convention of the BMPs listed in the TS4 Permit (Lbmp C S S R C – #).

Table 4.1– Construction Site Stormwater Runoff Control BMPs

Lbmp C S S R C	Included in SMP?	Description
01	Yes	Implement a requirement for a Erosion and Sediment Control (ESC) Plan for department projects disturbing equal to or greater than 1 acre.
02	Yes	Develop and adopt a design manual for erosion and sediment control BMPs which are required to be used on sites which will be disturbed and are either equal to or greater than 1 acre.
03	Yes	Provide access to at least one training class for the KDOT community which provides training on requirements for Stormwater Pollution Prevention Plans (SWPPP) and implementation of appropriate BMPs.
04	Yes	Develop a review process which considers potential water quality impacts which may occur during construction.
05	Yes	Require the KDOT community to control construction sites. At a minimum, control shall be imposed to prevent entry into the TS4 for the following wastes: discarded building materials, concrete, truck washout, chemicals, litter, and sanitary waste.
06	Yes	Develop written procedures for inspection of construction sites.
07	Yes	Maintain tracking system to track inspections and related tasks.

Refer to KDOT’s Annual Report for a listing of the BMPs KDOT has successfully implemented in a given calendar year to meet the required point total of the TS4 Permit.

Lbmp C S S R C – 01

Implement a requirement for a Erosion and Sediment Control (ESC) Plan for department projects disturbing equal to or greater than 1 acre.

Measurable Goal: Require an ESC Plan for all department projects disturbing equal to or greater than 1 acre.

Section 901 of KDOT's Standard Specifications states that BMPs shall be designed, implemented, inspected, and maintained to minimize or eliminate erosion, sediment and other pollutants in stormwater runoff from all projects. Section 901.3.a states that projects with 1 acre or more of erodible surface are required to submit a Notice of Intent (NOI) for authorization to discharge stormwater runoff from construction activities in accordance with the KDHE CSGP. Section 901.3.c additionally states that the project's Stormwater Pollution Prevention Plan (SWPPP) shall include the Contractor's Erosion Control Site Plan.

Provisions of the Federal Clean Water Act and related state rules and regulations require KDHE CSGP coverage where construction activities disturb one acre or more over the life of a project. KDOT obtains coverage for each project by submitting a NOI to KDHE for authorization under the KDHE CSGP. Construction activities regulated under this program are primarily undertaken by contractors, who are subject to various contract requirements to provide erosion and sediment control appropriate for each project.

Per Section 1.1 of the KDHE CSGP, KDHE requires the development, installation, operation, and appropriate maintenance of site specific BMPs and the SWPPP that will not lower the water quality of the receiving surface water. Section 7 details the erosion and sediment control plan requirements within the SWPPP.

Supporting Documentation: Sections 901.3.a and 901.3.c of KDOT's Standard Specifications

Annual Report Metric: Date of requirement adoption/update

Lbmp C S S R C – 02

Develop and adopt a design manual for erosion and sediment control BMPs which are required to be used on sites which will be disturbed and are either equal to or greater than 1 acre.

Measurable Goal: Require implementation of BMPs in compliance with the design manual on all department projects disturbing equal to or greater than 1 acre.

The KDOT Temporary Erosion Control Manual provides sediment and erosion control BMP design guidelines related to Site Stabilization, Temporary Erosion Control Devices, Geotextiles, Inlet Protection, and Sediment Storage Basins. The manual is required to be used in conjunction with Division 900 – Roadside Improvement, Planting and Seeding, as well as the KDOT Landscape Standard Sheets to address erosion and sediment control design on every KDOT project.

The KDOT Landscape Standard Sheets, as well as the associated Landscape Information Form provided by KDOT on the KDOT Authentication and Resource Tracking (KART) website, reflect the design guidelines laid out in the KDOT Temporary Erosion Control Manual. The Landscape Standard Sheets provide standard details and specifications for KDOT approved erosion and sediment control materials. They also contain tables where estimated erosion and sediment control quantities are summarized for each project. The Landscape Standard Sheets directly reflect and implement the KDOT Temporary Erosion Control Manual requirements.

Section 902.3.a of KDOT's Standard Specifications requires the use of the KDOT Temporary Erosion Control Manual and Landscape Standard Sheets or approved alternate reference documents for the design, installation and maintenance of temporary erosion and sediment control BMPs.

Supporting Documentation: KDOT Temporary Erosion Control Manual; Section 902.3.a of KDOT's Standard Specifications; Landscape Standard Sheets; Landscape Information Form

Annual Report Metric: Date of manual adoption/update

Lbmp C S S R C – 03

Provide access to at least one training class for the KDOT community which provides training on requirements for Stormwater Pollution Prevention Plans (SWPPP) and implementation of appropriate BMPs.

Measurable Goal: This training class must address all local requirements for SWPPPs, requirements for implementation of BMPs and address the requirements for permits.

KDOT partners with Kansas State University Salina Aerospace and Technology Campus to provide a Certified Inspection and Testing Training (CIT) Program Construction Stormwater (CSW) course, commonly known as Construction Stormwater Training, for KDOT employees, consultants, and contractors. To complete the course, a person must complete an online curriculum, attend in-person field trainings, and pass a written exam.

For Water Pollution Control Managers conducting site inspections for compliance with the KDHE CSGP, The Construction Stormwater Training is required per Section 901.3.d and 901.3.e of KDOT's Standard Specifications. This training is also required for those with responsibility for SWPPP review and approval.

The Construction Stormwater Training is described in further detail under Lbmp P P/G H – 05.

Supporting Documentation: Refer to Lbmp P P/G H – 05 for Construction Stormwater Training outline and training log

Annual Report Metric: Date of in-person training; number of people who received the Construction Stormwater Training

Lbmp C S S R C – 04

Develop a review process which considers potential water quality impacts which may occur during construction.

Measurable Goal: Review process must have written guidance for the reviewer. Approval to start construction may not be provided until the plan has successfully passed the review process either based on the initial plan submittal or has been modified to comply with requirements identified during the review process.

KDOT's review process, laid out in the Erosion Control Position Manual, gives a comprehensive guide on reviewing local and state level construction projects. This review process is supported by the Erosion and Sediment Control Reviewer Training, the IKE Erosion and Sediment Control Review Checklist, and IKE Local Projects Plan Review Checklist. These resources are used by the reviewer during the review process.

The review process is completed in the following steps:

1. The design team completes the Erosion Control Plan Design which may include the full design submittal or just the Erosion Control Plan, Landscape Standard Sheets and the Landscape Information Form.
2. The Erosion Control Plan, Landscape Standard Sheets and supporting data are submitted to the reviewer who performs the review.
3. The reviewer's comments and recommendations are submitted to the respective Area Engineer for final review and approval.
4. Necessary communication via email or meeting with the project team takes place to communicate any revision requirements.
5. The design team completes revisions and submits revised documents to the reviewer for review and/or approval.
6. Steps 3 through 5 are repeated until the reviewer approves the Erosion Control Plan and Landscape Standard Sheets.

Supporting Documentation: Erosion Control Position Guidance Manual; Erosion and Sediment Control Reviewer Training; IKE Erosion and Sediment Control Reviewer Checklist; IKE Local Projects Plan Review Checklist

Annual Report Metric: Date of process adoption/update

Lbmp C S S R C – 05

Require the KDOT community to control construction sites. At a minimum, control shall be imposed to prevent entry into the TS4 for the following wastes: discarded building materials, concrete, truck washout, chemicals, litter, and sanitary waste.

Measurable Goal: Require construction site waste to be controlled for all department projects disturbing equal to or greater than 1 acre.

Section 901.3.c provides minimum requirements for addressing waste control at construction sites that must be included in the SWPPP. A SWPPP is required to be submitted to the Field Engineer before the preconstruction conference for all projects that disturb equal to or greater than 1 acre.

Section 901.3.c specifies the mandatory use of Form 247 (SWPPP Inspection & Maintenance Form) on all KDOT owned projects requiring permit coverage. Form 247 is also required for projects owned by a city, county, etc. using contracts administered by KDOT.

The “GENERAL – 247A” tab in the form lays out requirements for controlling waste on construction sites and to prevent reentry into the area. The following items are included in this inspection:

- Discarded building materials
- Concrete
- Truck washout
- Chemicals
- Litter
- Sanitary Waste

Any deficiencies found during the inspection have seven (7) calendar days to be corrected, or a disincentive assessment will be issued to the contractor until the deficiencies are corrected.

Supporting Documentation: Section 901.3.c of KDOT's Standard Specifications

Annual Report Metric: Date of requirement adoption/update

Lbmp C S S R C – 06

Develop written procedures for inspection of construction sites.

Measurable Goal: The procedures must address the administration aspects associated with required inspections of construction sites, the issuance of inspection reports, notices of violations, and enforcement actions.

KDOT Construction Project Stormwater Compliance Plan

The KDOT Construction Project Stormwater Compliance Plan (CPSCP) lays out administrative requirements for training and expectations related to inspections, inspection reports, and notices of violations and enforcement actions related to the following KDOT positions:

- Area / Metro Engineer
- WPCM
- Inspector

The CPSCP addresses requirements for:

- Pre-Construction Conferences
- General Inspection Requirements
- Frequency of Inspections
- Required Forms
- Submittal of Reports
- Oversight Inspections
- Post-Construction Inspections
- Permit Termination
- Construction Stormwater Training

Section 901.3.e provides inspection personnel responsibilities, training requirements, inspection requirements, and timelines for inspections as well as guidelines for addressing deficiencies identified during inspections.

In parallel to the CPSCP, Form 247 is mandatory for use on all KDOT owned projects requiring permit coverage per Section 901.3.c and Section 901.3.e. This form is also required for projects owned by a city, county, etc. using contracts administered by KDOT. Accompanying the form are instructions which detail how various types of inspections should be conducted and how to fill out Form 247 accordingly.

In addition to meeting the requirements stated in KDOT's Standard Specifications, Form 247 procedures require that the contractor jointly participate in all project inspections. This requirement is intended to promote collaboration in the evaluation and decision process, and for the contractor to immediately address identified deficiencies. Photos are encouraged with form submissions.

Supporting Documentation: KDOT Construction Project Stormwater Compliance Plan; Section 901.3.e of KDOT's Standard Specifications; Form 247 Instructions

Annual Report Metric: Date of CPSCP adoption/update

Lbmp C S S R C – 07

Maintain a tracking system to track inspections and related tasks.

Measurable Goal: The tracking system must document the date of inspection and any inspection findings, including corrective actions.

Section 901.3.e of KDOT's Standard Specifications requires a site inspection of all temporary erosion and sediment control measures onsite by KDOT's Inspector and the Contractor's Environmental Inspector. The inspections must be documented on Form 247 then submitted to the Area Engineer and the contractor's WPCM within 24 hours of each inspection. The submitted Form 247 includes the date of inspection, inspection findings, and corrective actions required. Within three (3) calendar days, the WPCM is responsible for signing the inspection report and submitting it to the following email address: KDOT.stormwaterinspection@ks.gov. The inspection process is tracked locally by the KDOT Construction Office. Physical copies of inspections are also kept onsite in an Inspection Binder by the Prime Contractor for the duration of construction at the site.

A disincentive assessment may be issued to the contractor if the inspection report is not submitted on time, or deficiencies found in the inspection are not addressed within seven (7) calendar days.

The inspection process for tracking re-inspections to verify if identified deficiencies are being addressed follows the process discussed above.

Supporting Documentation: Inspection tracking spreadsheet; email archive

Annual Report Metric: Number of active projects with tracking systems

MCM 5: Post-Construction Stormwater Management

Minimum Permit Requirements

The minimum permit requirements for the post-construction stormwater management minimum control measure (MCM 5) per Section C.5 of KDOT's TS4 Permit are as follows:

Continue to maintain a program to address post-construction stormwater runoff from department projects in the permit area that disturb an area greater than or equal to one acre. Projects disturbing less than one acre must be included in the program if the project is a part of a plan that will disturb one acre or more within the permit area.

KDOT's Stormwater Control Measure Manual (SCM Manual) describes KDOT's post-construction stormwater management program. Section 1.2 of the SCM Manual states that department projects must consider stormwater control measures (SCMs) when the project either:

- Creates or adds one acre or greater of new impervious surface area; or
- Disturbs one acre or greater of land during construction; or
- Disturbs less than one acre but is part of plan that in total will disturb one acre or more.

a. Implement and maintain a requirement for BMPs to prevent or minimize adverse water quality impacts.

All BMP options included in the SCM Manual are those which prevent or minimize adverse water quality impacts (see Lbmp P-C S M – 02). Section 1.2 of the SCM Manual details when SCMs are required for department projects.

b. Implement and maintain strategies which include a combination of structural and/or non-structural BMPs appropriate for the department.

Section 3 of the SCM Manual describes the structural BMPs that KDOT has identified as being appropriate for the department. Section 4 of the SCM Manual describes structural BMPs that KDOT has identified as potentially being appropriate, depending on the project's unique considerations. See Lbmp P-C S M – 02 for a detailed description of the identified structural BMPs. Non-structural BMPs that KDOT has implemented to minimize adverse water quality impacts are described throughout this Stormwater Management Plan under the other MCMs.

c. Implement and maintain guidance to address post-construction runoff from department projects.

The SCM Manual provides guidance for addressing post-construction runoff from department projects, including descriptions on why the manual was adopted and when and where it should be used (Section 1), what designers have to submit for review (Section 2), design guidance for KDOT's preferred SCM types (Section 3), and design guidance for SCM types that KDOT may approve for use in a department project (Section 4).

d. Provide adequate long-term operation and maintenance of structural BMPs.

KDOT is committed to providing long-term operation and maintenance of structural BMPs. Preference 1 SCMs (vegetated filter strips), the most commonly constructed type of SCM, are

maintained through KDOT's regular roadside maintenance activities. Preference 2 and 3 SCMs (infiltration trenches and bioretention facilities, respectively), which are not as commonly constructed, require more specialized maintenance. Section 2 of the SCM Manual includes a requirement for the designer to complete and submit a maintenance form for projects which include Preference 2 and 3 SCMs. Once in operation, KDOT maintenance staff or others responsible for maintenance can reference the form to understand required maintenance activities are for each SCM. Typically, staff plan to inspect SCMs and perform maintenance twice a year.

Best Management Practices

KDOT implements a combination of post-construction stormwater management BMPs, consistent with the descriptions included in this Stormwater Management Plan and the provisions of the TS4 Permit, that result in meeting or exceeding the minimum point total required per calendar year which constitutes compliance with the standard of reducing pollutants, including TMDL regulated pollutants, to the Maximum Extent Practicable.

Post-construction stormwater management BMPs that KDOT typically implements are described in the following sections. The BMPs follow the naming and numbering convention of the BMPs listed in the TS4 Permit (Lbmp P-C S M – #).

Table 5.4 - Post-Construction Stormwater Management BMPs

Lbmp P-C S M	Included in SMP?	Description
01	Yes	Develop and implement a custom design manual or equivalent for Post-Construction Stormwater Management which specifies various non-structural and structural BMPs which may be feasible for department projects within the permit area that create or add 1 acre or greater of new impervious surface area.
02	Yes	Develop a list of post-construction structural or non-structural BMPs which may be incorporated in department projects within the permit area that create or add 1 acre or greater of new impervious surface area on department owned property.
03	No	Develop and implement a program and/or process to track long-term operation of department owned and operated post-construction structural stormwater BMP facilities. The program shall address function of the structural BMP facility through inspection and maintenance activities.

Refer to KDOT’s Annual Report for a listing of the BMPs KDOT has successfully implemented in a given calendar year to meet the required point total of the TS4 Permit.

Lbmp P-C S M – 01

Develop and implement a custom design manual or equivalent for Post-Construction Stormwater Management which specifies various non-structural and structural BMPs which may be feasible for department projects within the permit area that create or add 1 acre or greater of new impervious surface area.

Measurable Goal: The design manual shall impose requirements to capture, at least, the first 0.5 inches of precipitation and utilize methods to prevent discharge off-site, including but not limited to: retain on-site, infiltrate, evaporate, transpire, or beneficially reuse.

KDOT's SCM Manual specifies structural BMPs which may be feasible for department projects within the permit area. Section 1.2 of the SCM Manual states that department projects must consider SCMs when the project either:

- Creates or adds one acre or greater of new impervious surface area; or
- Disturbs one acre or greater of land during construction; or
- Disturbs less than one acre but is part of plan that in total will disturb one acre or more.

The SCM Manual requires that applicable department projects capture at least the first 0.5 inches of precipitation that falls over the project area to the Maximum Extent Practicable. The structural BMPs included in the SCM Manual are those which retain stormwater runoff on-site. Retained stormwater then has the chance to infiltrate and evapotranspire, therefore reducing the volume of runoff and the associated pollutants. Non-structural BMPs are implemented through this Stormwater Management Plan under the other MCMs.

Section 3 of the SCM Manual describes the structural BMPs that KDOT has identified as being appropriate for department projects. The SCMs included in this section are organized by a hierarchy of preferences so that KDOT's preferred types of SCMs are considered first during the design of a project. Section 4 of the SCM Manual also describes conditional SCMs which may be appropriate for a department project if none of the preferred SCMs are feasible.

In instances where the designer is unable to demonstrate capture of the first 0.5 inches of precipitation for 100% of the project area using either preferred or conditional SCMs, documentation is required to detail the circumstances preventing runoff capture.

Supporting Documentation: Stormwater Control Measure Manual

Annual Report Metric: Date of manual adoption/update

Lbmp P-C S M – 02

Develop a list of post-construction structural or non-structural BMPs which may be incorporated in department projects within the permit area that create or add 1 acre or greater of new impervious surface area on department owned property.

Measurable Goal: Develop and implement the list.

KDOT's SCM Manual includes a list of structural BMPs which may be incorporated in department projects within the permit area. Section 1.2 of the SCM Manual states that department projects must consider SCMs when the project either:

- Creates or adds one acre or greater of new impervious surface area; or
- Disturbs one acre or greater of land during construction; or
- Disturbs less than one acre but is part of plan that in total will disturb one acre or more.

Section 3 of the SCM Manual lists the structural BMPs that KDOT has identified as being appropriate for department projects. The SCMs included in this section are organized by a hierarchy of preferences so that KDOT's preferred types of SCMs are considered first during the design of a project. The structural BMPs described in Section 3 include:

- Preference 1: Vegetated filter strip
- Preference 2: Infiltration trench
- Preference 3: Bioretention

Section 4 of the SCM Manual lists conditional SCMs which may be appropriate for a department project if none of the preferred SCMs are feasible. These SCMs must be approved by KDOT for use in the project and approval is dependent on the project's unique considerations. The structural BMPs described in Section 4 include:

- Manufactured SCMs
- Permeable surfaces
- Underground storage
- Dry and wet detention basins
- Constructed wetland

Supporting Documentation: Refer to Lbmp P-C S M – 01 for the Stormwater Control Measure Manual

Annual Report Metric: Date of manual adoption/update

MCM 6: Pollution Prevention & Good Housekeeping

Minimum Permit Requirements

The minimum permit requirements for the pollution prevention and good housekeeping minimum control measure (MCM 6) per Section C.6 of KDOT's TS4 Permit are as follows:

Implement an operation and maintenance program that includes KDOT community training to prevent and reduce stormwater pollution from department operational activities in open space maintenance, fleet and building maintenance, new construction and land disturbance, stormwater system maintenance, maintenance yards, and storage yards in the permit area.

KDOT implements an operation and maintenance program as described in this Stormwater Management Plan and tracked in the Annual Report. Specifically, the program educates the KDOT Community through multiple trainings to reduce stormwater pollution from department activities, outlined in Table 6.1 below. Further training details are discussed in Lbmp P P/G H-05 BMP.

Table 6.1 – KDOT Community Training Summary

Department Operational Activity	Covered In	Topics Addressed
Open Space Maintenance	Stormwater Awareness Training, Facility Safety Training	Preventative measures for keeping oil, debris, and chemicals from entering the storm sewer or local waterways
Fleet Maintenance	Stormwater Awareness Training, Facility Safety Training, SPCC Training	Use of indoor wash bays and performing fleet maintenance inside to manage spills and water runoff; use of drip pans
Building Maintenance	Stormwater Awareness Training, Facility Safety Training	Maintenance of building exteriors, including utilities and tanks, to prevent deterioration and/or leaks
New Construction	Construction Stormwater Training, Stormwater Awareness Training	Use of temporary and permanent erosion control devices and BMPs to prevent sediment and other pollutants from traveling offsite
Land Disturbance	Construction Stormwater Training, Stormwater Awareness Training	Use of temporary and permanent erosion control devices and BMPS to prevent sediment and other pollutants from traveling offsite
Stormwater System Maintenance	Stormwater Awareness Training	Best practices for protecting KDOT stormwater systems and disposal of debris
Maintenance Yards	Stormwater Awareness Training, Facility Safety Training, SPCC Training	Spill prevention and control for drums stored outdoors at maintenance yards and facilities, as well as requirements for storage of equipment awaiting maintenance that may be stored outdoors
Storage Yards	Stormwater Awareness Training, Facility Safety Training, Snow Fighters Training, SPCC Training	Measures to prevent stored materials from contaminating stormwater by covering, enclosing, or otherwise protecting exposed materials

Best Management Practices

KDOT implements a combination of pollution prevention and good housekeeping BMPs, consistent with the descriptions included in this Stormwater Management Plan and the provisions of the TS4 Permit, that result in meeting or exceeding the minimum point total required per calendar year which constitutes compliance with the standard of reducing pollutants, including TMDL regulated pollutants, to the Maximum Extent Practicable.

Pollution prevention and good housekeeping BMPs that KDOT typically implements are described in the following sections. The BMPs follow the naming and numbering convention of the BMPs listed in the TS4 Permit (Lbmp P P/G H – #).

Table 6.3 – Pollution Prevention and Good Housekeeping BMPs

Lbmp P P/G H	Included in SMP?	BMP Description
01	Yes	Implement waste disposal procedures to prevent stormwater pollution from outdoor storage areas.
02	Yes	Develop procedures for application of pesticides when used by staff and third-party contractors.
03	Yes	Implement procedures for department vehicle or other mechanical equipment washing water disposal.
04	No	Implement procedures for street sweeping in the permit area.
05	Yes	Develop employee training program to educate department staff to minimize stormwater pollution in the workplace
06	No	Retrofit permittee owned areas to comply with stormwater BMPs
07	No	Install and operate a constructed wetland
08	Yes	Define procedures to protect outdoor salt and de-icing chemical storage areas with a focus on preventing and/or managing stormwater runoff
09	Yes	Implement good housekeeping and material management procedures and BMPs for the storage of materials in outdoor storage areas at maintenance yards.
10	Yes	Enact procedures to use drip pans under leaky or leak-prone equipment

Refer to KDOT's Annual Report for a listing of the BMPs KDOT has successfully implemented in a given calendar year to meet the required point total of the TS4 Permit.

Lbmp P P/G H – 01

Implement waste disposal procedures to prevent stormwater pollution from outdoor storage areas.

Measurable Goal: Waste disposal procedures shall be readily accessible to department staff. Procedures should apply in outdoor storage areas within the permit area. The department shall provide training on these waste disposal procedures.

Section 12.43 of the Highway Maintenance Manual addresses the identification of the following types of waste:

- Special Waste (Subpart A)
- Universal Waste (Subpart B)
- Orphaned Waste (Subpart C)
- Hazardous Waste (Subpart D)

Section 12.44 of the Highway Maintenance Manual identifies a list of guidance documents that KDOT utilizes for addressing waste determination and disposal at outdoor storage areas, including:

- KDHE Special Waste Disposal Request Form (<https://www.kdhe.ks.gov/DocumentCenter/View/4983>)
- KDOT Guidance for Universal Waste (<https://www.kdhe.ks.gov/DocumentCenter/View/5416/Requirements-for-Handlers-of-Universal-Waste-G---PDF>)
- KDOT Checklist for Handling Orphaned Waste (<https://www.kdhe.ks.gov/DocumentCenter/View/5164/What-is-the-Orphan-Hazardous-Waste-Disposal-Program-Brochure-PDF>)
- KDOT Guidance to Determining Hazardous Waste (<https://www.kdhe.ks.gov/DocumentCenter/View/5427/Hazardous-Waste-Determinations-and-Documentation-G---PDF>)

The Highway Maintenance Manual is available to all KDOT employees year-round on the internal intranet. The Stormwater Awareness Training, available year-round online to all KDOT employees through KDOT's Learning Management System, details general procedures for waste disposal, including:

- Dispose of waste materials created from responding to spills properly.
- Empty drip pans into the recycle drum or hazardous waste container as appropriate.
- Sweep up scraps and debris after completing a maintenance repair and dispose of properly.
- Dispose of material collected from storm drains properly.
- Never put liquids or liquids containing wastes into a dumpster, as they are rarely leak tight.

Improvement Goal: Clarify in Highway Maintenance Manual that the guidance documents listed in Section 12.44 are KDHE resources that KDOT utilizes by reference, not KDOT created materials

Supporting Documentation: Section 12.43 and 12.44 of the Highway Maintenance Manual; copies of KDHE guidance documents; refer to Lbmp P P/G H – 05 for Stormwater Awareness Training outline and training log

Annual Report Metric: Date of procedures adoption/update; number of staff who received the Stormwater Awareness Training

Lbmp P P/G H – 02

Develop procedures for department staff or third-party contractors which apply pesticides. The procedures shall require the manager of the crew spraying to have a commercial applicator certification from the Kansas Department of Agriculture if required by that Department.

Measurable Goal: Require staff/third party which apply pesticides to use such pesticides in compliance with the procedures. The procedures must require use of pesticides in compliance with the label instructions.

Section 4.5 of the Highway Maintenance Manual includes spray procedures for pesticides and herbicides. The procedures require the application of pesticides to be done by a Certified Sprayer and that chemical spraying contractors and operations must have Department of Agriculture approval. Section 4.52 outlines Safety Rules as they apply to pesticide use. Section 12.43 identifies when pesticides and pesticide-contaminated materials should be disposed of as universal or hazardous waste.

KDOT staff are required to use pesticides in compliance with the procedures. A Report of Noxious Weed Treatment (Form 322A) is required for submittal by either the County Weed Supervisor/Director or Commercial Contractor when pesticide treatment is used. Form 322A details the spraying operation to confirm it was completed to meet the following requirements:

- All spraying must be accomplished under the general direction of a Certified Sprayer (when a Certified Sprayer is not available, only products which are for general use and don't require a license to spray may be used).
- Personnel in spraying operations should be reasonably knowledgeable of the materials, hazards, methods, and purpose of the operation with which they are involved.
- Pesticides must be measured accurately.

The Highway Maintenance Manual is available to all KDOT employees year-round on the internal intranet. Form 322A is also available on the intranet for applicable staff, who then provide to contractors as needed.

Supporting Documentation: Section 4.5 of the Highway Maintenance Manual; copy of Form 322A

Annual Report Metric: Date of procedures adoption/update

Lbmp P P/G H – 03

Implement procedures for department vehicle or other mechanical equipment washing so that it is conducted in a manner to dispose wash water in the sanitary sewer or otherwise receives proper treatment prior to discharge to receiving waters.

Measurable Goal: Maintain proper wash facilities for department staff to wash vehicles and/or equipment or implement procedures for department staff to take vehicles and/or equipment to commercial wash facilities, either of which disposes the wash water to the sanitary sewer, or otherwise receives proper treatment prior to discharge to the environment, and not discharge untreated to the TS4 or directly to receiving waters.

The Stormwater Awareness Training, available year-round online to all KDOT employees through KDOT's Learning Management System, details procedures for employees related to department vehicle or other mechanical equipment washing, including:

- Never wash vehicles or equipment outdoors where wastewater is not sent to the sanitary sewer.
- Only wash vehicles and equipment in locations where the wastewater does not drain to the storm drainage system.
- Washing indoors over a sanitary floor drain is the best practice.
- Wash vehicles and equipment only in the designated wash areas.
- Designated wash areas must be impervious and adequately groomed or sloped to capture the wastewater and keep it out of the storm drainage system.

All KDOT facilities within the permit area have wash bays that staff are required to use for all equipment and vehicle washing. All KDOT wash bays are located indoors and are connected to sanitary sewer via a three-compartment sediment separator. The purpose of the sediment separators is to filter water before it enters the sanitary sewer system.

If a KDOT facility does not utilize a wash bay, equipment and vehicles must be taken to another KDOT facility with a wash bay or to a commercial car wash facility.

Improvement Goal: Update Highway Maintenance Manual to include written wash procedures

Supporting Documentation: Refer to Lbmp P P/G H – 05 for Stormwater Awareness Training outline

Annual Report Metric: Date of procedures adoption/update

Lbmp P P/G H – 05

Develop an employee training program to educate department staff on what actions they can take in the workplace to minimize stormwater pollution.

Measurable Goal: Provide guidance documents in the form of either fact sheets, flyers or e-mails to staff to coach them in appropriate actions they can take while working to minimize stormwater pollution. Alternately, provide in-person training or videos and document attendance or completion.

Retain copies of the guidance documents and/or attendance log. A log of when the guidance was distributed, or training was provided to staff should be maintained. Provide appropriate guidance and/or training to staff a minimum of annually.

Department staff and other members of the KDOT community are educated and coached regarding appropriate actions they can take while working to minimize stormwater pollution through multiple training courses. The following table lists each training course provided by KDOT that covers the topics listed in Table 6.1.

Table 6.2 – KDOT Training Courses

Training Name	Intended Audience	Course Format	Availability
Construction Stormwater	KDOT Employees, Consultants, Contractors	K-State Salina Certified Inspector Training	Curriculum is online year-round with field training and exam offered in spring and fall
Stormwater Awareness	KDOT Employees	KDOT Learning Management System	Online year-round
Facility Safety	KDOT Maintenance Facility Employees	In-Person	As needed following site inspections
Spill Prevention, Control, and Countermeasure (SPCC)	KDOT Maintenance Facility Employees	In-Person	Once annually
Snow Fighters	Manager-specified KDOT Employees	In-Person	Once annually

Construction Stormwater Training

KDOT partners with Kansas State University Salina Aerospace and Technology Campus to provide a Certified Inspection and Testing Training (CIT) Construction Stormwater (CSW) course, commonly known as Construction Stormwater Training for KDOT employees, consultants, and contractors. For those conducting site inspections for compliance with the KDHE general permit, this training is required per Section 901.3.d and 901.3.e of KDOT's Standard Specifications. KDOT also requires this training for water pollution control managers (WPCM) and those with the responsibility for SWPPP review and approval.

To complete the course, a person must complete an online curriculum, attend in-person field trainings, and pass a written exam. Learning objectives include:

- Basic principles of erosion, sediment control and non-stormwater/waste management control
- NPDES permit requirements
- Stormwater related KDOT plans, specifications, and procedures
- Inspection requirements and procedures
- Common compliance issues
- BMP installation and inspection (field demonstration)

The online curriculum is available to complete year-round. The field training, typically offered in the spring and fall, includes a three (3)-hour morning or afternoon session. Attendees gain hands-on experience with proper device installation and inspection, stockpile management, stabilization practices, seed and equipment, and SWPPP inspection requirements.

More information regarding this training can be found here: <https://www.salina.k-state.edu/research-training/training-professional-development/certified-inspector-training/courses/construction-stormwater-training.html>

Stormwater Awareness Training

The Stormwater Awareness Training is available year-round online to all KDOT employees through KDOT's Learning Management System (LMS). Other members of the KDOT community, such as contractors and consultants, can receive access to the training as well when requested. This training covers the following topics:

- Spill Response
- Material and Chemical Handling and Storage
- Open Space Maintenance and Waste Disposal
- Vehicle and Equipment Washing
- Street Sweeping and Stormwater System Maintenance
- Vehicle Maintenance
- Soil/Sediment Control at Construction Sites

Facility Safety Training

Facility Safety Training takes place at KDOT facilities throughout the State as needed following site inspections during which corrective actions are identified. Facility inspections and the resultant trainings are conducted by the District Safety Officer. Each Facility Safety Training is unique to the facility and its current conditions, but topics are included as needed to address stormwater pollution, such as open space maintenance, material handling and storage, waste disposal, vehicle and equipment maintenance, and other pollution prevention and good housekeeping practices. Site inspections and corrective actions that employees are trained on are documented in a memo. Ideally, facilities are maintained in good condition and practices are in place to minimize stormwater pollution, resulting in related topics not being included in the Facility Safety Trainings.

Spill Prevention, Control, and Countermeasure (SPCC) Training

The SPCC Training is conducted once a year in-person at each Sub-Area Office for KDOT maintenance and facility employees. Training attendance is logged using a sign-in sheet. This training outlines requirements for the following:

- Operating procedures to prevent oil spills

- Control measures to prevent spills from reaching navigable waters
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill
- Emergency information, including contact numbers and instructions for responding to a spill
- Procedures to prevent spills, such as tank containment, locking mechanisms, and site security

Additional training material and SPCC guidance material are found in Section 12.12 of the Highway Maintenance Manual.

[Snow Fighters Training](#)

Snow Fighters Training is conducted once a year in-person at each District or Area Office for relevant KDOT maintenance and facility employees, typically in mid-September to early October. Training attendance is logged in the KDOT Learning Management System. Training topics include operation during salt spreading activities, winter safety, snow policy, equipment management, and procedures for cleaning the area after loading salt into KDOT fleet vehicles.

Supporting Documentation: Training summaries or outlines; training logs

Annual Report Metric: Number of people who received each training

Lbmp P P/G H – 08

Define procedures to protect outdoor storage areas used for salt or other de-icing chemicals. Procedures can address both temporary and permanent protection from the elements, with a focus on preventing and/or managing stormwater runoff from areas used for storage.

Measurable Goal: Procedures shall be readily accessible to department staff. Procedures should apply to salt or other de-icing chemical storage in outdoor storage areas within the permit area. The department shall provide training on these procedures.

The KDOT Highway Maintenance Manual Section 12.14, available to all KDOT employees year-round on the internal intranet, describes salt storage procedures on KDOT facilities. These procedures include requiring all Sub-Areas have covered salt storage facilities and that all unmixed and mixed salt should remain under cover. Enclosed salt storage facilities minimize runoff into the receiving stormwater system. Loading the salt into vehicles occurs outdoors on an impermeable surface and the area is immediately swept to reduce the contamination of any snowfall.

KDOT generally no longer utilizes salt-sand mixtures, however in the event specific guidance is needed for the storage of salt-sand mixtures outdoors, each Area's SPCC Plan includes procedures on how stockpiles should be protected from stormwater runoff.

KDOT maintenance and facility employees who work with deicing materials are trained on these procedures once a year via the Snow Fighters Training, described in Lbmp P P/G H – 05.

Improvement Goal: Upgrade salt storage facilities to replace existing tarp shelters with tin shelters

Supporting Documentation: Section 12.14 of the Highway Maintenance Manual; copy of an SPCC Plan; refer to Lbmp P P/G H – 05 for Snow Fighters Training outline and training log

Annual Report Metric: Date of procedures adoption/update; number of staff who received the Snow Fighters Training

Lbmp P P/G H – 09

Implement good housekeeping and material management procedures and BMPs for the storage of materials in outdoor storage areas that pose a potential to pollute stormwater at maintenance yards.

Measurable Goal: Staff shall be trained on the procedures on an annual basis.

The Stormwater Awareness Training, available year-round online to all KDOT employees through KDOT's Learning Management System, details procedures for employees regarding storage of materials in outdoor storage areas that pose a potential to pollute stormwater at maintenance yards, general good housekeeping practices, as well as how to address spills when they occur. The training includes the following procedures:

- Keep outdoor work areas neat and tidy, spreading a drop cloth or tarp underneath any work that might produce overspray or debris and not leaving containers open and exposed unless they are required for the job at hand.
- Put away supplies and tools when the job is finished, indoors if possible.
- Properly dispose of waste from each job.
- Sweep up after outdoor projects. Sweep up scraps and debris left over from the work, at least every shift and dispose of the waste properly.
- Never hose down an outdoor work area to avoid washing debris or pollutants into a receiving water body or the stormwater sewer system.
- Portable containers like pails or bags should never be stored outdoors if possible. They should be stored indoors, under a roof overhang, or in a shelter.
 - If they must be stored outdoors permanently, they should be protected from exposure by using secondary containment to capture leaks and to protect against pollutants being exposed to stormwater runoff.
 - If materials must be stored outdoors for short periods of time, a waterproof tarp can be used to protect them temporarily. This temporary storage area requires periodic monitoring.
- Any tarps must be checked regularly for loosening or tearing by the wind and re-secured as needed.
- Dumpsters and trash receptacles are a threat to stormwater quality. Trash containers should be kept always covered unless trash is being added or the containers are being emptied.
 - Dumpsters should not be considered leak-tight – never put any liquids or liquid containing wastes into a dumpster.
- Bulk storage tanks must be protected by secondary containment devices.
- Valves or injectors for secondary containment structures that allow draining of accumulated rainwater must be kept always closed unless rainwater is actually being drained.
 - Accumulated rainwater must be confirmed to be clean and uncontaminated prior to draining being allowed.

Improvement Goal: Update Highway Maintenance Manual to include written good housekeeping and material management procedures

Supporting Documentation: Refer to Lbmp P P/G H – 05 for Stormwater Awareness Training outline and training log

Annual Report Metric: Date of procedures adoption/update; number of staff who received the Stormwater Awareness Training

Lbmp P P/G H – 10

Enact procedures for the use of drip pans under leaky or leak-prone vehicles and equipment awaiting maintenance.

Measurable Goal: Procedures shall be readily accessible to department staff and/or signs shall be posted in maintenance or fleet facilities reminding staff to use drip pans.

The Stormwater Awareness Training, available year-round online to all KDOT employees through KDOT's Learning Management System, details procedures for employees regarding the use of drip pans, including:

- Any vehicle that requires a drip pan is to be moved into a maintenance bay and a drip pan placed beneath the leak immediately.
- If a vehicle is leaking and the leak cannot be repaired immediately, or if the leak requires an emergency repair in a field situation, place a drip pan underneath the leak until the vehicle can be brought indoors or is repaired.
- Maintenance personnel should be notified of the issues with the vehicle.
- Any vehicle awaiting maintenance out of doors that has a drip pan must be inspected after a rainfall event to check for any spills or overflows. If any occur, consult the facility SPCC Plan for cleaning and containment of the spill.
- Drip pans must always be emptied into the correct container – the recycle drum or the hazardous waste container as appropriate.

Additionally, KDOT developed a poster that outlines steps that employees can take to reduce stormwater pollution, including using drip pans. This poster is physically posted at all KDOT maintenance yards throughout the state. See Lbmp P Ed & O – 06 for further description.

Improvement Goal: Update Highway Maintenance Manual to include written procedures on the use of drip pans

Supporting Documentation: Refer to Lbmp P P/G H – 05 for Stormwater Awareness Training outline; refer to Lbmp P Ed & O – 06 for picture of signage

Annual Report Metric: Date of procedures adoption/update

Total Maximum Daily Load (TMDL) Regulated Pollutants

The requirements for total maximum daily load (TMDL) regulated pollutants per Part II of KDOT's TS4 Permit are as follows:

- a. Implement Best Management Practices (BMPs) to reduce to the Maximum Extent Practicable the discharge of the following TMDL regulated pollutants (bacteria, nutrients, sediment) from the TS4 area to the watershed of impaired streams and/or lakes.**

The TMDL regulated pollutants listed in KDOT's TS4 permit includes bacteria, nutrients, and sediment. KDOT's ability to attenuate the discharge of these TMDL regulated pollutants is limited due to:

- Owning only a small percentage of land in each of the respective watersheds within the permit extents.
- Lacking jurisdictional authority to impose requirements on property owners and utilities to attenuate the discharge of TMDL regulated pollutants.
- Not being a source of bacteria or nutrient type pollutants. While KDOT property has the potential to generate sediment, it does not have the potential to generate bacteria as KDOT does not operate sanitary sewer systems and has very limited potential to generate nutrients as KDOT does not use fertilizers.

Despite limited opportunity to make a measurable impact, KDOT implements both structural and non-structural BMPs to reduce the discharge of TMDL regulated pollutants to the Maximum Extent Practicable. Per Title 40 of the Code of Federal Regulations (40 CFR), structural and non-structural BMPs are defined as:

- **Structural BMPs** are physical facilities that control stormwater to improve water quality.
- **Non-Structural BMPs** are intangible products such as policies, strategies, and approaches that address water quality and quantity.

Structural BMPs that KDOT implements during construction, such as erosion and sediment control measures (known as temporary structural BMPs, described under MCM 4 of this Stormwater Management Plan), and for post-construction, such as stormwater control measures (known as permanent structural BMPs, described under MCM 5 of this Stormwater Management Plan), work directly to prevent sediment and other pollutants from discharging to TMDL listed impaired streams and lakes. Additionally, the non-structural BMPs KDOT implements for each of the six MCMs all indirectly work towards reducing TMDL regulated pollutants to the Maximum Extent Practicable.

- b. Keep a record of the following items:**

- 1. Inspection/maintenance plan and schedule for each newly constructed BMP, as appropriate.**

The procedures for the inspection and maintenance of temporary erosion and sediment control measures are described in Lbmp C S S R C – 06. Detailed records are kept at each active construction site.

Inspection and maintenance plans and schedules for permanent stormwater control measures are developed by design consultants and kept as part of the project's record in KDOT's OnBase and ProjectWise systems.

2. Schedule for constructing and/or implementing BMPs in the upcoming year to reduce the discharge of TMDL regulated pollutants, when applicable.

KDOT maintains an online dashboard that provides status updates for both ongoing and future highway projects. All projects across the state are subject to the temporary erosion and sediment control requirements described under MCM 4 of this Stormwater Management Plan. Projects that meet the applicability criteria defined in KDOT's Stormwater Control Measure Manual must implement permanent stormwater control measures, as described under MCM 5 of this Stormwater Management Plan.

3. Maps which illustrate the permit area, outfalls of the storm sewer collection system, location of any constructed structural BMPs, and the boundaries of the contributing drainage basins to TMDL listed impaired streams or lakes.

KDOT maintains a TMDL map for each urban area which displays the TS4 permit area, outfalls, and constructed stormwater control measures in relation to all TMDL listed impaired streams and lakes and their contributing drainage basins. Erosion and sediment control measures are not displayed on this map as they are only temporarily installed during the length of a project's construction period.

c. In the stormwater management plan:

1. Best management practices:

a. Include a plan to implement BMPs to address TMDL regulated pollutants.

As described in part a., KDOT implements both structural and non-structural BMPs to reduce TMDL regulated pollutants to the Maximum Extent Practicable. This Stormwater Management Plan is KDOT's plan to implement BMPs to address TMDL regulated pollutants.

b. Include a description of non-structural practices being implemented.

Non-structural practices implemented by KDOT are described in the Best Management Practices sections of MCM 1 through MCM 6 of this Stormwater Management Plan.

c. Identify the design factors associated with structural BMPs.

Design factors associated with temporary erosion and sediment control measures are included in KDOT's Temporary Erosion Control Manual, described in Lbmp C S S R C – 02. Design factors associated with permanent stormwater control measures are included in KDOT's Stormwater Control Measure Manual, described under MCM 5 of this Stormwater Management Plan.

2. Assessment of effectiveness:

a. Include information on the reported effectiveness of reducing TMDL regulated pollutants for each chosen BMP based on regionally appropriate data or performance analyses.

Permanent Structural BMPs

Vegetated Filter Strips, Infiltration Trenches, and Bioretention vary in effectiveness of reducing sediment, nutrients, and bacteria in stormwater runoff. The International Stormwater Best Management Practice Database reports wide ranges of reductions for these three BMPs, reducing up to the following in stormwater runoff:

- Sediment (reported as total suspended solids): 84%
- Nutrients (reported as total nitrogen, total phosphorus): 46%
- Bacteria (reported as fecal coliform, e. coli): 99%

The International Stormwater Best Management Practice (BMP) Database is an evolving repository of studies that analyzes the performance of stormwater BMPs. It began in 1996 as a collaboration between the American Society of Civil Engineers (ASCE) and the United States Environmental Protection Agency (EPA). Currently, the effort to grow and develop the BMP Database is a partnership between the Water Research Federation (WERF), including ASCE's Environmental and Water Research Institute (EWRI), and the Federal Highway Administration (FHWA). To date, the International BMP Database contains over 700 BMP studies, with more than 200 Department of Transportation (DOT) related studies in the United States, including Midwestern States such as Kansas, Missouri, Colorado, South Dakota, Michigan, and Minnesota.

A vegetated filter strip, also referred to as a buffer strip, vegetated buffer, or grass strip, is a vegetated area that receives runoff in the form of lateral sheet flow from adjacent impervious areas. According to the International Stormwater BMP Database, vegetated filter strips may:

- Increase bacteria, measured as fecal coliform, in effluent runoff by up to 132%
- Remove nutrients, reported as total phosphorus and total nitrogen, up to 24% and 14%, respectively
- Remove sediment, measured as total suspended solids (TSS), up to 52%.

An infiltration trench, also referred to as a media filter, primarily relies on filtration and infiltration to remove pollutants from stormwater runoff. According to the International Stormwater BMP Database, infiltration trenches may:

- Remove bacteria, measured as E. coli and fecal coliform, at a rate up to 62% and 50%, respectively
- Reduce nutrients, measured as total phosphorus and total nitrogen, up to 46% and 16%, respectively
- Remove sediment, measured as TSS, up to 84%

Bioretention, also referred to as rain gardens or biofiltration, uses filtration, infiltration, and plant uptake to remove pollutants from stormwater runoff. According to the International Stormwater BMP Database, bioretention may:

- Remove bacteria, reported as E. coli and fecal coliform, up to 43% and 99%, respectively

- Reduce nutrients, reported as total nitrogen, up to 24%
- Increase nutrients, reported as total phosphorus, up to 26%
- Remove sediment, measures as TSS, up to 77%

Temporary Structural BMPs

Erosion and soil loss from unprotected construction sites are major contributors to sedimentation in streams, rivers, ponds, and reservoirs. Several types of temporary BMPs used on construction sites such as silt fence, wattles, rock checks, and sandbags both slow down the water running from a site and physically prevent silt from leaving the construction site by providing a material filter for the water to run through. The effectiveness of these BMPs can be measured by how they impact turbidity and water velocity.

Turbidity is a term that refers to how clear or murky water is; when there is a lot of silt in the water it becomes cloudy, and the water has higher turbidity. High turbidity in streams has a negative effect on all aquatic life; both plants and fish are impacted.

Silt fence is a vertical temporary barrier made of various types of geosynthetic fabric that reduces flow velocity of water leaving a construction site. The water ponds behind the fabric, giving silt floating in the water time to settle before the water moves through the fabric and offsite. When used and maintained properly, silt fence can provide significant turbidity reduction for construction site stormwater runoff. According to the paper, "Evaluation of Silt Fence Materials During and After Rainfall Events" (Dubinsky et. al, 2014), silt fence may:

- Reduce turbidity, when woven silt fence fabric is utilized, by 39% to 74% during and after the rainfall event, respectively
- Reduce turbidity, when nonwoven silt fence fabric is utilized, by 59% to 91% during and after the rainfall event, respectively

Ditch check practices include placing materials such as straw wattles and rocks across ditches in order to reduce water velocity, dissipate energy, and contain sediment in ditches. Reduced water velocity and lower energy result in reduced erosion in and along channels. The ability of ditches to trap/prevent sediment from moving downstream protects receiving water bodies from the issues related to high turbidity. This trapped sediment can be removed from the stream periodically. When installed and maintained properly, these practices can provide significant turbidity reduction for construction site stormwater runoff. The following are possible with different types of check dams:

- Sediment reduction of 50% to 80% in runoff (Polyakov, et. al., 2014) for rock check dams
- Sediment reduction of approximately 50% in runoff (Robichaud, et.al., 2019) for straw wattles

Non-Structural BMPs

Non-structural BMPs are focused on modifying behavior as opposed to constructing a physical device to intercept pollutants. As such, their effectiveness can't be measured

quantitatively, and no regionally appropriate data or performance analysis exists. However, effectiveness of this type of BMPs is evaluated by using adaptive management, i.e. setting goals for policy implementation, public engagement, behavioral/compliance changes, then periodically reviewing the strategies and policies to identify areas for improvement or necessary adjustments. KDOT utilizes adaptive management as part of the annual reporting process.

b. Include a plan and schedule to evaluate the effectiveness of the BMPs to reduce the discharge of TMDL regulated pollutants.

KDOT evaluates the effectiveness of all implemented BMPs described in this Stormwater Management Plan at a minimum annually as part of the Annual Report. Updates are made to this Stormwater Management Plan as necessary if the implementation of a BMP is found to be ineffective or as needing improvement. Description of significant changes in any of the implemented BMPs are reported in the Annual Report.

Specifically, for constructed structural BMPs, either temporary or permanent, BMP effectiveness is assessed on a continuous and cyclical basis by KDOT. The construction and maintenance of both temporary erosion and sediment control measures and permanent stormwater control measures are constantly under evaluation and are adjusted when deficiencies are identified in the field. This inspection and correction process for erosion and sediment control measures is described in Lbmp C S S R C – 06.

Surface water monitoring and reporting is not required of KDOT, as stated in Part II of the TS4 Permit.

d. Alternative Stormwater Offsite Pollution Reduction Program

Due to the difficulty of tracking the inspection and maintenance of stormwater control measures operated by another entity, KDOT currently does not participate in an alternative stormwater offsite pollution reduction program.