Quarterly

Spring Edition

May 2025

What's Going On Across The State?
Wisconsin MS4 Permittees

MS4 Audit Preparation Checklist now available!

The United States Environmental Protection Agency (U.S. EPA) requires Wisconsin Department of Natural Resources (DNR) staff to routinely conduct MS4 Audits. Although MS4 Audits are primarily conducted to assess and determine compliance with the MS4 Permit, MS4 Audits are beneficial in strengthening working relationships between the DNR and MS4 Permittees.

MS4 Audits serve as a significant two-way learning opportunity. They clarify MS4 Permit requirements and help the DNR learn about MS4 Permittees' operations, priorities and storm water challenges.

To help MS4 Permittees better prepare for a MS4 Audit, the DNR developed a MS4 Audit Preparation Checklist. This checklist may also be used by MS4 Permittees interested in evaluating their MS4 Permit Programs outside of formal audits.

Photo Credit: Village of Elm Grove, below enclosure of Underwood Creek.

Topics

Village Of Elm Grove: Underwood Creek Daylighting Project

Underwood Creek in Elm Grove, Wisconsin, runs under the Park and Shop parking lot and the Sendik's building. Recent findings have revealed that the existing creek enclosure, which was built in the 1960s, is failing.

Daylighting this section of Underwood Creek alleviates the public safety concern of a potential collapsed parking lot. It also provides a new opportunity to restore the waterway's natural path, create habitat for native species, and mitigate floods during high-flow events.

To address the failing enclosure, the Village negotiated with the railroad property to acquire land and easements to construct a naturalized streambed for stormwater management.

On Aug. 23, 2024, the Village Board of Trustees approved a resolution to bring this project to a referendum vote at the Nov. 5, 2024, election. The referendum passed, and the Village received grant funds for final stream channel design and engineering logistics from a variety of sources, including Milwaukee Metropolitan Sewerage District (MMSD), Fund for Lake Michigan, and National Fish and Wildlife Foundation.

In March 2025, the Village provided progress updates regarding the Underwood Creek daylighting project. The Village has been busy coordinating several efforts to keep the project moving forward, such as soil and geotechnical borings at the project site, utility meetings and vegetation clearing in some areas.

The Village hopes to have the project bid this spring and start construction this summer. Overall, the Village is excited to continue pushing this project forward because it will not only solve the public safety concern but also create a public space for residents and revitalize this section of Underwood Creek by restoring it to a natural ecosystem.

To keep up to date on the project, please see the Village's website.

Muskrat Removal From Stormwater Ponds

Muskrats can cause significant damage to stormwater pond slopes, compromising the integrity of the Best Management Practice (BMP). Telltale signs of muskrat damage include slumping or eroding slopes, collapsed banks, visible animal holes and trails, cloudy water, etc.

Once a muskrat establishes its home, the most effective solution is to trap and remove it from the area.

Under the authorities provided in NR 12.10, muskrats damaging dikes, dams, shorelines* or roadways can be removed by landowners or occupants of land at any time of the year. No permit is required, and the timing is not restricted to the muskrat trapping season.

Anyone performing removal services on behalf of the landowner or occupant must have a valid trapping license and written permission from the landowner or occupant.

Stormwater ponds count as shorelines

Village Of Kimberly: Streamlining Private BMP Reporting

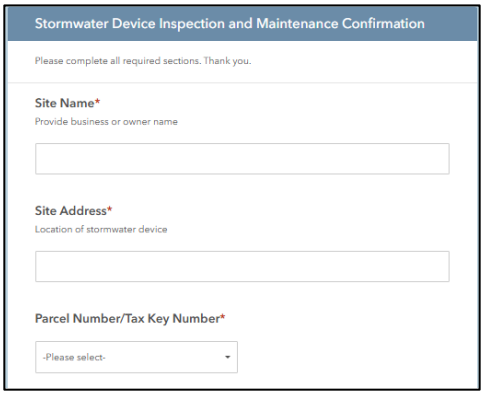
Many communities face the ongoing challenge of managing the inspection and maintenance of privately-owned stormwater Best Management Practices (BMPs). Ensuring proper inspection and maintenance are occurring, while having to properly track all this information at the same time, can be a logistical hurdle.

The Village of Kimberly in the Northeast Region of Wisconsin offers a practical solution worth considering. Their innovative approach involves sending annual reminder postcards to private BMP owners, each containing a QR code. This code directs owners to an online portal, simplifying the reporting process significantly. Upon accessing the portal, owners find comprehensive information regarding inspection, maintenance and annual reporting requirements for their stormwater BMPs.

The Village also provides readily accessible resources to private BMP owners, such as downloadable inspection forms tailored to common stormwater BMP types and educational material for private BMP owners.

Overall, the Village's streamlined reporting process has helped reduce administrative burdens. Simultaneously, it simplifies data collection for the Village, making it easier to track the overall status of private BMP inspection and maintenance. Additionally, providing education on private BMP responsibilities is crucial as it enhances the owner's understanding, leading to improved compliance and better stormwater management overall.

To learn more about the Village's private BMP efforts, visit their resources under "additional resources."



Screenshot of the Village's private BMP reporting portal.

The Optics Of Stormwater Water BMPs Maintenance

Structural BMPs are designed to mitigate stormwater pollution and flooding. Like cars, they require regular maintenance to ensure optimal performance. Without proper maintenance, BMPs can fill in and/or clog with sediment and debris, reducing their effectiveness in managing stormwater runoff.

One common maintenance issue is the encroachment of woody vegetation and trees. BMPs function best when maintained as designed, and something as simple as a tree growing where not intended can impact their effectiveness.

While trees provide many societal benefits, trees in the wrong place can cause damage to a BMP. As tree roots grow towards sources of moisture, growing roots could cause a variety of issues, such as inlet and outlet blockages and potentially rupture of underground infrastructure, which may lead to flooding and property damage

Overall, it is beneficial for BMPs to be routinely inspected, so costly, high-effort maintenance can be avoided.

However, because the public may see vegetation and tree removal as "removing nature," the optics of BMP maintenance can be challenging. Communication and education are key to mitigating this concern.

Various education efforts may be used to provide this education (e.g., emails, newsletters, workshops, mailed letters, social media posts, etc.). While broad education about the importance of BMP maintenance, such as a social media post, may be beneficial, educating a targeted audience prior to maintenance could be more beneficial.

For example, prior to tree removal at a certain BMP, municipalities could mail letters to nearby residents explaining the maintenance efforts and other logistics while educating on the importance of maintaining said BMP.

Racine County: Meachem Preserve Pond Retrofit

A traditional stormwater pond is about to get a big upgrade – it's being transformed into a constructed wetland that will seamlessly connect with the nearby 60-acre Meachem Preserve restoration in Racine County. This transformation effort has been led by Root-Pike Watershed Initiative Network (Root-Pike WIN) in partnership with KCI Technologies.

Root-Pike WIN explained that because there are few examples of constructed wetlands in the Pike River watershed, it's harder for communities to adopt them as a storm water management solution. With storm water ponds being one of the most utilized best management practices (BMPs), it is crucial they are designed to maximize pollutant removal and support healthy watersheds.

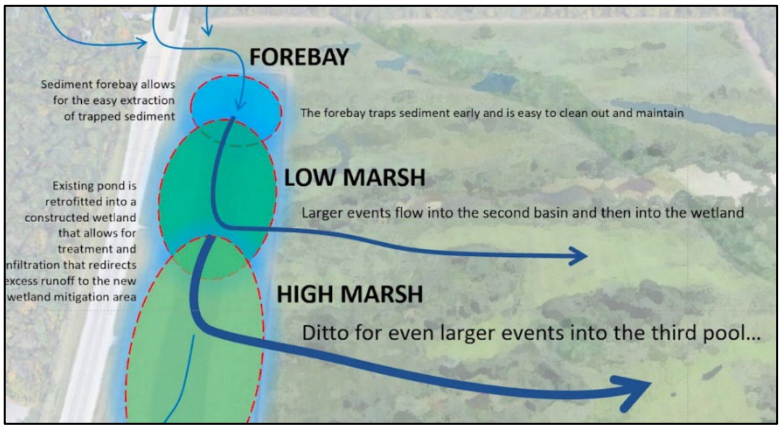


Photo Credit: Root-Pike WIN

The nine-key element Pike River Watershed Restoration Plan encourages placing naturalized stormwater basins next to existing green infrastructure, helping stormwater BMPs blend into the landscape. For this reason, the Meachem Stormwater Pond was chosen as the demonstration project site, which will serve as a tour location for municipal leaders and developers in the future. Once completed, the constructed wetland will include marsh areas of varying depths, a sediment forebay, and native plantings that will prevent 1,020 lbs. of suspended solids, 14.25 lbs. of phosphorus and 25.5 lbs. of nitrogen from flowing into Lake Michigan each year. The design for the project is currently being completed by KCI Technologies thanks to support from the Fund For Lake Michigan, Wisconsin Coastal Management Program and Microsoft.

MS4 Water Quality Trading Across The State

In South Central Region, two MS4 Permittees, City of Fort Atkinson and City of Watertown, are generating water quality trading (WQT) credits to demonstrate progress towards their Rock River Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for total phosphorus (TP) and total suspended solids (TSS). The City of Fort Atkinson is generating credits by making improvements at its Wastewater Treatment Facility (WWTF), which involves the installation of ultrafiltration equipment. The generated credits from the WWTF will be applied towards the City's MS4 WLAs within Reach 60. The City of Watertown (MS4) is generating credits a different way. The City's Waterways Improvement Program (WWIP) established its first project on a private farm which has installed two harvestable buffers in 2024.

In Southeast Region, WQT streambank stabilization projects led by Waukesha County will occur in Village of Elm Grove, City of Brookfield, Village of Menomonee Falls and Village of Butler. WQT credits generated will be split between the County and partnering MS4 towards their Milwaukee River Basin TMDL TSS and TP WLAs. Projects are anticipated to begin in spring and summer 2025.

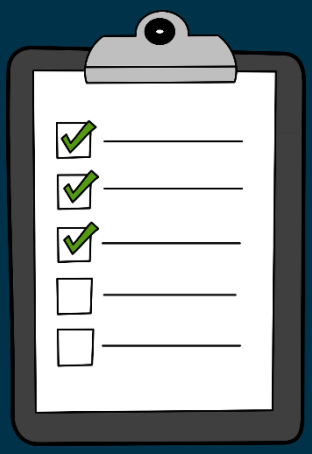
IDDE Dry Weather Field Screening: Chlorine Detection

Chlorine is not naturally found in the environment or waterways. As such, chlorine detected at an outfall (e.g., during routine dry-weather screenings) could come from various sources, such as a resident excessively watering their lawn, pool water discharge, water main break, or industrial facilities' discharges, such as non-contact cooling water.

To create a more efficient upstream investigation, the location of industrial facilities should be mapped. If detection of elevated chlorine levels is traced back to a WPDES permitted (or non-permitted) industrial facility, this may indicate non-compliance at the industrial facility. MS4s should notify the DNR to ensure potential non-compliance issues are adequately investigated. If the level of chlorine detected is permitted to be discharged into the storm sewer system, the MS4 should maintain documentation to establish chlorine baseline conditions at this outfall. It is important to note that one chlorine action level for all outfalls screened may not be feasible.

For example, a community may establish a different action level for chlorine at outfalls with upstream industrial permittees than for outfalls without upstream dischargers. Any action level parameter changes should be submitted to the DNR for review. Communities can access the DNR's Water Condition Viewer to view the locations of WPDES industrial dischargers.

Once the Water Condition Viewer is open, select these layers to view WPDES industrial discharges: "Resource Management – Permits, Fish, Sediment, Wild Rice," "Permits" and "Surface Water Outfalls."



Want To Be Featured In The MS4 Summer Edition?

We want to hear about your municipality's success stories and practices.

Please reach out to Wisconsin DNR staff with stories to include in upcoming editions:

Lexi Montes
Elexius.Montes@wisconsin.gov

Upcoming Dates, Reminders And Events

Reminder: Construction Season Is Approaching

As construction season begins, it is important to brush up on MS4 Permit requirements for the construction program. Each MS4 permittee is responsible for overseeing any construction sites greater than an acre or more of land disturbance or sites part of a larger plan of development or sale, including municipal projects, by conducting and documenting erosion control inspections at the frequency stated within its MS4 Permit. If your community has questions, please reach out to your local DNR stormwater staff and/or learn more about the construction stormwater requirements by visiting the MS4 BMP Menu.

Important! MS4 Annual Permit Fees

As a required by s. NR 216.08, Wis. Adm. Code, an annual permit fee is due June 30 each year. The DNR will send an electronic invoice for MS4 contacts with a valid email address. Please be sure to add DNREnvironmentalFees@wisconsin.gov to your contacts list and mark as not spam. All other invoices without an email will be printed and mailed to the address on file. If you do not receive an invoice by early June 2025, please contact your local DNR stormwater staff to obtain a copy of the invoice.

The Great Lakes Protection Fund: Funded Pilot Project To Support Operators And Stormwater Managers With Digital Tools

The Great Lakes Protection Fund is seeking partner communities to evaluate a no-cost pilot project to explore how sensors and AI could transform stormwater and sewer management. Digital tools will be customized for each community and may include:

- Installation of free sensors to measure water levels in pipes, basins, culverts and lakes.
- Asset digitization and reporting.
- Apps for field crews and operators to manage day-to-day tasks.
- And much more…

Interested? If you believe your organization could be a good fit to partner on this pilot project, please reach out to Branko Kerkez at Branko@hyfi.io