

Wisconsin Pollutant Discharge Elimination System Permit for Municipal Separate Storm Sewer System, Permit No. WI- S049930-03: Fact Sheet – August 2025

Purpose

The Wisconsin State Fair Park (WSFP) is currently covered under Wisconsin Pollutant Discharge Elimination System (WPDES) Permit No. WI-S049930-02. The WPDES permit expired on June 11, 2018. The Wisconsin Department of Natural Resources (Department) is proposing to reissue WPDES Permit No. WI- S049930-03 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 USC § 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. The Department also considered findings and discussions which occurred during the most recent annual storm water inspection conducted in August during the operation of the Wisconsin State Fair. 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 WSFP 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 WSFP 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.

Section 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 WSFP 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-storm water 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-storm water discharges to the Permittee's MS4 that 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 permittees¹ (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.

- **1.I. Impaired Waters:**

As with the previous permit, 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.

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 storm water management plan to not establish a new or increased MS4 discharge of a pollutant of concern to an impaired waterbody.

Section II. Storm Water Management Programs

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

This permit requires development of written storm water management program documents describing how the Permittee will comply with the permit's requirements for each of the six minimum control measures (i.e., the six storm water programs), 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. The Permittee is expected to develop written documents if they do not already exist and submit them to the Department (see Section IV in the MS4 Permit for compliance due dates). As written program procedures are required for each of the six storm water management programs under s. NR 216.07, Wis. Adm. Code, written program procedures will not be discussed within each of the six

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.

storm water program sections described later within this factsheet. The Permittee should reference this section for assistance or contact its local storm water specialist.

Consistent with the previous permit, this permit also requires the Permittee to establish measurable goals for each of its six storm water management programs. As the Permittee has six programs, the Permittee will have at least six measurable goals – one for each of its programs. Though this is also not a new requirement, the reissued permit contains specific measurable goal conditions. By the dates listed in the permit, the Permittee is required to submit a document which identifies its program's measurable goal, describes how its goal was identified, anticipated action the Permittee will take to work towards its goal, and anticipated metrics that will be used to evaluate the success of its actions taken to work towards its goal. Though establishing measurable goals is not a new condition, the requirement to provide the measurable goal, describe how it was identified, anticipated action, and metrics is new.

To provide additional clarity, an explanation of measurable goals, its intent, potential mechanisms to identify and measure success, and example measurable goals is provided below. As measurable goals are required for each of the six storm water management programs, measurable goals will not be discussed within each of the six storm water program sections described later within this factsheet. The Permittee should reference this section for assistance or contact its local storm water specialist.

Measurable Goals

The MS4 permit lists specific conditions the Permittee must implement to better the quality of its storm water discharge. Implementation of these specific conditions are best management practices known to reduce and/or eliminate storm water pollutants, regardless of the municipality. For example, to reduce the discharge of sediment and construction materials from construction sites, all MS4 permits across the state require the MS4 Permittee to inspect their storm water Best Management Practices or BMPs, e.g., infiltration basins, wet ponds, etc., and take action to address maintenance needs. However, as each MS4 Permittee is unique (i.e., municipalities face different storm water challenges, have different resources and needs, and implement storm water activities differently), the MS4 Permit does not include specific conditions each MS4 Permittee should implement to reduce its discharge of storm water pollutants to the maximum extent practicable (MEP) – part of the MS4 permit standard. These actions must be determined by the individual Permittee.

In summary, measurable goals should drive action which encourages enhancement of the Permittee's own program and consequently, further reduce its storm water pollutants to the MEP. Measurable goals may be simple, complex, based on a known or perceived need, a want, or expand upon required permit conditions. However, measurable goals should go beyond the specific conditions identified in the permit. Example measurable goals, how they can be identified, actions that could be taken, and how they can be measured is provided below.

- **Note:** Although the following examples are more suited for traditional MS4s (i.e., municipalities), they may inspire the Permittee to develop measurable goals applicable to WSFP.

Lastly, it is important for the goal to be measurable so the Permittee can determine if the actions taken to reach its goal were successful. If the goal was reached, the Permittee may determine its actions were successful and continue to implement similar actions in the future. However, if the goal was not reached, the Permittee may determine alternative actions are necessary. To make a goal measurable, the Permittee may set a quantitative

goal (i.e., number based) or qualitative goal (i.e., narrative based). The examples below provide both quantitative and qualitative measurable goals for reference.

- **Example of Measurable Goals, Methods to Identify, Actions to Take, and Metrics to Measure Success:**

Example 1: If a Permittee identifies noncompliance issues at construction sites are not resolved in a timely manner, it may identify this as an area for improvement and set a measurable goal of 50% or more noncompliance sites return to compliance within 24 hours. To achieve this goal, the Permittee may choose to implement a variety of actions such as providing education to construction applicants during plan review, utilizing more enforcement, conducting more inspections, etc. To measure the success of this quantitative measurable goal, the Permittee should count the number of noncompliance sites that returned to compliance within 24 hours after implementing its chosen actions. If 50% or more noncompliant sites returned to compliance within 24 hours, the Permittee may determine its actions were suitable. If less than 50% of noncompliant sites returned to compliance within 24 hours, the Permittee may determine alternative actions are necessary to achieve its goal.

Example 2: If a Permittee collecting residential leaves observes potted plants and other vegetation are placed within residential leaf piles, it may identify this as an area for improvement and set a measurable goal of reducing the amount of potted plants and other vegetation observed within residential leaf piles. To achieve this goal, the Permittee may choose to implement a variety of actions such as providing passive education to residents via its website/newsletter/social media/door hangers, providing active education via in-person education events, sending notice of violation letters to offending residents, etc. To measure the success of this qualitative measurable goal, the Permittee could ask leaf collection staff if they observe less potted plants and other vegetation, assign someone to assess potential improvement by observing the residential leaf piles, or count the amount of potted plants/other vegetation pre- and post- actions. If the Permittee assessment indicates its actions successfully met its goal, the Permittee may determine its actions were suitable. If the Permittee assessment indicates its actions did not successfully meet its goal, the Permittee may determine alternative actions are necessary to achieve its goal.

Example 3: A Permittee recently adopted a downtown redevelopment plan which has a large focus on aesthetics. To encourage downtown visitors to keep the area clean, the Permittee plans to install educational signage and/or install waste containers. As the Permittee already intends to implement these activities, the Permittee may choose to utilize these actions for a program measurable goal.

The Permittee may set a quantitative goal of installing a certain amount of signage or waste containers and, to measure its success, count the number of signs or waste containers installed. If the Permittee met its goal, they may choose to establish another measurable goal such as this in the future. If the Permittee did not achieve its goal, it should determine what additional steps are needed in the future to achieve the goal.

The Permittee may also set a qualitative goal of reducing the amount of litter observed in the downtown area. To achieve this goal, the Permittee may choose to install educational signage or waste containers. To measure its success, the Permittee could observe litter pre- and post- installation. If the Permittee assessment indicates its actions successfully met its goal, the Permittee may determine its actions were

suitable. If the Permittee assessment indicates its actions did not successfully meet its goal, the Permittee may determine alternative actions are necessary to achieve its goal.

Example 4: If a Permittee cannot identify a measurable goal based on a known or perceived need (Example 1 and 2) or want (Example 3), the Permittee may choose to set a measurable goal based upon existing permit conditions. For example, the permit requires implementation of specific conditions because they are known best management practices (e.g., screening outfalls is a known best management practice to identify potential illicit discharges). Using outfall screenings as an example, the Permittee may choose to increase its outfall screening frequency or screen additional outfalls so it may identify potential illicit discharges that may have otherwise been missed.

Section II.A Public Education and Outreach

The previous permit required the WSFP to increase awareness of how the combined actions of human behavior influence storm water pollution and its effects on the environment. The new permit continues this directive and requires the WSFP to identify target audiences, delivery mechanisms (i.e., passive or active), persons responsible for implementation, and develop a mechanism for evaluating effectiveness. However, in the previous permit, it did not encompass all common audiences' the WSFP interacts with. Therefore, the new permit distinguishes between the two categories of targeted audiences stated as "Broad Target Audience: General Public" and "Specific Target Audience: WSFP Employees, Contractors, Vendors, Exhibitors, and Campers" and lists specific education topics³ for each.

- **Broad Target Audience: General Public (Permit Condition II.A.1.a)**

The WSFP's previous permit did not provide a frequency in which education and outreach topics shall be addressed. In the new permit, the WSFP must implement the specific education topics on an annual basis.

Permit Condition II.A.1.a (iii): This education topic states "Continue to promote beneficial onsite reuse of leaves and grass clippings and proper use of lawn and garden fertilizers and pesticides". During the permit reissuance process discussions, since the WSFP is a non-traditional MS4 (i.e., does not have residents), Department staff explained using a passive mechanism to satisfy this education topic would suffice. For example, their educational signage on the importance of pollinators posted on the Department of Natural Resources Fair Grounds Building may be used as a passive mechanism.

Permit Condition II.A.1.a (iv): This education topic states "Continue to promote the management of stream banks and shorelines to minimize erosion and restore and enhance the ecological value of waterways." Since the WSFP is not along any stream banks or shorelines, during the permit reissuance process discussions, the Department explained utilizing passive mechanisms may be used to satisfy this education topic. For example, the WSFP has Exploratory Park, with a water pumping system in place

³ Education topics consistent with s. NR 216.07 (1), Wis. Adm. Code

where the WSFP may post educational signage in this area as it pertains to this education topic (e.g., importance of capturing water to reduce peak flows in waterways, etc.).

- **Specific Target Audience: Fair Park Employees, Contractors, Vendors, Exhibitors, and Campers (Permit Condition II.A.1.b)**

The WSFP's previous permit did not provide a frequency in which education and outreach topics shall be addressed. In the new permit, the WSFP must implement the specific education topics on an annual basis.

Permit Condition II.A.1.b (ii): This education topic states "ii. The Permittee shall continue to educate Fair Park Employees about storm water pollution from sources at the Fair Park and how to prevent or reduce pollutant runoff from areas that may generate storm water pollution. At minimum, education shall be provided through training activities including proper material management and disposal of sanitary wash water and solid waste, locations of storm sewer drains and outfalls, and general good housekeeping/pollution prevention practices."

During the permit reissuance process discussions, Department staff explained the WSFP may utilize education and training provided to staff on the Illicit Discharge Detection and Elimination and Pollution Prevention Program to help satisfy this education topic. For example, staff who are responsible for the implementation of a Storm Water Pollution Prevention Plan (SWPPP) receive a refresher training on the SWPPP which discusses the importance good housekeeping practices to reduce and eliminate storm water pollution.

- **Measurable Goal (Permit Condition II.A.2)**

Though not a new requirement as previously described, the reissued permit requires the Permittee to develop and submit a document identifying its measurable goal for their Public Education and Outreach Program and describing how the goal was identified, anticipated action the Permittee will take to work towards its goal, and metrics that will be used to evaluate the success of its actions taken to work towards its goal. Though establishing measurable goals is not a new condition, the requirement to provide the measurable goal information is new.

- **Permit Reapplication (Permit Condition II.A.3)**

Lastly, the permit requires the Permittee to submit a summary of the actions taken to achieve its Public Education and Outreach measurable goal, evaluation results, and propose measurable goals for the next permit term. The Department will consider the proposed measurable goals and other information submitted with the reapplication package to develop the next permit.⁴

⁴ Consistent with ss. NR 216.01 and 216.07, Wis. Adm. Code.

Section II.B Public Involvement and Participation

The previous permit required the Permittee to notify the public of ‘activities required by the permit’ and to encourage input from the public regarding these activities. The new permit contains a similar requirement but identifies more specific activities for public input. The Permittee must allow for public comment and consider comments on annual reports, storm water management plan revisions, and development of benchmarks for TMDL pollutant reduction. Lastly, to satisfy the eReporting Rule, the Permittee needs to track and report the delivery mechanism and target participants for each activity.

Unlike a traditional MS4 which may utilize municipal board meetings, common councils, or public informational meetings to present to the public their MS4 Permit activities, the WSFP has a Board of Directors. WSFP’s Board of Director meetings are open to the public and held on a quarterly basis.

- **Measurable Goal (Permit Condition II.B.2)**

Though not a new requirement as previously described, the reissued permit requires the Permittee to develop and submit a document identifying its measurable goal for their Public Involvement and Participation Program and describing how the goal was identified, anticipated action the Permittee will take to work towards its goal, and metrics that will be used to evaluate the success of its actions taken to work towards its goal. Though establishing measurable goals is not a new condition, the requirement to provide the measurable goal information is new.

- **Permit Reapplication (Permit Condition II.B.3)**

Lastly, the permit requires the Permittee to submit a summary of the actions taken to achieve its Public Involvement and Participation Program measurable goal, evaluation results, and propose measurable goals for the next permit term. The Department will consider the proposed measurable goals and other information submitted with the reapplication package to develop the next permit.

Section 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.

- **Legal Authority (Permit Condition II.C.1)**

Consistent with the WSFP’s previous permit, this permit requires the Permittee to have an ordinance or regulatory provision which prohibits non-storm water discharges into its municipal separate storm sewer system or waters of the state. The ordinance or regulatory mechanism coupled with inspection and enforcement authority are necessary for the Permittee to prevent illicit discharges or improper disposal. As these are existing requirements, the Department expects the Permittee to already be enforcing an ordinance or regulatory mechanism.

Unlike traditional MS4 permittees, WSFP does not have its own municipal ordinance prohibiting non-storm water discharges. Rather, WSFP's legal authority is established through signed Vendor and Exhibitor agreements which prohibit illicit discharges⁵ and identify non-storm water discharges. The WSFP must continue to enforce signed agreements with existing Vendors and Exhibitors and initiate new agreements with new Vendors and Exhibitors.

Note: The term 'Vendor' describes those who sell food, items, and/or beverages throughout the entirety of the Wisconsin State Fair. Whereas the term 'Exhibitor' describes those who bring livestock to the Agricultural Village and are not present for the full duration of the Wisconsin State Fair (please see the Pollution Prevention Program section for more information on Exhibitors).

Lastly, WSFP may utilize local law enforcement and/or department law enforcement to assist in enforcement activities, when necessary. For example, if a Fair attendee is responsible for an illicit discharge, and therefore a Vendor or Exhibitor agreement is not in place, WSFP should work with local law enforcement to take appropriate action.

- **Major Outfall Screening Requirements (Permit Condition II.C.2.b)**

Like the WSFP's previous permit, dry-weather and wet-weather outfall screening consists of visual observation, field analysis, and potentially lab analysis. The Permittee should have an inspection form or similar document to record the results of all screening activities. Documentation must be kept for at least 5 years and a summary of the results should be submitted with the annual report.

As with the previous permit, this permit requires the Permittee to screen MS4 outfalls. In addition to the typical screening requirements, the Permittee is also required to conduct specific actions pertaining to fecal bacteria. Fecal bacteria actions and outfall screening requirements will be discussed in more detail however, the following section provides an overview of the "typical" screening requirement expectations. If the Permittee has questions or requires additional information, it should contact its local storm water specialist.

For any outfall screened, the permit requires visual observations and field sampling for certain IDDE parameters, when flow is present. Consistent with the previous permit, the Permittee must identify pollutant parameter action levels that when exceeded, requires additional action. Though the Permittee has the flexibility to determine its action levels, the Department's IDDE guidance document⁶ provides recommended action levels based on available science and data. However, the Permittee is encouraged to adapt its IDDE programs based upon the results of screening and characteristics of the sewer sheds.

⁵ Although the Vendor and Exhibitor agreements language varies, both provide language that states dumping into the storm sewer is prohibited and can result in a fine by the Wisconsin Department of Natural Resources (DNR), WSFP and/or City of Milwaukee Plumbing inspectors who perform inspections during the WSFP to ensure compliance.

⁶ [Storm water publications/guidance || Wisconsin DNR](#) – Title "MS4 Illicit Discharge Detection and Elimination" PDF.

If visual observations and/or field sampling results indicate the presence of an illicit discharge, the Permittee must begin its investigation and elimination procedure (see Investigation and Elimination Procedures for more information). If 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.

- **Dry-Weather and Wet-Weather Major Outfall Screenings (Permit Condition II.C.2.a)**

MS4 outfall screening requirements are similar to the previous permit. However, based on previous outfall screening results, screening requirements have slightly changed. While the sections below describe these changes and provides information, such as outfall screening location and drainage area, the following table provides a summary of the screening requirements:

Table 1. Dry-weather and wet-weather screening requirements summary.

Major Outfall Name; Manhole Screening Location	Dry-weather Screening Frequency	Wet-Weather Screening Frequency	Fecal Bacteria Screening Requirements
HO-B1; manhole upstream of this outfall	Annually, at least once during operational hours and at least once during non-operational hours.	n/a	n/a
HO-03; manholes SCH05A and SCH05B	Annually, at least once during operational hours and at least once during non-operational hours.	Annually, at least once during operational hours and at least once during non-operational hours	During dry and wet weather screenings, sample for E. coli. Regardless of field observations, if flow is observed during dry- weather screenings at SCH05A ⁷ , the source of the flow shall be immediately investigated.
HO-17; manhole upstream of this outfall	Annually, at least once during operational hours and at least once during non-operational hours.	n/a	n/a

⁷ See page 16 within Permit Fact Sheet for more information at this manhole location.

Major Outfall Screening Locations:

WSFP has three major outfalls within its permitted area. However, because all these outfalls are located underground, beneath the Milwaukee Mile Racetrack, the outfalls are inaccessible. Therefore, the Permittee must conduct its outfall screening requirements at “upstream manholes”. Though these screening locations are the same as the previous permit, additional information about each outfall’s location and historical characteristics is provided for clarity.

- **Major Outfall HO-B1** is located near 82nd Street and Greenfield Avenue, West Allis, WI. This outfall receives flow from the City of West Allis and has historically not been active (i.e., no observed flow) during dry weather sampling according to past inspection report documentation. WSFP’s drainage area to this outfall is primarily consists of the southwest corner of the Milwaukee Mile Racetrack and portions of the Wisconsin Exposition Center Building area. This outfall discharges to Honey Creek but, is located underground the Milwaukee Mile Racetrack. Therefore, screening requirements shall occur at the upstream manhole at the point where the City of West Allis’ storm water enters the WSFP’s storm sewer.
- **Major Outfall HO-03** is located near 84th Street, West Allis, WI. This outfall receives flow from the City of West Allis. WSFP’s drainage area to this outfall is primarily consists of the Agricultural Village (i.e., livestock barns) and is the only outfall which receives runoff from the Agricultural Village area. Referred to as the 84-inch diameter outfall in the WSFP’s previous permit, this outfall also discharges to Honey Creek underground the Milwaukee Mile Racetrack.
 - o This outfall has historically been known for high fecal bacteria concentrations (see fecal bacteria testing requirements and the Milwaukee River Basin TMDL sections within this fact sheet for more information). Dry and wet weather screening requirements must occur at two upstream manhole locations: SHC05A and SHC05B. SHC05A is located closest to the underground outfall whereas SHC05B is upstream located behind the Swine Barn western perimeter where City of West Allis’s storm water also enters the WSFP’s storm sewer. Both SHC05A and SHC05B are the same screening locations required by the previous permit.
- **Major Outfall HO-17** is located near 77th Street and Walker Avenue, West Allis, WI. This outfall receives flow from the City of West Allis and runoff from the northeast corner of the Milwaukee Mile Racetrack of WSFP. This major outfall has historically not been active (i.e., flow) during dry weather sampling according to past inspection report documentation. This outfall discharges to Honey Creek underground the Milwaukee Mile Racetrack. Therefore, dry weather field screening for this major outfall occurs at an upstream manhole at the point where the City of West Allis’ storm water enters the WSFP’s storm sewer.

Defining Dry-Weather Field Screenings:

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.

Defining Wet-Weather Field Screenings:

Wet-weather screening helps better understand build-up, wash-off cycles of pollutants in storm water runoff such as fecal bacteria concentrations at the WSFP. Wet weather sampling should be conducted within the first 30 minutes or as soon thereafter as practical, but not to exceed 60 minutes, after runoff begins discharging at the outfall⁸.

As stated in the new permit, if the Permittee is unable to take a sample due to insufficient rain or staff limitations during non-operational hours of the WSFP, and explanation describing why wet weather field screening did not occur shall be provided and submitted with that years' Annual Report.

If the Permittee is unable to sample within 60 minutes of the wet weather event, a sample should still be taken. However, this discrepancy should be noted on the inspection report.

Additionally, if no rain occurs at all during the duration of the Wisconsin State Fair (operational and non-operational hours), the inspection report used to document wet-weather field screenings should indicate this. For example, a check box could be included on the inspection reports stating, "no rain", or something similar for documentation purposes.

- **Dry-Weather Field Screening at Major Outfalls HO-B1 and HO-17 (Permit Condition II.C.2.a (i))**

The WSFP's previous permit required WSFP to conduct annual dry-weather field screenings at both HO-B1 and HO-17 at least once during operating hours of the annual Wisconsin State Fair, and again during non-operating hours of the Wisconsin State Fair – with both screening events to occur during dry weather. However, the previous permit also stated: "[All] Outfalls will be evaluated at the commencement of each permit cycle, but those outfalls exhibiting dry conditions or parameters continuously within the expected ranges will have consideration for discontinuing of testing during subsequent years of the same permit cycle, after discussion and coordination with the Department." According to past IDDE inspection reports, HO-B1 and HO-17 have been historically dry. Therefore, WSFP has not conducted dry-weather outfall screenings at these outfalls since 2017.

Consistent with the previous permit, WSFP is required to conduct dry-weather field screening at HO-B1 and HO-17 at the same frequency (i.e., annually, at least once during operating hours of the Wisconsin State Fair, and once during non-operating hours of the Wisconsin State Fair; see **Section VI** in the permit for definitions). However, unlike the previous permit, the WSFP must conduct dry-weather field screening regardless of previous years' results. This is to ensure potential illicit discharges are detected and if so, can be addressed.

⁸ Consistent with s. NR 216.28, Wis. Adm. Code.

- **Dry-Weather and Wet-Weather Field Screening at Major Outfall HO-03 (Permit Condition II.C.2.a (ii))**

Like major outfalls HO-B1 and HO-17, dry-weather field screening shall occur at the upstream manhole locations. On an annual basis, both locations shall be screened at least once during operating hours of the Wisconsin State Fair, and once during non-operating hours of the Wisconsin State Fair. This dry-weather field screening frequency and locations does not differ from the WSFP's previous permit.

Unlike major outfalls HO-B1 and HO-17, wet-weather field screening for major outfall HO-03 is required at the two upstream manhole locations (SHC05A and SHC05B). As with dry-weather field screening, wet-weather field screenings shall occur at SHC05A and SHC05B annually – at least once during operating hours of the Wisconsin State Fair and once during non-operating hours of the Wisconsin State Fair. This wet-weather field screening frequency and locations does not differ from the WSFP's previous permit.

Lastly, due to Honey Creek's impairment for fecal bacteria and historical high concentrations of fecal bacteria at major outfall HO-03, the previous WSFP permit required the Permittee to test for *E. coli* and *Enterococci* during dry and wet-weather field screenings when flow was observed at major outfall HO-03 upstream manhole locations SHC05A and SHC05B. The WSFP's new permit continues to have the Permittee test for *E. coli* during dry and wet-weather field screenings at manhole locations SHC05A and SHC05B if flow is observed to continue to monitor and reduce fecal bacteria loading in the WSFP's storm water discharge.

However, one difference is the new permit will not require the testing of *Enterococci* and only will require the testing of *E. coli*. Scientific literature has shown *E. coli* to be a reliable and a useful indicator in freshwater systems as this type of bacteria is specific to warm-blooded animals (including humans) and do not naturally exist in the environment. Whereas scientific research has shown *Enterococci* may naturally exist in certain environments and could be useful fecal indicators for marine coastal environments instead.⁹

- **Investigation and Elimination Procedures (Permit Condition II.C.2.c)**

Where enforcement response procedures outline how the ordinance is enforced once an illicit contributor is identified, the investigation and elimination written procedure should outline actions the Permittee will take 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. For public

⁹ Derk Rothenheber & Stephen Jones, Enterococcal Concentrations in a Coastal Ecosystem are a Function of Fecal Source Input, Environmental Conditions, and Environmental Sources, ASM Journal, Applied and Environmental Microbiology, vol. 84 No. 17 (August 17, 2018), available at [10.1128/AEM.01038-18](https://doi.org/10.1128/AEM.01038-18).

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.).

As with the previous permit, this permit also requires the Permittee to eliminate identified illicit discharges or connections as soon as possible. However, where the previous permit required the Permittee to eliminate identified illicit discharges or connections within three working days to the MEP, this permit requires eliminating the identified illicit discharge or connection within 30 days. If the Permittee determines it will take longer than 30 days to eliminate the illicit discharge or connection due to technical, logistical or other reasonable issues, the Permittee shall notify the Department within 45 days of discovery. The notification shall include the Permittee's plan to eliminate the illicit discharge in an expeditious manner. This condition has been added because the Department understands there may be situations where eliminating the illicit discharge or connection will take time. For example, if a broken sanitary sewer line from a neighboring municipality has impacted the WSFP's storm sewer system, significant resources and time may be needed to plan and complete the repair.

The investigation and elimination written procedure should also include specific notification procedures. Though these notification procedures are not new to the permit, the requirement to describe how the Permittee implements its notification procedures within the written program is new. The Permittee shall include in its written program procedure to 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 with illicit dumping. Finally, the Permittee should contact an adjacent MS4 if it identifies an illicit discharge which flows into an adjacent MS4 or, identifies an illicit discharge originating from an adjacent MS4.

Consistent with the WSFP's 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 investigation upstream 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.

Lastly, also described on page 10 of the Fact Sheet, if flow is observed during dry or wet weather screening and illicit visual indicators are noted (e.g., such as 'floatables', discoloration, etc.), the Permittee should initiate upstream investigations immediately to find the source.¹⁰ Additionally, the Permittee should still collect a sample upon noting these observations to measure the necessary pollutant parameters for IDDE reporting.

¹⁰ See permit condition II.C.2.c.i (1) for specific IDDE investigation procedures for manhole SCH05A.

Manhole SHC05A (Permit Condition II.C.2.i (1))

As stated previously, the Permittee must test for *E. coli* at major outfall HO-03 manholes SHC05A and SHC05B when flow is observed. However, noncompliance issues had been repeatedly found at manhole SHC05A from annual WSFP storm water inspections conducted by the Department in 2022 and 2023.

The WSFP has historically had high levels of *E. coli* at manhole SHC05A, as well as visual observations such as ‘floatables’ which had been noted on inspection reports (see **Table 2** below). However, the WSFP did not conduct follow-up investigation upstream for 2022 and 2023 to eliminate the source(s).

Table 2. Outfall SHC05A – *E. coli* results from 2022-2024. Results in MPN/100mL.

Event	2022	2023	2024
Before the Wisconsin State Fair (wet)	>2,419.2	23,000	1400
Before the Wisconsin State Fair (dry)	980	100	160
During the Wisconsin State Fair (wet)	>2,219.2	>240,000	60000
During the Wisconsin State Fair (dry)	43,520	Two dry weather sampling events: 8/7/23: 69,000* 8/11/23: 13,000*	56,000 – Investigation upstream did occur this year by WSFP because of the Notice of Noncompliance issued from the 2023 Inspection report. WSFP was able to trace upstream to find a barn cleanup effort where loose hay and fecal bacteria were observed. As a result, WSFP street swept the area.

*means ‘floatables’ were noted as a visual observation on the inspection report.

Department staff explained visual observations such as ‘floatables’ (indicative of non-storm water discharges) should be investigated immediately upstream to find the source. Therefore, the WSFP’s new permit requires immediate investigation **regardless** of visual and sensory observations or action level exceedances if flow is present during dry-weather field screenings. Samples should still be taken and analyzed for the required pollutants (which includes *E. coli*).

- **Enforcement Response (Permit Condition II.C.2.d)**

The new permit requires development of an enforcement response plan that documents how the Permittee will enforce its Vendor and Exhibitor agreements when an illicit discharge investigation identifies a responsible party. The enforcement response plan is intended to provide clarity and consistency in enforcement actions the Permittee 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 from a vendor versus a Fair attendee¹¹), 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.

- **Measurable Goal (Permit Condition II.C.3)**

Though not a new requirement as previously described, the reissued permit requires the Permittee to develop and submit a document identifying its measurable goal for their IDDE Program and describing how the goal was identified, anticipated action the Permittee will take to work towards its goal, and metrics that will be used to evaluate the success of its actions taken to work towards its goal. Though establishing measurable goals is not a new condition, the requirement to provide the measurable goal information is new.

- **Permit Reapplication (Permit Condition II.C.4)**

Lastly, the permit requires the Permittee to submit a summary of the actions taken to achieve its IDDE Program measurable goal, evaluation results, and propose measurable goals for the next permit term. The Department will consider the proposed measurable goals and other information submitted with the reapplication package to develop the next permit.

Section II.D Construction Site Pollutant Control Program

This permit continues the requirement to implement a construction site pollutant control program to reduce the discharge of sediment from construction sites. The requirements have similar intent to the last permit; however, the changes are intended to add clarity to the permit.

- **Legal Authority (Permit Condition II.D.1):**

Pursuant to s. NR 216.07(4)(a), Wis. Adm. Code, MS4 permits must require implementation and enforcement of a legal authority to comply with construction site state performance standards, as well as sanctions to ensure compliance, to the extent authorized by law. In other words, MS4 permits must require

¹¹ See page 9 in the Fact Sheet for example. While the WSFP may have its own enforcement mechanism for vendors (i.e. contracts), the WSFP may utilize local law enforcement where contracts do not exist.

permittees to have, and enforce, its own legal authority to ensure construction sites¹² are complying with state performance standards.

Unlike traditional MS4 permittees with their own municipal ordinances, WSFP must defer to the Department of Administration (DOA). WSFP relies upon the Department of Administration – Division of State Facilities’ master specifications and design guidelines for all construction and remodeling projects undertaken by WSFP, particularly Section 31 10 00 Site Clearing; Section 3120 00 Earthmoving; Section 31 23.16.13 Trenching; Section 31 23 19 Dewatering; and Section 31 25 00 Erosion Control” and to “manage erosion and sediment from construction site activities through implementation and maintenance of source area controls and structural best management practices.”

However, because the previous permit contained caveat language such as “may”, implementation of the permit conditions was unclear. For example, because the previous permit stated erosion and sediment from construction sites *may* be addressed by “inspections and enforcement to follow Wisconsin Construction Site Technical Standards ...” it was unclear if WSFP, as the Permittee, was required to conduct inspections and take enforcement action. To clarify expectations, Department staff needed additional information on WSFP’s ability to “manage erosion and sediment from construction site activities”.

In summary, it is the Department’s understanding that WSFP operates and maintains State of Wisconsin facilities making them eligible for DOA funding support and oversight¹³. As these projects are typically required to comply with construction site state performance standards, many construction projects occurring at WSFP are directly managed and regulated by the DOA, not by WSFP.¹⁴ Therefore, DOA is responsible for ensuring¹⁵ designs meet local and state requirements, applying and obtaining all applicable permits, and ensuring the site complies with all regulations (i.e., responsible for inspections and compelling compliance, when needed).

Through additional permit drafting meetings with WSFP, clarity on who the Department NOI permit holder was discussed. Since DOA is the entity managing construction projects with disturbance of an acre or more (i.e., requiring the need for a Department NOI), the DOA *should* be the construction storm water permit holder (more information provided on page 19 on DOA/DFD-led projects). However, WSFP staff have been listed as the permit holder for the last six years when an NOI was issued for a construction project at WSFP. Therefore, moving forward, if the DOA requests WSFP staff continue to be the permit holder, the WSFP should contact the Department so next steps can be determined.

¹² Construction sites with one acre or more of land disturbance, and sites of less than one acre if they are part of a larger common plan of development or sale, are those requiring this regulatory authority. These sites require a Department Notice of Intent.

¹³ As described within the [Introduction to the State of Wisconsin Building Commission \(last updated in December 2010\)](#) and the [Division of Facilities Development Policy and Procedure Manual \(updated April 2024\)](#), the Wisconsin State Building Commission was created to ensure state buildings and infrastructure, such as those within WSFP, are developed and maintained efficiently, economically, and in compliance with state regulations.

¹⁴ In the event WSFP is the permit holder for a Department NOI construction site, WSFP must complete and document erosion control inspections as required by the Department’s storm water construction permit.

¹⁵ DOA should ensure site compliance by following its Division of State Facilities’ Development (DFD) master specifications and design guidelines. These master specification and design guidelines can be found here: https://doa.wi.gov/Pages/DoingBusiness/MasterSpec_Div31.aspx

Though DOA, as the permittee for certain construction sites within the WSFP, is responsible for ensuring compliance with the terms of the permit and reducing “pollutants in storm water runoff from construction sites... whose runoff will connect to the MS4,”¹⁶ the Department expects WSFP to **assess** these active construction sites once every 45 days. Unlike traditional MS4 Permittees’ erosion control inspection requirements, this assessment is intended to determine if sediment, or other pollutants, are discharging off-site in violation of the construction site permit and impacting the WSFP’s storm sewer system. To demonstrate compliance with this condition, the WSFP shall document its assessments and maintain documentation for at least 5 years. WSFP is not required to use a specific form to document its assessments. As such, the Permittee should determine how it will document its assessments.

If WSFP observes off-site sediment discharges from a construction site managed by DOA or has reason to believe a construction site is in noncompliance with the conditions of the permit, WSFP shall communicate known or potential noncompliance issues to DOA/DFD. As DOA/DFD is the regulating entity, the expectation is DOA/DFD will take action to resolve any noncompliance issues. The Permit requires WSFP develop a response procedure describing how WSFP will notify DOA/DFD and how WSFP will ensure known/potential noncompliance issues have been addressed on the construction site.

WSFP may contact its local Department storm water specialist for assistance. However, the Department expects WSFP to notify DOA/DFD first and work through any known or potential noncompliance issues.

- **DOA/DFD-led projects/Projects requiring a Department NOI**

Any construction project at the WSFP exceeding a certain cost threshold (i.e., over \$100,000) becomes a DOA-led construction project. In other words, the DOA is the permit holder and is responsible for the implementation of those projects (e.g., construction manager and coordinator, architect, erosion control and/or storm water management plan review and permitting, ensuring it meets state guidelines and WDNR Technical Standards, etc.).

During the permit reissuance process, the WSFP explained they submit project requests to the DOA first. Once projects are selected and approved, the DOA begins the plan review and permitting process and submits a Department Notice of Intent (NOI) to obtain a DNR Storm Water Construction Permit, if applicable.

- **Small construction projects managed by WSFP**

For construction projects that do not exceed a certain cost threshold (i.e., \$100,000), the WSFP manages these smaller projects and utilizes the DOA/DFD master specification and design guidelines. Typical construction projects include electronic or camera upgrades, water main/utility repairs, or renovations of small office spaces. Additionally, WSFP is responsible for coordinating any vendor project that may be needed. The vendor is responsible for submitting construction plans to WSFP for review and approval. Typical vendor projects include expansion of the existing vendor structure, addition of a roof structure, or footings for posts.

¹⁶ As required by s. NR 216.07(4) Wis. Adm. Code.

This permit requires that for construction sites which do not require a Department NOI, the WSFP's written program procedure must still describe how the Permittee manages erosion control and sediment from these sites. For example, description of types of erosion control BMPs implemented for the different types of projects (e.g., vendor projects, utility, etc.) as described above.

- In the event a construction project managed by WSFP reached over an acre or more of land disturbance requiring a Department NOI, WSFP would ask the DOA/DFD to lead and manage the project.

- **Measurable Goal (Permit Condition II.D.3)**

Though not a new requirement as previously described, the reissued permit requires the Permittee to develop and submit a document identifying its measurable goal for their Construction Site Pollutant Control Program and describing how the goal was identified, anticipated action the Permittee will take to work towards its goal, and metrics that will be used to evaluate the success of its actions taken to work towards its goal. Though establishing measurable goals is not a new condition, the requirement to provide the measurable goal information is new.

- **Permit Reapplication (Permit Condition II.D.4)**

Lastly, the permit requires the Permittee to submit a summary of the actions taken to achieve its Construction Site Pollutant Control Program measurable goal, evaluation results, and propose measurable goals for the next permit term. The Department will consider the proposed measurable goals and other information submitted with the reapplication package to develop the next permit.

Section II.E Post-Construction Storm Water Management Program

As with the Construction Site Pollutant Control program, MS4 permits must require implementation and enforcement of a legal authority to comply with [post-construction state performance standards], as well as sanctions to ensure compliance, to the extent authorized by law. In other words, MS4 permits must require permittees to have, and enforce, its own legal authority to ensure all permanent, post-construction storm water management best management practices (BMPs) built within its municipality are complying with state performance standards.

Unlike traditional MS4 permittees, WSFP does not have private properties where post-construction BMPs would be required. However, WSFP must ensure all of its municipally owned or municipally operated post-construction BMPs continue to comply with state requirements.

Municipally owned BMPs are post-construction BMPs owned and operated by the Permittee (WSFP). Though DOA/DFD is responsible for ensuring the BMP was designed and constructed according to state requirements, once the BMP is constructed, WSFP assumes ownership and is responsible for all inspection and maintenance requirements. For example, WSFP must inspect its own BMPs to determine if maintenance is needed. While

WSFP may conduct routine maintenance, if state funds are needed to conduct maintenance, WSFP must work with DOA.

At the time of permit reissuance, all post-construction BMPs are municipally owned (i.e., WSFP owned).

- **BMP Inventory (Permit Condition II.E.2.a) and Post-Construction BMP Inspection and Maintenance Procedures (Permit Condition II.E.2.a.(ii))**

New to this permit is the requirement for the Permittee to develop a BMP Inventory. An inventory of structural post-construction storm water management BMPs is critical for documenting future Total Maximum Daily Load (TMDL) requirements and can be used to help track required BMP inspections, maintenance needs, completed maintenance, or other documentation notes.

For each BMP inventoried, the following information must be provided:

1. BMP name, type, location, and year constructed.
2. Confirmation of whether each of the following exists:
 - a. Record drawing.
 - b. Storm water management plan, operation and maintenance plan, or similar document which describes inspection and maintenance procedures.
3. The name or title and contact information of the individual(s) responsible for inspecting and pursuing maintenance for WSFP owned BMPs.
4. Inspection frequency. At minimum, each BMP shall be inspected at least once every 5 years.
5. Location of inspection and maintenance record documentation.

Also new to this permit is the requirement for the Permittee to develop written program documents describing its municipally owned (i.e., WSFP owned) BMP inspection and maintenance procedures. The written procedure should include information such as inspection frequencies and who is responsible for conducting inspections and pursuing maintenance.

Lastly, while BMPs should be inspected per its storm water management plan¹⁷, the permit sets a minimum expectation that each BMP be inspected at least once every 5 years.

- **Measurable Goal (Permit Condition II.E.3)**

Though not a new requirement as previously described, the reissued permit requires the Permittee to develop and submit a document identifying its measurable goal for their Post-Construction Storm Water Management Program and describing how the goal was identified, anticipated action the Permittee will take to work towards its goal, and metrics that will be used to evaluate the success of its actions taken to work towards its goal. Though establishing measurable goals is not a new condition, the requirement to provide the measurable goal information is new.

¹⁷ As required by s. NR 216.47 Wis. Adm. Code.

- **Permit Reapplication (Permit Condition II.E.4)**

Lastly, the permit requires the Permittee to submit a summary of the actions taken to achieve its Post-Construction Storm Water Management Program measurable goal, evaluation results, and propose measurable goals for the next permit term. The Department will consider the proposed measurable goals and other information submitted with the reapplication package to develop the next permit.

Section II.F Pollution Prevention Program

Pollution prevention activities are employed to reduce municipal sources of pollution. This section consists of multiple sub-programs and at least one measurable goal for the Permittee's pollution prevention program. The maintenance requirements for municipality owned (WSFP owned) BMPs has been moved to the Post-Construction section because this requirement fits within the BMP inspection and maintenance requirements.

Required by s. NR 216.07(6) Wis. Adm. Code, the Pollution Prevention Program consists of sub-programs (winter road management, nutrient management, street sweeping and catch basin cleaning, management of leaves and grass clippings, and Storm Water Pollution Prevention Plans (SWPPPs) for municipal properties) and a training component. However, given that WSFP provides staff training via its education requirements, the required pollution prevention training activities are found within the Public Education and Outreach program (see permit condition II.A.1.b.ii).

For the required sub-programs, the Pollution Prevention Program builds upon these sub-programs to incorporate WSFP's current pollution prevention activities and conditions to improve or expand upon them to reduce and/or eliminate storm water pollution sources.

If a sub-program is not being implemented to any extent within the WSFP, and is therefore not applicable, a written program describing implementation is not required. However, it is recommended the Permittee submit documentation confirming the sub-program is not being implemented. For example, if a Permittee does not have any applicable properties requiring a nutrient management plan, it is recommended the Permittee provide a statement confirming this.

If a sub-program is being implemented by an entity which is not the Permittee, the Permittee is required to submit a written program describing how its sub-program is being implemented and how the Permittee is ensuring implementation is consistent with permit requirements. For example, if the WSFP utilizes a private contractor for landscaping and collection of yard waste/leaves on behalf of a Permittee, the Permittee must submit a written program procedure describing how the sub-program activities are being implemented and describe how the Permittee is ensuring permit conditions are met.

If a sub-program is being implemented to any extent, the Permittee is required to submit a written program describing how activities of the sub-program are being implemented.

- **Source Area Best Management Practices (Permit Condition II.F.1.a)**

As stated above, the WSFP's new permit provides specific source areas which have the potential to generate storm water pollution. Therefore, the new permit clearly describes the area and the types of pollution prevention BMPs the WSFP continues to implement. BMP effectiveness has been determined through annual WSFP storm water inspections and several conversations during the permit reissuance process.

Consistent from the WSFP's previous permit, the Permittee must continue to implement BMPs for trash and recycling receptacles, trash compactors and grease storage containers, and restrooms and portable restrooms as described in the new permit.

Additionally, the Ag Village area consists of Livestock Barns, Cattle Barn, Poultry and Rabbit Building, Goat and Sheep Barn, and Double Deck Barns for horses. The Ag Village is the primary source contributing to the fecal bacteria levels in storm water runoff at the WSFP. Therefore, the WSFP's new permit clearly describes the types of BMPs implemented to reduce and/or eliminate fecal bacteria pollution and must be described within the WSFP's written program procedure:

Restrooms and Portable Restrooms

As with the previous permit, the Permittee shall continue to review the number of restrooms available for adequacy on an annual basis for the Wisconsin State Fair and other events held within the WSFP. While the Permittee is not required to adhere to a specific restroom requirement, existing resources, such as the following, may be beneficial to consider:

The Portable Sanitation Association International. This association developed a chart of recommended number of restrooms based upon event attendance and duration. However, also provides additional guidance considering factors such as temperature, alcohol consumption, and flux of use. More information can be found here: [Special-Event-Chart.pdf](#)

Ag Village - Storm Water inlet protection

In the WSFP's 2018 Storm Water Management Bacteria Reduction Plan, it identified WSFP installing storm water inlet protections throughout the Ag Village to prevent debris/solids from entering the storm sewer system. Since then, the WSFP has implemented this BMP. The WSFP's new permit requires to continue this implementation during any event where livestock is present at the WSFP and have the inlet protections inspected daily, so they are maintained if full. Additionally, the new permit requires this BMP be described in the WSFP's written program procedure.

Ag Village - Scooper Trooper Program

This BMP was also identified in the WSFP's 2018 Storm Water Management Bacteria Reduction Plan. The WSFP has continued to implement their Scooper Trooper program where staff are assigned locations within the Ag Village to sweep fecal matter, hay, debris, garbage, etc. throughout the area. This BMP has been added as a clear pollution prevention activity permit condition and must be described in the WSFP's written program procedure.

Ag Village - Monitoring existing storm water inlet passive education intended to discourage illicit dumping

Installing and maintaining storm drain stencils (e.g., “Dump no waste, drains to river”) was also identified in the WSFP’s 2018 Storm Water Management Bacteria Reduction Plan. While WSFP has continued to implement/maintain these storm-drain stencils (passive education), WSFP piloted a new passive education activity – a color-coded ID system for grated inlets. First implemented during the 2024 Wisconsin State Fair, grated inlets were painted either red or green. Grated inlets which discharge to storm sewer are colored red – providing a visual indication to stop (i.e., do not dump or wash animals near these drains). Whereas grated inlets which discharge to sanitary sewer are colored green – providing a visual indication to go (i.e., acceptable to wash animals near these drains). Vendors and Exhibitors are provided training on the color-coding system before the start of the Wisconsin State Fair.

While this color-coding system seems promising, success is uncertain given the limited time of implementation. As such, this permit requires the Permittee to monitor these passive education efforts (i.e., storm water inlet stencils and the color-coding system) rather than requiring implementation. To provide flexibility, the permit does not dictate how the Permittee should monitor these passive efforts. However, the Permittee should describe how it intends to monitor the success of these passive education activities within its written program. For example, during the Fair, WSFP staff may conduct daily visual inspection to determine if there are visual signs of illicit dumping. Another example could be asking Vendors and Exhibitors to take a post-Fair survey to determine if the color-coding system was clearly understood and/or changed behavior.

Ag Village - Swine Barn Washing Area BMPs

During the 2023 annual WSFP storm water inspection, Department staff observed liquid and solid debris, such as animal fecal matter and animal bedding, on the western perimeter outside of the swine barn. Through inspection, it was determined the liquid and solid debris originated from the swine barn washing area. Though this wash area is within the swine barn, wash water and other debris had made its way over the curbed edge of the swine barn where it was observed discharging to the concrete drainage swale which lines the western perimeter of the barn. This concrete swale then discharges to a storm water inlet (i.e., manhole SHC05B). At the time of the 2023 inspection, there was no storm water inlet protection installed.

For the 2024 Wisconsin State Fair, the WSFP staff installed filter socks and fence scrim along the western perimeter to prevent wash water and other debris discharging to the concrete swale. However, observations made during the 2024 WSFP storm water inspection were similar from the previous year demonstrating the BMPs installed were inadequate at preventing the discharge of wash water and debris – however, inlet protection was installed at that time.

As this area is a clear source of storm water contamination, the WSFP’s new permit includes permit conditions specific to the swine barn washing area. To eliminate this source of storm water contamination, the Permittee must continue to monitor the area throughout the Fair’s operation. This monitoring frequency should be described in the WSFP’s written program

procedure. If the Permittee determines the existing BMPs are not effective at preventing wash water and other debris from discharging outside of the swine barn, it must identify alternative BMPs to implement. For example, if WSFP finds the filter socks and fence scrim are not preventing wash water and other debris from discharging to the concrete swale, even with additional maintenance, it should identify alternative BMP(s) to implement. Additionally, the permit also includes a requirement that the concrete drainage swale shall be swept on a need be basis for when fecal matter and debris are observed. The Permittee must describe these BMPs within their written program procedure (e.g., how often is the swine barn washing area monitored, etc.).

Ag Village - Sheep and Goat Barn BMPs

During the 2023 annual WSFP storm water inspection Department staff observed two storm water inlets adjacent to the sheep and goat barn washing area that were also cause for concern. Though both inlets contained inlet protection (filter baskets), the inlets were full of debris (such as animal bedding) and wash water. Additionally, Department and WSFP staff witnessed an Exhibitor intending to dump a bucket of unknown liquid into one of the storm water inlets. However, WSFP staff prevented the illicit dumping.

Though WSFP provides storm water education to all exhibitors, to prevent storm water contamination (including illicit dumping) WSFP decided to install solid manhole covers over both storm water inlets for the 2024 Wisconsin State Fair. During the 2024 WSFP storm water inspection, the solid manhole covers were observed to be an adequate BMP. Therefore, WSFP's new permit requires WSFP to continuously monitor this area for continued effectiveness. This monitoring frequency should be described in the WSFP's written program procedure

Note: The Department recognizes that flooding could occur. Therefore, the WSFP should continue to monitor the area to determine if the solid manhole covers need to be removed, when needed.

As with the swine barn washing area, if the Permittee determines the existing BMPs are not effective at preventing wash water and other debris from discharging to these storm water inlets, it must identify alternative BMPs to implement.

Manure Management

During the annual WSFP storm water inspection in 2022, WSFP staff explained there has been tracking issues out of the main manure pit located within the Ag Village. The WSFP explained this tracking of manure happens when the material is loaded onto the truck and hauled off-site for final disposal. Manure pits are typically emptied out during major change overs of the barns in the Ag Village (e.g., animal changes, clean outs, etc.).

At the time, the WSFP had been continuously street sweeping this area to keep up with tracking. However, since the material was also impacting a storm water inlet located at the top of the entry to the pit, for the 2024 Wisconsin State Fair, WSFP staff installed a solid manhole cover on the storm water inlet too.

Therefore, the WSFP's new permit includes a clear permit condition to continue to implement proper collection, storage, and management of tracking. Additionally, the Permittee must describe their BMPs implemented at manure feedlots and storage facilities within their written program procedure.

- **Storm Water Pollution Prevention Activities (Permit Condition II.F.1.b)**

Although WSFP's previous permit required storm water pollution prevention planning for State Fair Park garages, storage areas and other sources of storm water pollution, it was unclear that Storm Water Pollution Prevention Plans (SWPPPs) were required.

The WSFP's new permit makes this requirement clear. Any municipal garages, storage areas, or other related facilities (e.g., outdoor material storage) with the potential to generate storm water pollution is required to have storm water pollution prevention plans (SWPPP) for each site under the Permittee's control. The new permit clearly identifies SWPPP requirements (e.g., SWPPPs must contain a map identifying sources of pollution, flow path, etc.) and includes the inspection requirements for any properties which require a SWPPP. Quarterly visual inspections of the property and annual facility compliance inspections are required and must be documented. Any deficiencies found during the inspections should be corrected. Inspections are also necessary to determine the effectiveness of the SWPPP. For example, if multiple stains are observed during an inspection, this may indicate the SWPPP is ineffective at preventing spills. The Permittee may determine revisions to the spills training is needed, relocation or removal of the pollutant source is needed, and/or additional BMPs are needed. The SWPPP should be updated to reflect these revisions and submitted to the Department.

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, identification, and description of potential sources of pollution, drainage patterns and discharge locations, and all structural and non-structural BMPs, such as good housekeeping activities and training, which are utilized to reduce the runoff of pollutants from the site. SWPPPs shall be revised as needed to be consistent with current site conditions and activities. Updated SWPPPs should be submitted to the Department upon completion or with that reporting year's MS4 Annual Report.

The WSFP has two properties which require a SWPPP due to the potential to generate storm water pollution:

- **Primary Waste Yard** located NE of West Pierce Street and Grandstand Ave. This property contains several grease containers, roll-away dumpsters, storage of miscellaneous equipment, and the WSFP's main trash compactor.
- **Eastern Side Racetrack Property** located on the SE side of the racetrack. This property routinely stores gravel, sand, and other construction related material and is in close proximity to a storm water inlet.
 - o **Note:** During the winter season, road salt is stored in the Coliseum building (enclosed) within the WSFP. However, excess road salt leftover had been brought to the Eastern Side Racetrack Property until the following winter season. However, during an annual WSFP storm water inspection in 2024, Department staff noted several issues with the storage of this excess road salt (e.g., improper tarp, not properly contained or covered, etc.). As a result of the 2024 inspection, the WSFP will no longer store excess road salt at this

property. Any excess road salt leftover will be given to the City of West Allis (i.e., neighboring municipality).

- **Street Sweeping and Catch Basin Cleaning (Permit Condition II.F.1.c)**

The WSFP's new permit will continue to require daily street sweeping and as needed during operating hours of the Wisconsin State Fair and other events held within the WSFP throughout the year. Any modifications, adjustments, or enhancements to the Permittee's street sweeping program should be described within their written program procedure.

Additionally, the new permit will also require the Permittee to continue to implement its catch basin cleaning program frequency in areas of the WSFP that are actively utilized during operating hours of the Wisconsin State Fair and other events held within the WSFP throughout the year. Any modifications, adjustments, or enhancements to the Permittee's catch basin cleaning program should be described within their written program procedure.

As street sweeping and catch basin cleaning materials are considered solid waste, collected materials 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.

- **Winter Road Management (Permit Condition II.F.1.d)**

The WSFP conducts its own winter road management operations and maintenance. To reduce overapplication of salt and deicers, this permit continues the requirement for the Permittee to utilize road salt or other deicers in a manner so that no more shall be applied than necessary to maintain public safety. However, in the WSFP's new permit, it also requires the Permittee to develop and implement a written salt application or salt reduction strategy to minimize overapplication of deicers and to calibrate equipment annually. These revised and new conditions are consistent with other MS4 permit conditions throughout the state.

The Wisconsin Department of Transportation (WisDOT) Highway Maintenance Manual - Chapter 6¹⁸, contains guidelines on winter maintenance including application of road salt and other deicers. This, and additional

¹⁸ Wisconsin Department of Transportation (WisDOT) Highway maintenance manual -Chapter 6. <https://wisconsindot.gov/Pages/doing-business/local-gov/hwy-mnt/mntc-manual/chapter06.aspx> The WisDOT highway salt storage requirements are contained in ch. Trans 277, Wis. Adm. Code.

resources such as those provided by Wisconsin Salt Wise¹⁹ and Minnesota Pollution Control Agency²⁰, can be used to assist with evaluating and/or revising the Permittee's written salt application or salt reduction strategy.

- **Management of Leaves and Grass Clippings (Permit Condition II.F.1.e)**

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 written program that describes how the Permittee collects leaves and grass clippings at the WSFP, including pick-up methodology and equipment used, timing of associated street cleaning, standard operating procedures, and schedule and frequency. Additionally, the Permittee's written program must identify the location and associated BMPs utilized during material storage and final disposal.

- **Nutrient Management (Permit Condition II.F.1.f)**

Nutrient management plans are required for any municipally controlled property (e.g., parks, athletic fields, golf courses, lawns, etc.) in which fertilizers are applied to five acres or more of pervious area. Nutrient management plans must be based on soil samples for each individual property that is applicable. 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.

At the time of permit reissuance, WSFP did not have any properties which require nutrient management plans.

- **Measurable Goal (Permit Condition II.F.3)**

Though not a new requirement as previously described, the reissued permit requires the Permittee to develop and submit a document identifying its measurable goal for their Pollution Prevention Program and describing how the goal was identified, anticipated action the Permittee will take to work towards its goal, and metrics that will be used to evaluate the success of its actions taken to work towards its goal. Though establishing measurable goals is not a new condition, the requirement to provide the measurable goal information is new.

- **Permit Reapplication (Permit Condition II.E.4)**

Lastly, the permit requires the Permittee to submit a summary of the actions taken to achieve its Pollution Prevention Program measurable goal, evaluation results, and propose measurable goals for the next permit term. The Department will consider the proposed measurable goals and other information submitted with the reapplication package to develop the next permit.

¹⁹ Resources provided by Wisconsin Salt Wise can be found at: <https://www.wisaltwise.com/>

²⁰ Minnesota Pollution Control Agency's Smart Salting for Roads Manual can be found at: <https://www.pca.state.mn.us/sites/default/files/p-tr1-13.pdf>

Section II.G Storm Water Quality Management

The storm water quality management conditions are continued from the previous permit. 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.

Section 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 February 1, 2030).

For each of the six storm water programs²¹, the reapplication will require submission of the Permittee's measurable goals summary from the current permit term and proposed program modifications and measurable goals for the next permit term for each program. Additionally, the Permittee must submit TMDL pollutant load reduction benchmarks which also include an explanation on how the proposed actions and benchmarks reduce pollutants to the MEP and provide assurance the TMDL reduction goals will be achieved in the future. The Department will consider the reapplication package and any other relevant information to develop the next permit.

The reapplication information must be submitted to the Department's eReporting system. This electronic system, available at: <https://dnr.wi.gov/permits/water/> is the same internet-based system used to submit the MS4 Annual Reports. However, unlike the MS4 Annual Report, information required for the reapplication package will not be submitted on Department forms. Permittees shall provide the information in a written format of their choosing.

Section III. Total Maximum Daily Loads (TMDLs)

Conditions within this section apply to MS4 areas discharging to the Milwaukee River TMDL (MRB TMDL). These new conditions are required because additional BMPs and controls beyond those currently employed are needed to attain water quality standards.

To provide the Permittee the required time to develop plans for addressing its waste load allocations (WLA), this permit does not require the Permittee to demonstrate numeric progress on its WLAs during this permit term. However, because the MRB TMDL was approved in March 2018, the Department's goal is for the Permittee to implement actions during this permit term that accomplish an improvement in water quality and move the Permittee towards achieving future load reduction goals.

Each of the TMDL Section requirement is described below in more detail.

²¹ The six storm water programs are also referred to as minimum control measure (MCM): Permit conditions II.A, II.B., II.C., II.D., II.E., and II.F.

• TMDL Pollutant Load Reduction Evaluation for TSS and TP (Permit Condition III.A)

The first step in the TMDL planning process is identifying which MRB TMDL reaches, also referred to as reachsheds or sub-watersheds, the MS4 discharges to and the associated reduction goal. Section III.A.1 requires developing a map identifying the specific TMDL reach boundaries, structural BMPs and associated drainage areas, and excluded areas. Supplemental information, such as an explanation for any excluded areas and confirmation of maintenance agreement for private BMPs, must also be provided as required by Section III.A.2.

Once the individual TMDL reaches and drainage areas are identified, the Permittee is required to estimate the pollutant loading from each reachshed with and without controls. The difference between the “no controls load” and “with controls load” is the “existing load reduction”. The calculated existing load reductions can then be compared to each reach goal to determine how much additional control is needed for each reach. This information must be compiled in a Tabular Summary as required by Section III.A.3.

Lastly for each BMP, the Permittee needs to compile a tabular summary documenting the pollutant removal efficiency of the BMP and area treated. Any BMP without an operation and maintenance plan (e.g., inspection schedule) should not be included in the pollutant load reduction evaluation. Though the permit requires the identified information be included in a tabular format, the Permittee may choose how the tabular format is presented. However, to provide additional clarity, an example tabular format (**Table 3**) is provided below.

Most permittees in Wisconsin utilize WinSLAMM software to develop load reduction estimates, but permittees are not required to use this program. Permittees may use other computer programs or methods provided the evaluation methods are similar or equivalent and are approved for use 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 equivalent methodology to be easily updated based upon changes to the individual watershed. Rather than updating the whole model, 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.

As the Permittee chose to utilize WinSLAMM, permit conditions for the TMDL Pollutant Load Reduction Evaluation for TSS and TP require files that are specific to WinSLAMM for additional clarity. Modeling input and output summary files should be submitted in .txt format. Drainage system image should be submitted in .pdf format. If additional information is needed to determine compliance (i.e., WinSLAMM model files), this may be requested by the Department.

Table 3: TSS and TP Tabular Summary Example Format.

TMDL Reachshed	No Controls Load (weight, e.g., lbs)		With Controls Load (weight, e.g., lbs)		Existing Load Reduction (%)		Assigned TMDL WLA (%)		TMDL WLA % Reduction Remaining ¹	
	TSS	TP	TSS	TP	TSS	TP	TSS	TP	TSS	TP

Reached - 01					
Reached - 02					

¹ If existing load reduction is greater than assigned TMDL WLA, enter 0 for TMDL WLA % Reduction Remaining.

- **TSS and TP WLA Assessment (Permit Condition III.B)**

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 assessment to better plan for future projects such as future WLA Benchmarks (Section III.C). 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 assessment does not provide reasonable assurance WLA will be achieved by utilizing current practices, the Permittee should consider implementing alternatives strategies. Additional information on alternatives is described below.

The Permittee is highly encouraged to evaluate multiple alternatives and resources when completing the TSS and TP WLA Assessment. 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 Plan²². 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.

- **Establishment of WLA Benchmarks for TSS and TP (Permit Condition III.C)**

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 application 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

²² Milwaukee Metropolitan Sewerage District Regional Green Infrastructure Plan. June 2013. <https://www.mmsd.com/what-we-do/green-infrastructure/resources/regional-green-infrastructure-plan>

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.²³

- **Fecal Coliform Reduction Efforts (Permit Condition III.D)**

The third TMDL pollutant with WLAs from the Milwaukee River TMDL is fecal coliform, which is used as an indicator of enteric pathogens²⁴. While the TMDL allocations in the Milwaukee River Basin TMDL are expressed only in terms of fecal coliform, both fecal coliform and *E. coli* are used as indicators of enteric pathogens, and both have been listed as sources of recreational use impairments – which the TMDL was completed to address.

However, unlike the typical TMDL pollutants of concern (TSS and TP), fecal bacteria WLAs are based on a load reduction curve rather than a mass reduction. For MS4 permittees, this means fecal bacteria loading fluctuates in storm water runoff. For example, fecal bacteria loading may be higher during high-flow conditions. Additionally, because fecal bacteria loading can drastically change (e.g., illicit dumping, a sanitary sewer line may break at an unknown point of time), not only do MS4s need to implement a variety of BMPs to accommodate various flow conditions, MS4s must also continuously evaluate BMPs to implement.

Lastly, because fecal bacteria are a biological organism, MS4s cannot demonstrate progress using a model. Therefore, to demonstrate progress on fecal bacteria reductions, MS4 permittees must implement a variety of BMPs to reduce, with the goal of eliminating, fecal bacteria loading and routinely taking action to identify and eliminate known or potential fecal bacteria sources. For example, eliminating illicit connections; requiring, monitoring, and enforcing proper pet waste management and prohibiting the feeding of wildlife; and disconnecting impervious surface areas to mitigate fecal bacteria build-up and wash-off cycles.

Since the WSFP brings in thousands of people and houses several agricultural animals during the Wisconsin State Fair and other related events periodically throughout the year, BMPs are needed across the board in order to address fecal bacteria loading from WSFP. Therefore, the following fecal bacteria efforts are included in the new permit:

²³ 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.

²⁴ 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.

Dry Weather Screening Immediate Investigation at Manhole SHC05A (Permit Condition III.D.1)

During dry-weather screening, when flow is observed at this outfall, the Permittee must immediately investigate the source of flow, regardless of visual and sensory observations or field analysis results. In other words, even if there is no indication of an illicit discharge (no color, smell, exceeded IDDE parameter levels), the Permittee must immediately search for the source of flow. More explanation of this permit condition is provided on page 16 of the fact sheet, along with past high fecal bacteria results at manhole SHC05A in Table 2 on page 16.

Sampling Data Evaluation (Permit Condition III.D.2)

To better determine where additional fecal coliform bacteria efforts may be needed in the future, the Permittee is required to evaluate its *E. coli* sampling data. In summary, the intent of this requirement is to see if any conclusions can be made concerning fecal coliform bacteria loading sources. Therefore, the Permittee can focus its fecal coliform bacteria reduction and elimination efforts in drainage areas that have been problematic. The Department also envisions this evaluation will be used to help draft future MS4 permit requirements. For example, if a particular area in the Ag Village has been identified as continuous source of fecal bacteria, such as the Swine Barn, the Department can incorporate permit conditions to continue to reduce fecal bacteria loading in this area.

Fecal Bacteria Management Plan Tabular Summary (III.D.3)

In 2015, the WSFP developed a Fecal Bacteria Management Plan due to high fecal bacteria concentrations in its storm water runoff. This plan described activities, good housekeeping, and BMPs in place to reduce and/or eliminate fecal bacteria loading. In 2018, the Plan had been updated and adjusted as result of the Department's storm water inspection conducted that year.

Rather than requiring the Permittee update its 2018 Plan, the Department proposed the Permittee change its Plan from a text-heavy document to tabular format. This way, both the Permittee and Department staff can more clearly track existing source areas and associated BMP. Furthermore, the tabular format should allow both WSFP and the Department to more efficiently identify BMP effectiveness and where improvement could be made. An example tabular format, including recommendations to help better determine BMP effectiveness and/or improvements is provided below (**Table 4**).

Table 4. Example of tabular format for the WSFP's Fecal Bacteria Management Plan Tabular Summary. Examples are provided below on how the table could be filled out.

Fecal Bacteria Loading Category	Fecal Bacteria Loading Source Area	Existing BMP(s) applicable to source	How WSFP ensures BMP is accurately Implementation	Metrics used to Evaluate BMP Effectiveness	Potential BMP (new, revised) and (if applicable) anticipated implementation date

Animal Washing	Concrete swale outside of Swine barn washing station. Solid fecal matter and wash water containing fecal waste	Perimeter fence, storm water inlet basket, filter socks	Daily visual observations for fence and basket, basket cleaned out daily/when needed	<p>Visual observations <u>tiered approach</u>: Successful and No revisions necessary: No solid fecal waste and no liquid present.</p> <p>Successful but on watch: No solid fecal waste but liquid present (with minimal solids present – i.e., hay, small solids).</p> <p>Not successful and revisions needed: Solid waste and liquid observed.</p>	<p>Replace perimeter fence with solid barrier (i.e., concrete curb, liquid tight barrier)</p> <p>Anticipated implementation date: By 2027 Wisconsin State Fair.</p>
Animal Transfer	Within WSFP (i.e., between buildings)	Scooper Troopers sweep and dispose of visible waste during fair	Scooper Troopers sign log-in sheet. WSFP staff makes daily visual observations during fair, and reviews log-in sheets.	<p><u>Visual Observations</u>: Successful: Street sweeper staff (at end of day) says no visible fecal waste.</p> <p>Successful but watch: Street sweeper staff observed minor areas where fecal waste is present.</p> <p>Not Successful and Needs Revisions: Street sweeper staff note fecal waste is present in several places.</p> <p>Other: Scooper Trooper Input (e.g.,</p>	

				Is there a hot spot, do you feel understaffed or there is not enough work?)	
Manure Pits					
RVs					
Trash compactors					
Portable restrooms					
Other					

Section IV. Implementation Schedule

The implementation schedule for new and updated permit requirements which apply to the Permittee is listed in Table 1 of the proposed permit. Table 1 does not list all the requirements of the permit. As such, it is the Permittee's responsibility to ensure it is complying with all permit conditions contained within 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:

dnr.wi.gov

<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

Permit Drafter

Elexius (Lexi) Montes– Wisconsin DNR, 1027 W St Paul Ave, Milwaukee, WI 53233; (414) 940-9860;
elexius.montes@wisconsin.gov