Wisconsin Pollutant Discharge Elimination System Permit for Municipal Separate Storm Sewer System, Permit No. WI- S049883-4: Fact Sheet – October 2023

Purpose

The City of St. Francis is currently covered under Wisconsin Pollutant Discharge Elimination System (WPDES) Permit No. WI- S049883-3. The WPDES permit expired on June 11, 2018. The Wisconsin Department of Natural Resources (Department) is proposing to reissue WPDES Permit No. WI-S049883-4 to continue the coverage of storm water discharges from this municipally owned or operated municipal separate storm sewer system (MS4) permittee. The proposed permit requires the MS4 permittee to develop, implement, and maintain storm water management programs to reduce the discharge of pollutants from the MS4 to waters of the state.

This fact sheet summarizes the Department's process and rationale for developing and issuing the MS4 permit.

The Department's Authority to Issue WPDES Permits

This permit is issued under the statutory authority granted to the Department pursuant s. 283.33, Wis. Stats. (Storm water discharge permits) and implements applicable federal and state law relating to MS4s. The specific federal requirements for MS4 permits are found in 33 U.S.C. § 1342 (p)(3)(b) and 40 CFR § 122.26. The specific state requirements for MS4 permits are found in subch. I of ch. NR 216, Wis. Adm. Code.

The Department's Regulation of Storm Water from the MS4

In Wisconsin, WPDES permits are issued by the Department with federal oversight from the United States Environmental Protection Agency (USEPA). The Department is responsible for the issuance, reissuance, modification, and enforcement of all WPDES permits issued for discharges into the waters of the state, except discharges occurring in Indian Country which are regulated directly by the USEPA. No person may legally discharge to waters of the state without a WPDES permit issued under this authority.

In 1987, Congress amended the Clean Water Act (CWA), authorizing a national program of comprehensive storm water pollution control for MS4s, certain industries, and construction sites. In 1993, ch. 147, Wis. Stats., (now ch. 283, Wis. Stats.) was amended to include storm water as a "point source" discharge and to require that the Department promulgate administrative rules for permitting the discharge of storm water. As a result, the Department created ch. NR 216, Wis. Adm. Code, for permitting storm water discharges from certain municipalities that own or operate MS4s, storm water discharges associated with industrial activity, and storm water discharges associated with land disturbing construction activity.

General Approach to Permit Development

In November 2016, the USEPA promulgated the MS4 General Permit Remand Rule (40 CFR Part 122). The USEPA amended its regulations governing how small MS4s obtain coverage under NPDES general permits. In addition to establishing two alternative approaches to obtaining permit coverage, the rule clarifies that the permitting authority must establish the necessary "clear, specific, and measurable goals" for the MS4 to "reduce the discharge of pollutants from the MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of

the Clean Water Act." Referred to as the "MS4 permit standard," both approaches ensure that the public participation requirements of the CWA are met. The Department is applying the Comprehensive approach to issue this group permit. Under the Comprehensive approach, all requirements are contained within the permit.

Permit conditions were developed to meet the MS4 permit standard: reduce pollutants to the maximum extent practicable (MEP), protect local water quality, and meet CWA Standards. This permit requires continued implementation of the six minimum control measure programs, development a storm water management plan to make progress towards the reduction goals outlined in the Milwaukee River TMDL, and completion of special requirements during the permit term which provide improvements in water quality. Permittees satisfy the MS4 permit standard through successful implementation of the storm water management programs and compliance with the WPDES permit.

This permit incorporates USEPA's clarification on permit requirements, specifically to address 40 CFR § 122.34 (a), that "Terms and conditions . . . must be expressed in clear, specific, and measurable terms." To accomplish this, permit provisions that included caveat terms such as "if feasible" or "as necessary" are revised to provide more clarity on when a specific action is required.

Additionally, in December 2015, the USEPA promulgated the NPDES Electronic Reporting Rule (40 CFR Parts 9, 122, 123, 124, 127, 403, 501, and 503). This regulation requires the electronic reporting and sharing of NPDES program information. The USEPA identifies specific NPDES information, or data elements, that NPDES permitting authorities, such as the Department, are to electronically collect, manage, and share with the USEPA. The Department's electronic reporting system was built to collect these data elements. The Permittee can locate the eReporting system here: https://dnr.wi.gov/topic/stormwater/municipal/eReporting.html.

The Department considered annual reports, storm water management plan documents, and responses to the request for information provided by the Permittee when developing the permit conditions. An initial meeting was held with the Permittee to discuss permit conditions. Additional correspondences with the Permittee subsequently occurred to further discuss requirements. The following document provides an explanation for major permit requirements and summarizes changes from the previous permit.

Applicability

This permit applies to the MS4 listed on the cover page of the permit. No new MS4s are covered by the reissued permit.

Overview and Significant Changes from the Previous Version of the Permit

The proposed permit includes the conditions required by s. NR 216.07, Wis. Adm. Code, which consists of the following six categories, or minimum control measures:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Pollutant Control
- Post-Construction Storm Water Management
- Pollution Prevention

This proposed permit follows federal and state requirements and provides flexibility for the Permittee to develop, implement, maintain, and evaluate its MS4 programs to help determine appropriate methods for meeting permit requirements.

This proposed permit requires the Permittee to maintain its programs developed and implemented under the previous version of the City of St. Francis Permit, comply with measurable goals, and to summarize its efforts toward meeting the permit requirements in an annual report. In addition, this proposed permit continues to require compliance with the developed urban area performance standard of s. NR 151.13, Wis. Adm. Code. A summary of the most significant changes from the previous version of the City of St. Francis Permit and additional clarity is provided below.

Permit Structure
The Permit is broken down into seven sections. Section I outlines the applicability and general storm water permit requirements. Sections II and III include the storm water program requirements and Total Maximum Daily Load (TMDL) requirements. Section IV contains a schedule of when specific permit requirements must be completed. Section V and VI are standard conditions and definitions, respectively. Lastly, Section VII contains the reduction goals for Total Suspended Solids (TSS) and Total Phosphorus (TP) from the Milwaukee River TMDL.

I. Applicability
The proposed permit does not add additional conditions to this section. However, some conditions warranted clarification. Clarification of these conditions are described below.

I.A. Permitted Area
The permit covers all areas within the jurisdiction of the Permittee. If the Permittee acquires new areas (e.g., annexation) during the term of the permit, these new areas are now considered the jurisdiction of the City and the permit conditions apply to these areas.

I.B. Authorized Discharges
The Permittee is required to implement best management practices in its permitted area to reduce its discharge of storm water pollution to waters of the state. Through implementing these best management practices, the Permittee is authorized to discharge storm water point source discharges from its MS4 to waters of the state.

Permit section II.C.1 requires the Permittee to have a municipal ordinance or other regulatory mechanism that prohibits illicit discharge, spilling or dumping of non-storm water substances or material into the Permittee's MS4 or waters of the state. The municipal ordinance or other regulatory mechanism must also identify non-stormwater discharges or flows that are not considered illicit discharges (e.g., discharges from potable water sources, foundation drains, and air conditioning condensation that are not significant sources of pollutants to waters of the state).

Non-stormwater discharges to the Permittee's which are not considered illicit (e.g., discharges from potable water sources, foundation drains, and air conditioning condensation that are not significant sources of pollutants to waters of the state) and storm water discharges from regulated WPDES

permittees[1] (e.g., storm water associated with an industrial storm water permittee) are authorized to be discharged to the Permittee's MS4.

Though these discharges are authorized, they may not be illicit. If the Permittee discovers an illicit discharge originating from an authorized source (e.g., from a regulated WPDES permittee), the Permittee is expected to implement its Illicit Discharge Detection and Elimination program according to Permit Section II.C.

I.I. Impaired Waters
The Permittee is required to determine whether any part of its MS4 discharges to a listed impaired waterbody and where so, include a written section in its storm water management program that discusses the management practices and control measures it will implement as part of its program to reduce, with the goal of eliminating, the discharge of each pollutant of concern that contributes to the impairment of the waterbody.

As communities expand, alteration of the land by development can increase the discharge of pollutants such as oil and grease, heavy metals, and nutrients. The Permittee must meet design criteria for new and redevelopment and implement pollution prevention practices as described in their stormwater management plan to not establish a new or increased MS4 discharge of a pollutant of concern to an impaired waterbody.

II. Storm Water Management Program
This permit requires development of written storm water management program (SWMP) documents describing how the Permittee will comply with the permit's requirements for each of the six minimum control measures, consistent with s. NR 216.07, Wis. Adm. Code. This is not a new requirement, but rather a clarification because the previous permit did not require written program documents. As explained in the USEPA Rule Remand, "the written SWMP provides [the Department] something concrete to review to understand how the MS4 will comply with permit requirements and implement its storm water management program."[2] This also provides an opportunity for the Department to assess compliance with the permit requirements. The Permittee is expected to develop written documents if they do not already exist and submit them to the Department. Existing and new SWMP documents describing the Permittee's approach to each minimum control measure must be submitted to the Department by October 1, 2025.

II. A. Public Education and Outreach
The previous permit required the City of St. Francis to increase awareness of how the combined actions of human behavior influence storm water pollution and its effects on the environment. The Permittee was to prioritize education topics identified in the permit, address all education topics at least once during the permit term with a minimum of 3 topics each year, identify target audiences, and establish measurable goals. The Permittee participated in Southeastern Wisconsin Watersheds Trust's Respect Our Waters campaign to provide broad education and outreach to the entire Milwaukee River Basin watershed along with other MS4 permittees located within the watershed.

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[1] The Department's statewide website can assist in identifying regulated WPDES permittees that may discharge into the Permittee's MS4: https://uadnrmaps.wi.gov/H5/?viewer=SWPV. The Permittee should also identify all WPDES permittees in its jurisdiction as required by Permit Section II.H.

[2] 81 Federal Register 89339, December 9, 2016.

Similar to the previous permit, the reissued permit will require the Permittee to address all identified education topics at least once during the permit term with a minimum of 3 topics each year, and track and report the education topics and target audiences, and have measurable goals. The permit removes the requirement to prioritize the broad education topics each year. Instead, this permit requires focused, localized education. The goal of this focused effort is to identify storm water education needs of the community and provide targeted education based on those identified needs. Additionally, this permit condition facilitates how to establish, work towards, and measure the success of a program's measurable goal. The Permittee may use this process as an example to establish measurable goals for the remaining minimum control measures (storm water programs).

The permit specifies the Permittee has 18 months (by April 1, 2025) to identify and prioritize the specific storm water quality issues or pollutants of concern in their community. The Permittee has flexibility to use the most appropriate methods to learn what their community education needs are. After educational needs have been identified and prioritized, the Permittee will have 24 months (by April 1, 2027) to complete a targeted education event based on their needs assessment. It is the Permittee's responsibility to determine the most appropriate event (passive or active– examples provided below), to best addresses the needs and to identify metrics which will be used to measure the effectiveness of their targeted education. For example, if leaf collection and disposal methods are identified as an education need, the Permittee could assess quantity of leaf litter in roadways before and after education is provided. After completion of the targeted education, the Permittee will have to submit a summary of the results with the next permit application along with plans for targeted education in the next permit term.

Though the permit does not require the Permittee to use active delivery mechanisms (examples of active and passive mechanisms are provided in the Table below), during the permit drafting process, the Department highly encouraged the Permittee to utilize active mechanisms at least once during the permit term. This request was based on a recommendation found within the Permittee's MS4 Audit Summary Report dated May 28, 2021.

Examples of Active and Passive Public Education and Outreach Delivery Mechanisms

Active/Interactive Mechanisms	Passive Mechanisms
• Educational activities (school presentations, summer camps) • Informational booth at event • Targeted group training (contractors, consultants, etc.) • Government event (public hearing, council meeting) • Workshops • Tours • Other	• Passive print media (brochures at front desk, posters, etc.) • Distribution of print media (mailings, newsletters, etc.) via mail or email • Media offerings (radio and TV ads, press release, etc.) • Social media posts • Signage • Website • Other

II. B. Public Involvement and Participation

The previous permit required the Permittee to implement a program to notify the public of activities required by the permit, to encourage input from the public regarding these activities, and include measurable goals. The new permit contains a similar requirement but identifies more specific activities for public input and clarified expectations for measurable goals. The Permittee must allow for public

comment and consider comments on annual reports, storm water management plan revisions, adoption of storm water related ordinances, and development of benchmarks for TMDL pollutant reduction. Lastly, to satisfy the eReporting Rule, the Permittee need to track and report the delivery mechanism and target participants for each activity.

II. C. Illicit Discharge Detection and Elimination (IDDE)

Permittees have been implementing Illicit Discharge Detection and Elimination (IDDE) programs since first obtaining MS4 permits. The reissued permit will build upon the existing programs and provide more clarity to measurable goals and specific response actions, adding greater emphasis to the elimination part of the IDDE.

Both the existing and reissued permit require MS4s to have an ordinance or regulatory provision which prohibits non-storm water discharges into the MS4 system or waters of the state. The ordinance coupled with inspection and enforcement authority are necessary for the MS4 to prevent illicit discharges or improper disposal. As these are existing requirements, the Department expects MS4s to already be enforcing an ordinance or regulatory mechanism.

Section II. C. 4 of the new permit requires development of an enforcement response plan that documents how the MS4 will enforce its illicit discharge ordinance. The enforcement response plan is intended to provide clarity and consistency in enforcement actions the MS4 will complete once an illicit discharge is identified. The enforcement response to all identified illicit discharges may not be the same (e.g., consider illegal dumping verses cross connections), so the Permittee may identify specific actions for all illicit discharges or identify actions for certain types of discharges. The enforcement response plan must also identify the person responsible for responding to illicit discharge reports.

Dry weather field screening remains an effective way to identify illicit discharges or which storm water pipes may have illicit connections. Dry weather screenings should occur when flow should not be present. Typically, this is 48-72 hours after a rain event. However, based on the precipitation event and size of drainage area, the amount of time may change. Similar to the previous permit, the Permittee needs to identify pollutant parameter action levels used during outfall screening. Based upon the sampling result for a specific pollutant, the Permittee may need to take additional action. For example, the concentration of ammonia detected at the outfall may require the Permittee to collect a sample for lab analysis and complete a sewer shed investigation to find the source. Other times, only follow up monitoring is needed. The Permittee has the flexibility to determine the action levels and corresponding response steps provided the pollutants and specified parameter action levels are identified in the written IDDE field screening procedures or similar document. The Department has developed guidance to assist with developing parameter action levels, and the Permittee is encouraged to adapt their IDDE programs based upon the results of screening and characteristics of the sewer sheds. The IDDE field screening procedures or similar document shall also explain when a certified lab sample needs to be collected, as these are more accurate and hold greater weight during enforcement.

Prioritization of outfalls to screen is an effective practice to identify illicit discharges and eliminate the pollutant loads. Similar to the previous permit, this permit calls for identifying priority outfalls – any MS4 outfall, not just major outfalls, which has a high likelihood of illicit discharge based upon multiple variables. The Permittee should select 20 percent (1/5) of the major outfalls and 20 percent (1/5) of the priority outfalls to screen each year. If the Permittee determines at least 20 percent of these outfalls cannot be screen during a given year due to technical, logistical, or other reasonable issues, the

Permittee must describe the reasoning in its annual report for that reporting year. However, the Permittee shall ensure all major and priority outfalls are screened at least once during the permit term. It is highly recommended a schedule of annual outfalls screening be provided in the IDDE written procedure to ensure the Permittee is screening outfalls as required and to more easily demonstrate permit compliance. Lastly, any outfall showing evidence of illicit discharges or exceeding a parameter action level, must be screened the following year to ensure the illicit discharge has been eliminated.

Outfall screening consists of visual observation, field analysis, documentation, and potentially lab analysis. The Permittee should have an inspection form or similar document to record the results of visual observation. If flowing water is observed at the outfall, a field analysis should be conducted to determine the source of the flow and the appropriate parameter action levels followed. If general observations and screening indicate the presence of illicit discharge, and the source cannot be readily identified, the Permittee should collect a water sample for lab analysis. The water sample should then be analyzed for parameters to aid in determining the source of illicit discharge. Documentation of field screening activities should be kept for at least 5 years. A summary of the results needs to be submitted with the annual report. This can be a spreadsheet summarizing the sample results for each outfall.

The final requirement of the IDDE program is investigation and elimination procedures for responding to known or suspected illicit discharges. Where enforcement response procedures outline how the ordinance is enforced once an illicit contributor is identified, the investigation and elimination procedures outline the actions the Permittee will take to respond when illicit discharges are suspected or identified through screening, notification, complaints, or other sources. The Permittee should have procedures for immediately investigating portions of the MS4 suspected to contain illicit discharge based upon field screening, complaints, visual observation, or other relevant information. These procedures shall identify the person responsible, the response time, investigation techniques to employ, and equipment necessary. The Permittee must also have a plan for responding to spills which discharge into or out of the storm sewer, including prevention and containment.

The permit changes the response time for eliminating illicit discharges or connections. The previous permit required the removal of the discharge or connection to the maximum extent practicable and, if the source had not been identified or observed within 6 months, required the Permittee to maintain written documentation of the actions undertaken, including additional investigation requirements. This permit requires the Permittee to take appropriate actions to expeditiously eliminate the illicit discharge. For public sources, this can mean beginning to take steps to stop the illicit discharge. For private sources, this can mean beginning to use the enforcement response procedures (written notice, NON, etc.). Within the 30-day time period, an initial assessment of feasibility to remove the discharge should be made. If the illicit discharge cannot be removed within 30 days, the Permittee shall contact the Department. Within 45 days, the Permittee must submit an illicit discharge elimination plan to the Department which identifies the actions and timeframe the Permittee will follow to remove the illicit discharge. For example, if a force main is leaking into a storm sewer under a major roadway, significant resources and time may be needed to plan and complete the repair. The Permittee will be expected to follow the submitted elimination plan and remove the illicit connection as soon as practicable.

The IDDE investigation and elimination procedures should also include specific notification procedures. The Permittee shall include in its written program procedure immediately notifying the Department within 24 hours of identifying a spill or release of hazardous substance into or from its MS4. Advance notification of dye testing is also required because dyes are often confused will illicit

dumping. Finally, the Permittee should contact an adjacent MS4 if it identifies an illicit discharge which flows into the adjacent MS4's storm sewer system or property under the jurisdiction of the adjacent MS4. Additionally, the Permittee should contact an adjacent MS4 if it identifies an illicit discharge originating from an adjacent MS4's storm sewer system or property under its jurisdiction.

The Permittee also needs to maintain a system for documenting illicit discharge activities, including complaints, referrals, and investigation activities. Records should be kept for at least 5 years.

This permit also requires training on the Permittee's illicit discharge procedure for those staff responsible for implementing the illicit discharge program at least once during the permit term. For example, training on how a potential illicit discharge is responded to (e.g., If a complaint is called in by a resident, or a DPW crewmember observes an illicit discharge, how is it communicated to the person responsible for investigation?). The method for training (e.g., in-person, email with training information, or a training video) is determined by the Permittee. A summary of the training method should be included in the program's written procedure.

II. D. Construction Site Pollutant Control

This permit continues the requirement to implement a construction site pollutant control program to reduce the discharge of sediment from construction sites. The requirements are similar to the last permit and the changes are intended to add clarity to the permit. The Permittee is expected to have a construction site ordinance in place which requires construction plans which meet the performance standards in s. NR 151, Wis. Adm Code, allows for inspection and enforcement to ensure compliance with performance standards, and requires site operators to properly manage waste materials on construction sites. If, after the effective date of the reissued permit, the Permittee becomes aware its ordinance does not meet state requirements, the Permittee shall update its ordinance within 3 months.

The requirement for the MS4 to notify landowners of other potentially required permits has been removed. This requirement has been removed because it is the landowner's responsibility to obtain all applicable permits, and the municipality does not always know what are the latest DNR wetland and waterway permitting requirements that could apply to a site.

New requirements in this permit include written plan review procedures, specific construction site inspection frequencies, and written enforcement procedures. The Permittee also need to include in the construction program documents how they will respond to information submitted from the public, including complaints.

The Permittee's plan review procedures should identify the steps construction site operators will follow to obtain a construction permit and the procedures the plan review staff (MS4 Permittee) will follow to review and issue construction site permits. The procedures should also describe how the Permittee will consider water quality impacts through its plan review process as required in s. NR 216.07 (4) (b), Wis. Adm. Code. The considerations can be in the form of a checklist or specific BMPs for certain site conditions but must describe a consistent process or evaluation that is applied to all sites within the Permittee's jurisdiction. For example, the Permittee may require certain BMPs on high slope or large sites or additional barriers if the site is adjacent to wetlands or other waterbodies. The Permittee may also require identification of portable toilets on constructions sites and require them to be on impervious surfaces and in locations of low traffic to limit bacteria runoff.

The inspection frequencies within Table 2 are intended to provide clarity to the construction program requirements and are consistent with other MS4 permits in the state. Some permittees may require inspection of smaller sites or more frequent inspection frequencies, but at a minimum, the MS4 Permittee must complete inspections according to Table 2. All active sites greater than 1 acre need to be inspected every 45 days and follow-up inspections are required until issues are resolved. The Permittee is also required to keep record of all inspections and follow-up for 5 years.

The final new requirement of the construction program requires the Permittee to develop an enforcement response plan or similar document. The enforcement response plan should describe how and when the Permittee will use the enforcement provisions in their local ordinance to ensure the discharge of sediment and pollutants is controlled accordingly. For example, a permittee may elect to issue a stop work order after an initial inspection and follow-up inspection 7 days later, to a site which has not installed erosion and sediment control practices but has begun mass site grading.

II. E. Post-Construction Storm Water Management

The post-construction program is intended to control the quality of storm water discharges from the MS4 after construction is complete. The discharges should be controlled for the life of the site or until redevelopment takes place. This permit continues the requirement for the Permittee to have an ordinance or regulatory mechanism that applies to sites of specific size and requires post-construction standards equal to or more restrictive than ch. NR 151, Wis. Adm. Code, and Department technical standards. The ordinance should also require a storm water management plan for the site, permit application and associated fees, long-term maintenance for post-construction BMPs, and provide the MS4 with inspection and enforcement authority.

Similar to the construction site program, the permit requires written procedures the Permittee will employ for reviewing plans for sites which require post-construction BMPs. The procedures should describe the Permittee's review process and items the Permittee reviews to consider water quality impacts.[3] These may include wellhead protection barriers near drinking water sources or additional controls for developments in TMDL areas. The procedures should also describe how Permittee reviews requests for regional storm water controls if proposed by the site developer.[4]

New to this permit is the requirement for the Permittee to develop and maintain a system for tracking post-construction BMPs. Tracking post-construction BMPs is critical for documenting TMDL progress, as well as ensuring BMPs are functioning as designed and meeting the performance standards. The tracking system consists of three elements and must include:

1. An inventory of all municipally owned or operated post-constructed BMPs and all privately owned BMPs constructed on or after June 1, 2006.

- Municipally owned BMPs are BMPs owned by the Permittee, regardless of date of construction.
- Municipally operated BMPs are privately owned BMPs that the Permittee has long-term maintenance agreement, regardless of date of construction.
- Required by the Permittee's previous MS4 permit, the Permittee is required to obtain long-term maintenance agreements on privately owned BMPs constructed on or after June 1, 2006. The inventory must include these BMPs and provide confirmation of whether long-term

[3] As required by s. NR 216.07 (5) (b), Wis. Adm. Code.
[4] As required by s. NR 216.07 (5) (c), Wis. Adm. Code.

maintenance agreements exist.

The BMP inventory must include:

- BMP name, location, BMP type, and year constructed.
- Confirmation of whether each of the following exists for each BMP:
    - Record drawing.
    - An operation and maintenance plan with inspection procedures and schedule.
    - For privately-owned BMPs, long-term maintenance agreements or written documentation of the Permittee's ability to inspect and maintain a privately owned BMP.

2. A procedure describing how the Permittee will enforce long-term maintenance agreements to ensure inspections and maintenance are completed and BMPs function as designed. For example, if the Permittee sends letters to private BMP owners, this should be described. Additional information, such as the person responsible for sending letters, how and where reports are submitted, the person responsible for reviewing and maintaining submitted reports, should be include. The final piece of this procedure is a description of when and how the Permittee will use its enforcement authority in the post-construction ordinance to address compliance issues. For example, if the Permittee's ordinance provides authority to make repairs and bill the property owner, the enforcement response procedures should describe when this authority will be used and steps the Permittee will undergo to complete the repairs.

3. The Permittee needs to maintain a system for tracking these inspections. Though the Permittee determines how its tracking system will be used, the Department highly recommends the Permittee include a schedule of required inspections to ensure inspections occur and to more easily demonstrate permit compliance. Lastly, while BMPs should be inspected per the operation and maintenance plan or long-term maintenance agreement, the permit sets a minimum expectation that each BMP be inspected at least once per permit term (e.g., at least once every 5 years).

Section II.E.4 is the last new requirement of the permit. Starting in 2013, a project was conducted by Wisconsin Sea Grant in partnership with 1000 Friends of Wisconsin, Orion Planning and Design, and Milwaukee Metropolitan Sewerage District (MMSD) to identify green infrastructure (GI) ordinance barriers in the municipalities served by MMSD. [5] Removal of GI ordinance barriers is essential for adoption of innovative storm water management techniques and provides developers and landowners with more alternatives to meet the post-construction performance standards. At the time of the project, no GI ordinance barriers were identified within the City of St. Francis's ordinances. However, through implementation of the Permittee's municipal code, if the Permittee identifies an ordinance barrier to GI, the permit requires the Permittee to remove said GI barriers within 12 months of discovery.

II. F. Pollution Prevention

The pollution prevention activities consist of multiple programs and training which are employed to reduce municipal sources of pollution. These activities include winter road management, nutrient management, street sweeping and catch basin cleaning, management of leaves and grass clippings, good housekeeping at municipal properties, and employee training. The Permittee should develop written program procedures for each of the programs.

[5] Wisconsin Sea Grant Institute, "Tackling Barriers to Green Infrastructure: An Audit of Municipal Codes and Ordinances." DATE. https://www.seagrant.wisc.edu/our-work/focus-areas/coastal-communities/green-infrastructure/

The maintenance requirements for municipality owned or operated BMPs has also been moved to the post-construction section because this requirement fits within the BMP maintenance and tracking requirements for Section II. E. 3.

Winter Road Management

This permit continues the requirement for municipalities to not apply road salt or deicers in quantities larger than required to maintain public safety. To reduce overapplication of salt and deicers, this permit requires the Permittee to develop and implement a salt application, salt reduction strategy, or similar document which describes the conditions, equipment, and strategy which will be followed during deicing events. The Wisconsin Department of Transportation (WisDOT) Highway Maintenance Manual - Chapter 6, contains guidelines on winter maintenance including application of road salt and other deicers. This document can be used to assist with development of the Permittee's salt reduction strategy.[6]

The permit requires annual calibration for salt application machinery. The Permittee's winter road management program should describe how calibration is completed for each piece of equipment and a record showing equipment was calibration must be maintained. Factory calibration is not considered acceptable for annual calibration as new machinery has been shown to significantly over apply salt based on factory settings.[7] Calibration is also key for properly using the quantity of deicers used for reporting on the annual report. To ensure the strategy is being accurately implemented the Permittee is required to provide training on its salt reduction strategy to municipal staff involved in deicing operations every other year.

Lastly, to identify potential improvements to its salt reduction strategy, the Permittee should evaluate its strategy at least once each year. At minimum, the quantity of deicing products used, and application rates should be evaluated. However, it is the Permittees responsibility to determine when and how the evaluation occurs. For example, some Permittees evaluate the quantity used and application rates after each storm while others evaluate at the end of each winter season. Though not required by the permit, the Permittee may choose to incorporate this evaluation into the required training.

Nutrient Management:

Nutrient management plans are required for fertilizer application on all municipally controlled properties (parks, athletic fields, golf courses, lawns, etc.) with five acres of pervious area. This includes soil samples for each individual property. For additional information, please refer to DNR Technical Standard 1100, Interim Turf Nutrient Management and additional guidance found here: https://dnr.wi.gov/topic/stormwater/standards/turf_nutrient.html.

Street Sweeping and Catch Basin Cleaning:

Street sweeping and catch basin activities are an effective way to remove large sediment particles that would otherwise be washed away during precipitation events. This permit requires the Permittee to

[6] Wisconsin Department of Transportation (WisDOT) Highway maintenance manual -Chapter 6. https://wisconsindot.gov/Pages/doing-bus/local-gov/hwy-mnt/mntc-manual/chapter06.aspx The WisDOT highway salt storage requirements are contained in ch. Trans 277, Wis. Adm. Code.

[7] Based on discussions with Mary Jo Lange, Director of Public Works for the City of Cudahy. Testing of a new truck in 2018 was over applying salt by 92%.

track the number of lane miles swept, number of catch basins cleaned and the weight in tons of material collected annually. If Permittee uses street sweeping or catch basin cleaning as part of their efforts to meet a performance standard or TMDL reduction goal, the sweeping and cleaning frequencies must be consistent with those identified in the pollutant loading analysis.

Collected material is considered solid waste and must be disposed of in an appropriate manner. If the Permittee stages this solid waste material prior to disposal, BMPs should be employed to prevent contamination with storm water runoff. Dewatering and drying this solid waste material should be done in a manner that does not allow for liquid generated from this material to discharge to waters of the state (surface, ground, or wetland) as this is considered a non-storm water discharge and is not authorized by this permit. All material should be disposed of in a landfill unless the Permittee has an approved beneficial reuse exemption from the DNR Solid Waste Program.

Management of Leaves and Grass Clippings

Collection of leaves is an effective measure for reducing nutrient input from urban storm water runoff. While many BMPs are designed to settle out solid materials, leaf matter leaches dissolved phosphorus, which is not captured by traditional settling devices. Collection of leaves before precipitation is essential for reducing dissolved phosphorus contributions from the MS4.

This permit requires the Permittee to provide a description of their leaf collection program including the methodology and equipment used for collection, the frequency and timing of collection, and instructions for residents and landowners on where to locate leaves for collection. Consistent with the previous permit, the Permittee must identify where leaves are disposed of and track the quantity of leaves collected on an annual basis.

A new requirement for the leaf collection program during this permit term is for the Permittee to identify BMPs it will employ to the leaf management program to reduce nutrient loading. The Permittee should evaluate their current leaf collection strategies and look for opportunities to improve collection practices with the goal or reducing the amount of time leaves are on streets. The overall leaf management strategy should consider the source of leaves, transport (curb and gutter vs. swale), and finally fate (infiltration practice vs. pond vs. direct discharge). Recent leaf management research shows the phosphorus loading is tied to the quantity of leaves on the streets and the frequency of removing leaves from the street is more important than the method of removing the leaves.[8] The Permittee is encouraged to pilot new leaf management techniques as part of the iterative process and identify collection practices best fitting the needs of their residents, street characteristics, and resources while reducing nutrients in runoff.

Storm Water Pollution Prevention Planning

This permit continues the requirement for municipal garages, storage areas, and other public works related facilities (e.g., composting facilities) with the potential to generate storm water pollution to have storm water pollution prevention plans (SWPPP) for each site under Permittee control. These sites would normally be covered by an industrial storm water permit, but to avoid the need for multiple permits, the requirements for these industrial sites have been incorporated in the MS4 permit. The requirements for each SWPPP include a map of the site, potential sources of pollution, drainage

[8] Phil Gaebler. "Phosphorus Reduction Through Leaf Collection." March 5, 2019. Fox-Wolf Watershed Alliance Conference, Green Bay, Wisconsin.

patterns and discharge locations, description of housekeeping activities, and description of BMPs to reduce the runoff of pollutants from the site.

At the time of permit reissuance, the Permittee operated one site which required a SWPPP (the City's DPW Yard located at 2125 E. Bolivar Avenue). If the Permittee acquires additional properties which require SWPPP(s), the Permittee shall develop and implement site specific SWPPP(s). Any new or revised SWPPPs must be developed and submitted to the Department for review.

The Department determined during the City's 2021 MS4 Audit that the City's DPW Yard SWPPP (located at 2125 E. Bolivar Avenue) required revisions. In summary, revisions were needed as site activities changed (i.e., activities noted in the SWPPP no longer occur on site) and additional BMPs were needed (e.g., structural BMPs surrounding stockpiled materials and nonstructural BMPs such as increased housekeeping activities). To return to compliance, the City began implementing actions outlined in the MS4 Audit Summary (dated May 28, 2021) and drafted a revised SWPPP. However, the SWPPP was never finalized as the City was evaluating a need for a new DPW garage and this decision may impact site activities, associated BMPs and location. During the permit drafting process, the Department clarified a SWPPP must be finalized for the DPW Yard within 12 months of permit issuance (by October 1, 2024). If the SWPPP requires revisions after the City makes its final determinations, a revised SWPPP should be developed and submitted to the Department as required by section II.F.5 d).

Quarterly visual inspections should be conducted at each site, and inspections documented. Additionally, an annual inspection should be completed for each site. Any deficiencies found during the inspections should be corrected and the SWPPP updated. Updated SWPPPs should be submitted with the annual report any time revisions are made.

Internal Education Training

The Permittee is required to provide training to municipal staff involved in pollution prevention activities. The trainings should include pollution prevention activities and their impacts on storm water quality (e.g., road salt contributions to chloride impairments) and the Permittee's implementation of these activities (e.g., type and amount of product used for the various conditions, areas which receive product, etc.). One training event must be held during the permit term to cover each pollution prevention topic, except Winter Road Management which education must occur every other year.

II. G. Storm Water Quality Management

The storm water quality management conditions are continued from the previous permit, except for the requirement to develop a plan to achieve a 20 percent TSS reduction from the pre-2004 urbanized area. This requirement was removed because MS4 permittees in the region have collectively achieved a 23.6% reduction and the Milwaukee River TMDL sets much higher reduction goals for TSS.

The Permittee is expected to maintain all BMPs used to achieve their existing control level in accordance with s. 281.16 (2) and (3), Wis. Stats. Maintenance and continued operation of BMPs is necessary to prevent backsliding.

II. J. Annual Report

Section II. J. 8 was added to implement the USEPA eReporting Rule requirements and requires that the Permittee submit its annual reports and other permit compliance documents electronically through the Department's electronic reporting system.

II. K. Reapplication for Permit Coverage

The permit reapplication requirements are expanded from the previous permit term and specify additional information the Permittee must submit 180 days prior to permit expiration (by April 3, 2028). The reapplication will require submission of information the Department will consider n to develop the next permit.[9]

III. Special Conditions

The Special Conditions section is new to this permit and includes requirements to address the Milwaukee River TMDL. These new special conditions are required because additional BMPs and controls beyond those currently employed are needed to attain water quality standards.[10] Conditions within this section apply to MS4 areas discharging to the Milwaukee River TMDL.

When developing the Special Conditions section, the Department's goal was to provide the Permittee time to develop its plans for addressing the WLAs, but also accomplishing an improvement in water quality which can be realized within this permit term. The Milwaukee River TMDL was approved in March 2018, so the Permittee has had time to begin planning.

III. A. 1 TMDL Pollutant Load Reduction Evaluation for TSS and TP

The first step in the TMDL planning process is identifying which reaches the MS4 discharges to and the associated reduction goal. Section III. A. 1. requires updates to the MS4 map identifying the specific TMDL reach boundaries, structural BMPs and associated drainage areas, and excluded areas. For any excluded areas, the MS4 should specify why the area will not be included in the load reduction evaluation.

Once the individual TMDL subwatersheds and drainage areas are identified, the Permittee is required to estimate the pollutant loading from each TMDL watershed with and without controls. The difference between the with controls and without controls pollutant loading is the load reduction. The calculated load reductions can then be compared to the reach goal to determine how much additional control is needed for each reach.

Most permittees in Wisconsin utilize WinSLAMM software to develop load reduction estimates, but the Permittee is not required to use this program. The Permittee may use other computer programs or methods provided the analysis methods are similar or equivalent and approved by the Department. The Department envisions equivalent methodology could be a well-designed monitoring strategy collecting outfall/pipe flow and concentration which can be used for data-based decisions and analysis. In either case, the Permittee should develop its modeling or analysis to be easily updated based upon changes to the individual TMDL watershed. Rather than updating the whole analysis, it will be more cost effective to update one model or subset of models. This will be a useful approach for evaluating progress in future permit terms.

Lastly for each BMP, the Permittee needs to compile a tabular summary documenting the pollutant removal efficiency of the BMP, area treated, and a maintenance agreement for any privately-owned

[9] Consistent with ss. NR 216.01 and 216.07, Wis. Adm. Code.
[10] Sawyers, A.D. and Best-Wong, A. November 26, 2014. Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs." USEPA office of Watershed Management

BMP. Any privately-owned BMP without a maintenance agreement should not be included in the pollutant load reduction evaluation.

In April 2019, the Permittee finalized its Storm Water Quality Management Plan Update which included information needed to comply with the TMDL Pollutant Load Reduction Evaluation for TSS and TP. As additional BMPs have not been implemented in the Permittee's TMDL area since the Plan was finalized, Department staff reviewed the Plan for compliance with Section III. A. 1 and determined it satisfied Section III. A. 1 permit conditions.

III. A. 2. WLA Attainment Analysis for TSS and TP

The WLA Attainment Analysis requires the Permittee to evaluate how the WLA will be achieved. This analysis shall include identifying the type and number of BMPs necessary to achieve the reduction goals, financial costs of such BMPs, and other resources needed. The intent of this permit condition is for the Permittee to identify all available options to fully achieve WLAs, it is not a commitment of action the Permittee must implement. The Permittee should use this analysis to better plan for future projects such future WLA Benchmarks (Section III.A.3). The analysis is also intended to illustrate resources needed to fully achieve WLAs utilizing current practices (i.e., necessary budget and workload, and time to achieve WLAs). If the analysis does not provide reasonable assurance WLA will be achieved by utilizing current practices, the Permittee should consider implementing alternatives such as Water Quality Trading or adopting more stringent development and redevelopment standard. Additional information on alternatives is described below.

The Permittee is highly encouraged to evaluate multiple alternatives and resources when completing the WLA Attainment Analysis. Within the greater Milwaukee Region, many water quality planning documents already exist or are under development. These include water body specific restoration plans, Nine Key Element Plans, and Regional Green Infrastructure Plan[11]. The Permittee can take the recommendations from these efforts and incorporate them into future development or revitalization plans, or use similar methodology for identification of project location and prioritization.

Other options to consider include Water Quality Trading or municipal partnership. These alternatives allow more flexibility in the location of where practices can be implemented for the Permittee to show a reduction in pollutant loads.

One alternative the Permittee must evaluate and consider is updates to its development and redevelopment standards. The Permittee will need to look at historical development rates and projected future development and estimate the pollutant load reductions if the minimum TSS and TP removal requirement are increased. The Permittee shall evaluate setting the load reduction requirement at the TMDL reach goal and at a level which provides the additional level of control needed which the municipality cannot supply via public projects. The Permittee may enact an ordinance that is municipal-wide, targets individual TMDL reachsheds, or designated areas within the permitted MS4, balancing required TMDL reductions, parcel size, and the impact of other treatment options. Increasing redevelopment reductions is one tool in moving toward TMDL compliance.

[11] Milwaukee Metropolitan Sewerage District Regional Green Infrastructure Plan. June 2013. https://www.mmsd.com/what-we-do/green-infrastructure/resources/regional-green-infrastructure-plan

III. A. 3. Establishment of Wasteload Allocation (WLA) Benchmarks for TSS and TP

Where the TMDL pollutant reduction evaluation shows TMDL WLAs have not been met for TSS or TP, the Permittee must develop pollutant load reduction benchmarks for those parameters and submit them with the permit reapplication package. The benchmarks should reflect structural controls implemented as part of the Permittee's storm water management program, as well as any additional reductions expected to result from BMPs proposed to be completed during the next permit term. Nonstructural controls can be included where effectiveness information is available.

The Department expects the TMDL benchmarks to be permit cycle (5-year basis) targets used to assess progress towards meeting the final WLA goal. The Permittee should continue to iteratively manage its storm water programs to reduce pollutants and identify the TMDL benchmarks accordingly. As discussed previously, the Permittee is encouraged to review and incorporate recommendations from other regional plans as the Department will consider these in review of measurable goals and benchmarks as allowed by s. NR 216.07, Wis. Adm. Code.[12]

III. A. 4. Fecal Coliform Reduction Efforts

The third TMDL pollutant with WLAs from the Milwaukee River TMDL is fecal coliform. While the TMDL allocations in the Milwaukee River Basin TMDL are expressed only in terms of fecal coliform, both fecal coliform and E. coli have been listed as sources of recreational use impairments that the TMDL was completed to address.

Unlike TSS and TP, fecal coliform WLAs are based on a load reduction curve rather than a mass reduction. For permittees, this means that depending upon the moisture conditions, the allowable loading of fecal coliforms changes. Currently, fecal coliform loads greatly exceed the water quality standard under all flow conditions, so efforts are needed across the board.

The first new requirement in this permit to address fecal coliform is for the Permittee to develop a parameter action level to use during illicit discharge screening by October 1, 2025. This parameter action level shall set a numeric level (e.g., 125 counts/100 mL or presence/absence) for bacteria indicator in the sample, that if exceeded, requires specific follow-up action or investigation. The Permittee has the flexibility to select which bacteria indicator (e.g., *E. coli*, fecal coliform, human Bacteroides) it wishes to use and the associated action level. It is expected the Permittee will adjust its action level as more data on dry flow conditions are collected. Though the Permittee may choose to screen for fecal coliform at all MS4 outfalls, this permit only requires fecal coliform screening at MS4 outfalls within the Milwaukee River Basin TMDL.

While the TMDL WLAs are specified in fecal coliform, which is used as an indicator of enteric pathogens,[13] the specific indicator selected for illicit discharge is not as important as the action level. This is because the goal of this requirement is to identify illicit cross connections or discharges rather than monitor the level of instream fecal coliform. It is expected that an illicit connection will result in a strong positive result for the selected indicator. The Permittee shall provide explanation for why it chooses a specific indicator and include how the tests will be completed.

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[12] Section NR 216.07, Wis. Adm. Code. Permit Requirements. The Department shall issue permits using the information provided by the applicant and other pertinent information when developing permit conditions.

[13] Final Report: Total Maximum Daily Loads for Total Phosphorus, Total Suspended Solids, and Fecal Coliform Milwaukee River Basin, Wisconsin. Approved by USEPA on March 9, 2018.

The Permittee is also required to complete a Fecal Coliform Source Inventory by October 1, 2026. For this effort, the Permittee will need to identify and locate on a map, other potential sources of fecal coliform entering the MS4. The permit provides a list of potential sources, but this list is not considered inclusive of all sources within the permitted MS4 area or could discharge into the permitted MS4 area.

Once the fecal coliform source inventory is complete, the Permittee will need to prioritize the sources and identify BMPs to be employed to remove the sources in a Source Elimination Plan. The Plan shall explain the rationale for the prioritization system and provide a cost estimate of the BMPs that will be employed. Lastly, the Permittee must develop a schedule for addressing the sources which includes specific actions or benchmarks the Permittee will complete during the next permit term. This Source Elimination plan is due with the permit application on April 3, 2028.

III. B. TMDL Benchmarks

As fully achieving TMDL WLAs may take many years, the Department's expectation is for all MS4 permittees discharging to an approved TMDL to make progress, to the maximum extent practicable, on its TMDL WLAs each permit term. To provide reasonable assurance progress will be made during each permit term, the Permittee proposed specific actions to complete during the permit term. These proposed actions, TMDL Benchmarks, must be completed by the end of the permit term unless otherwise specified.

Permit condition III.B.a)

During the permit drafting process, the Permittee explained its intent to construct a BMP project on E. Layton Avenue with a goal to implement the project during this permit term. However, as the Permittee was unable to commit to the project by permit expiration (September 30, 2028), the permit requires the Permittee to continue advancing the project and submit the project's final implementation plan by April 3, 2028. However, as the project is currently in an early planning stage, the permit also requires the Permittee to submit a preliminary plan or other supporting documentation by October 1, 2025, which provides the Department reasonable assurance the Permittee intends to implement the project. If by October 1, 2025, the Permittee cannot provide reasonable assurance the project will be implemented, the Permittee shall propose alternative actions(s) to demonstrate progress.

Permit condition III.B.b)

Similar to TMDL benchmark III.B.a, TMDL benchmark III.B.b also requires the Permittee to submit documentation by October 1, 2025. This information should describe how the actions identified in this benchmark will be completed by the end of the permit term.

IV. Implementation Schedule

The implementation schedule for new and updated permit requirements which apply to the Permittee is listed in Table 3 of the proposed permit. Tables 3 does not list all the requirements of the permit.

Additional Information

The proposed WPDES permit, fact sheet, and other MS4-related information are available from the Department's website as indicated below. Web links to pertinent state statutes and administrative codes are also provided.

DNR WPDES Permits on Public Notice website:
http://dnr.wi.gov/topic/Wastewater/PublicNotices.html

DNR Storm Water Runoff Permits website:
http://dnr.wi.gov/topic/stormwater/

DNR Municipal Storm Water Permits website:
http://dnr.wi.gov/topic/stormwater/municipal/

DNR Storm Water Technical Standards, Models and BMPs website:
http://dnr.wi.gov/topic/stormwater/standards/

Chapter 283, Wis. Stats.:
https://docs.legis.wisconsin.gov/statutes/statutes/283.pdf

Chapter NR 151, Wis. Adm. Code:
https://docs.legis.wisconsin.gov/code/admin_code/nr/100/151.pdf

Chapter NR 216, Wis. Adm. Code:
https://docs.legis.wisconsin.gov/code/admin_code/nr/200/216.pdf

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