



Title: Permitting Alignment – Overview, Policy Shifts, and Rule Changes

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Purpose:

To provide an overview of the permitting alignment effort and its major policy shifts, and to describe, in detail, the proposed rule changes in support of these shifts, prior to engaging with external stakeholders in Q4, 2021.

Executive Summary:

Background and Situation:

Minnehaha Creek Watershed District (MCWD or District) is focused on the protection and improvement of natural resources in ways that support thriving communities. The collective efforts of the organization work towards enacting a vision of thriving communities generated through the intersection of the natural and built environments – a balance creating value and enjoyment. This is the unifying theme of the District’s 2017 Watershed Management Plan (Plan).

To materialize this vision, and because land use is the principal driver of the health of natural systems, MCWD’s primary strategy is to work with those who shape the landscape. The MCWD doesn’t own or control the land, therefore, the organization needs to work collaboratively with the land-use community to achieve its mission. This strategy is clearly outlined in the District’s [Balanced Urban Ecology](#) (BUE) policy, which calls for aligning policies, plans and investments with partners in the land use community. The alignment serves as a means to achieve the District’s natural resource objectives while also delivering broader social and economic value within communities.

Beyond integrating plans and capital investments, one of the principal points of engagement with the land use community is through the District’s permitting program. The District’s program has over 1,200 points of engagement with the land use community annually, including developers, architects, engineers, municipal staff and officials, and landowners.

Historical Issues & Direction Forward:

The Permitting Program implements policies to protect natural systems from changes in the built environment. However, over time, and through self-assessment, the District has acknowledged that its historic approach to creating and implementing regulation has generated conflict with the land use community. While some of this can be attributed to natural tensions inherent in any government regulatory program, the District has recognized many historical critiques as constructive and legitimate.

Despite periods of conflict, the District has experienced moments of coaction and partnership with regulated parties, the combined effort resulting in capitalizing on land-use change to produce natural resource benefits that exceed regulatory requirements. These cooperative endeavors have resulted in some of the District’s most recognizable projects, including the Mader Wetland Bank, the Methodist Hospital Creek Remeander and Boardwalk, and [the West End Stormwater Expansion](#).

These moments of collegial alignment have fueled the realization that there is more that can be accomplished cooperatively than through a rigid, reactive approach. As part of MCWD’s overall effort to realign the organization

around its vision of a Balanced Urban Ecology, the District's Permitting Program must continue to protect natural resources from land use change. However, to realize this cooperative vision, it must do so in ways that minimize conflict and maximize partnership with the land use community; primarily, by aligning stakeholder experience with the District's message and BUE policy. This sentiment laid the foundation for the Permitting Program's new purpose, as identified through the District's Strategic Planning effort:

"To protect natural resources against degradation associated with land-use development; and, partner with public and private parties to generate greater natural resource outcomes that those achieved through regulation alone."

In aligning the Permitting Program around this new purpose, the District is moving forward from the traditional regulatory model, toward developing meaningful relationships with the land-use community, and together building projects that provide social, economic, and environmental benefits. In service of this goal, Permitting will seek to provide a heightened level of service to its applicants and communities by creating clear rules and process, aligning its efforts with other state agencies, and creating greater efficiencies with its municipal partners.

Diagnosis of Issue Drivers:

To thoroughly understand the historical issues Permitting has experienced and identify their causes, staff undertook a comprehensive policy analysis process. Beginning in 2018, staff engaged the Citizen's Advisory Committee (CAC) through a series of guided discussions over the course of 10 months to group historical issues into categories. Once consensus had been built around the categorical issues, staff and the CAC worked to identify potential solutions. The results of that work were vetted with Operations and Policy Committee in early 2019. The categorical issues and solutions outlined through this process served as the basis of the scope of work to realign the District's Permitting Program. The collective process identified four primary drivers of the Permitting Program's historical conflict:

1. The rule language and administrative process are onerous for applicants and communities.
 - i. MCWD's rules are inconsistent and misaligned with state standards, causing friction, inefficiency, and missed partnership opportunities within the triangulated relationship between MCWD, applicants, and communities.
 - ii. The rules and procedures are written in dense technical and legal language, making them hard to navigate and understand, resulting in incomplete submittals and the need for multiple touch points and cycles of review between MCWD and applicants.
 - iii. MCWD's regulatory scope, processes and requirements are not effectively tailored to the scope or risk of a project, requiring significant administrative overhead for the District and applicants for relatively low risk work.
2. The District's Compliance Framework, which is used to monitor sites for adherence to District rules, has limited actionable measures and consequences to discourage non-compliance. Further, staff capacity is not sufficient to provide an inspection presence at all construction sites.
 - i. This has created an awareness amongst portions of the regulated public that the District has a limited basis in which to compel compliance, and perpetuates the perception of an agency willing to impose regulations, but hesitant to enforce them in the field.
 - ii. The District does not have any formal partnerships related to regulatory compliance, leaving MCWD to resolve non-compliance and persistent issues independently. This occurs even though many of the same rules and standards are implemented by both the city and MCWD.

- iii. MCWD's inspections are not formally guided by a risk-management framework, resulting in a fluctuating compliance presence across the broad swath of projects we permit, and no defined sense of the Program's priorities. The lack of formal guidance has resulted in misaligned inspections, which do not adequately focus staff time on appropriate natural resource risk. This postures our inspections as reactive, rather than preventative.
3. MCWD is typically engaged at the end of the land use planning process, when site layouts have already been determined.
 - i. This has been the result of cities operating their zoning processes independently, referring applicants to the District at varying times, with the timing often dependent on whether or not the District has a working relationship with the city's community development department. This is also due to the perception that the District's process is not a critical step in determining a site's layout.
 - ii. The late involvement limits how well MCWD can act as a value-added partner that can shape, steer, or advise projects. Additionally, this perpetuates the image of the District operating solely as a regulator that is reactive, and out of touch with the modern development community.
 - iii. It creates tension and generates adversarial interactions with applicants and communities when planned projects conflict with MCWD's rules – often in ways that could have been avoided with earlier coordination. The conflict often materializes as additional project costs or schedule delays, both of which impact relationships with the land-use community.
 - iv. As a result, MCWD's rules provide baseline protection against natural resource degradation, but do not generate opportunities to make improvements through proactive partnership.
4. The District does not have established policy frameworks for consistently managing the process and risk associated with partnering with permit applicants.
 - i. There is no process memorialized that guides an applicant or staff through the steps leading a potential land-use opportunity toward a partnership. From a developer's perspective the lack of formal process presents a significant amount of risk, and no sense of timeline. From staff's perspective, the absence of a formal process increases the likelihood for mistakes, or delays, affecting the potential for positive outcomes. Organizationally, the lack of process provides no sense of how potential opportunities are weighed, nor how the District's interests will be protected.
 - ii. The District has historically navigated each partnership opportunity on a case by case basis. Without clear process or policy set by the Board. As a result, staff are often perceived to be operating with prospective partners with no apparent organizational backing, or clarity on the procedural steps for working together.
 - iii. There are no established criteria that dictate how partnership opportunities may be assessed, or what constitutes a worthwhile pursuit. The lack of formalized criteria presents the appearance that each opportunity is an ad-hoc investigation, and risks inconsistent assessments.
 - iv. Without a formalized process or criteria, or an understanding of the potential benefits, there is little incentive for the land-use community to engage the District in any cooperative effort to pursue creative solutions or partnership opportunities.

The culmination of these issue drivers is the perception that the Permitting Program is a reactive, traditional regulator that is out of touch with the land-use community – a perception that we have continually battled against, and one that runs counter to the mission and vision of the organization. The Permitting Program, as it exists today, fulfills a necessary role of protecting the District’s natural resources. However, as the issues outlined above illustrate, it does so, often at the cost of achieving the MCWD’s mission and vision.

Proposed Solutions & Strategies:

To address these issues and their causes, MCWD is embarking on a series of changes to its regulatory programming in order to better serve its mission, communities, and applicants. These efforts are being undertaken to better align staff focus with natural resource risk; to make the rules simpler, more streamlined, and aligned with modern standards and guidance; and, provide a more user friendly experience. These changes are in service of the larger goal of improving natural resources. By implementing a partnership framework, facilitating early coordination, and expanding efficiency and staff capacity through the changes listed above, the Permitting Program will be able to focus on establishing cooperative relationships with the land-use community. Through these established relationships, we can collaboratively build projects that provide benefits socially, economically, and environmentally.

Therefore, to align MCWD’s permitting program with its overall strategy of protecting *and improving* natural resources, staff, the CAC, and the Board agreed upon the following policy shifts to better the regulatory process and rules in the following areas:

1. Simplifying and streamlining the rule language and process, by:
 - i. Simplifying the process for small-scale projects that pose low risk to determine if there are alternative means available to process lower risk applications.
 - ii. Communicating rules and procedures in plain language for a more approachable, user-friendly experience.
 - iii. Moving away from universally required technical submittals towards a range of acceptable materials that can be used to meet permit requirements.
 - iv. Investing in technology to provide a user-friendly, simple, and efficient means for applicants to apply for permits, while allowing staff to store and utilize valuable land-use data.
2. Eliminating regulatory overlap, aligning standards, and investigating opportunities for municipal partnership, by:
 - i. Aligning with state standards, particularly the Minnesota Pollution Control’s (MPCA) Municipal Separate Storm Sewer System (MS4) permit, providing a consistent regulatory framework that avoids bouncing applicants between multiple agencies, and, often competing regulatory standards.
 - ii. Meeting state MS4 standards, and potentially undertaking reporting, on behalf of municipal partners where the District can assist in meeting inspection or permit review requirements in exchange for joint compliance enforcement, inclusion of the District’s permitting process in municipal zoning review, or other items.
3. Promoting early engagement, by:
 - i. Working with our communities to formally develop frameworks on how MCWD works with or integrates into municipal zoning processes -- articulating the value the District can add, the type of projects we are primarily interested in, when in the process we are most effectively engaged, the method of

engagement, what the city can expect from the District as a response, and an outline of how each party will work together if an opportunity is present.

- ii. Communicating to applicants and potential partners, the value of early coordination with the District through communications, marketing materials, and other items.
- iii. Encouraging the use of our fast, no-cost, pre-application review that has been developed for use and integrated into our online permitting system.

4. Defining how we act as a value added partner for permit applicants, by:

- i. Developing a framework and process based upon past success, to provide internal and external clarity, in coordination with the Responsive Model. This will include policies, procedures, and protocols that memorialize how potential opportunities are routed through pre-established steps that may yield partnership opportunities, while simultaneously mitigating risk for the District.
- ii. Providing time, expertise, and technical assistance to applicants, when they engage MCWD early.
- iii. Defining, via our Responsive Model, how and when we can offer funding and other support, for high-impact projects.

5. Refining the Compliance Framework, by:

- i. Refining the escalation process for crispness and clarity, for smooth, effective internal operations of enforcement proceedings.
- ii. Exploring the range of actions at the Board's discretion for issues of varying scope and scale.
- iii. Formalizing the prioritization framework into Board policy to memorialize the District's internal risk assessment of particular land-uses or construction activities, and outline appropriate levels of field presence.
- iv. Updating financial assurance amounts and protocols to reflect modern construction prices, and define more clearly how dollar amounts may be used, to deter compliance issues before they begin.
- v. Developing local and state compliance partnerships to define roles and responsibilities amongst agencies regulating similar matters, and collaborative resolution of issues.

6. Training of staff:

- i. To act as policy planners through recognizing the needs of key geographies, understanding the gaps in meeting those needs, and how to execute partnerships, projects, and support policy in order to fill them.
- ii. To provide technical assistance through determining the appropriate scope and scale of resource utilization toward permits and potential opportunities.
- iii. To cultivate projects and represent MCWD's brand through a deep understanding of organizational priorities, and an understanding of building potential partnership opportunities.

- iv. To analyze and communicate data regarding program effectiveness, land-use trends, pollutant removal progress, while also working to inform future projects, policy, and initiatives.

June 10, 2021 Discussion:

The primary goal of the June 10, 2021, meeting is to determine the Board's comfort with the rule changes staff has proposed in support of the policy shifts and strategies that have been identified in the summary above.

In this meeting, staff will work to:

1. Frame the purpose of the Permitting Alignment effort;
2. Review the policy shifts the Board and Staff have discussed previously;
3. Review the proposed rule changes proposed in support of the policy shifts; and,
4. Receive the Board's feedback.

The proposed rule changes, their rationale, and relevant data have been summarized in the attached document entitled, 'Summary of Proposed Rule Changes' (Attachment 1). Additional detail supporting the proposed changes can be found in Stantec's 'Program Alignment Rule Scoping' and staff and counsel's 'Regulation of Changes in Stormwater Conveyance System Flows Under Waterbody Crossings & Structures Rule' documents (Attachments 5 & 6).

In meeting #2, anticipated on June 24, 2021, staff will focus on planned improvements in the areas of compliance and partnership development.

Supporting documents (list attachments):

1. Summary of Proposed Rule Changes
2. Table 2: Proposed Erosion Control Changes
3. Table 3: Proposed Stormwater Management Changes
4. Table 4: Proposed Wetland Protection Changes
5. Stantec Permitting Alignment Analysis - DRAFT
6. Regulation of Changes in Stormwater Conveyance System Flows Under Waterbody Crossings & Structures – DRAFT

Attachment 1: Summary of Proposed Rule Changes

Rule Changes – Issues and Strategies

The rule changes summarized below are in support of policy shifts the Board and Staff identified in prior discussions. These policy shifts served as the foundation for the [Permitting Alignment Scope of Work](#), adopted by the Board in September 2019.

The proposed rule changes support the major policy themes of, (1) simplifying and streamlining the rule language and process, and (2) eliminating regulatory overlap, aligning standards, and investigating opportunities for municipal partnership. These are explained in additional detail below.

Simplifying and streamlining the rule language and process:

Issue

The District's current rule language and administrative process is onerous for applicants and communities. The rules and procedures are written in dense technical and legal language, making them hard to navigate and understand, resulting in incomplete submittals and the need for multiple touch points and cycles of review between MCWD and applicants. This draws significantly on staff time, and causes focus to be pulled away from pursuing more pressing threats and opportunities. Further, from our customer's perspective, there is little clarity on what is expected of them. This is so pronounced, that often applicants rely on MCWD staff or a hired consultant to interpret the rule triggers, requirements, and action steps on their behalf. The continual cycle of these interactions negatively reinforces our customer's perspective of the District.

Additionally, MCWD's regulatory scope, processes and requirements are not effectively tailored to the scope or risk of a project, requiring significant administrative overhead for the District and applicant for relatively low risk work. This creates the perception that the District is overly involved in minutia, diverting focus away from larger issues, concerns, projects, and opportunities. In effect, the broad scope of the rules inadvertently shifts staff time toward smaller scale projects, and because these inquiries, applications, and administrative requirements are numerous and frequent, they often divert resources at the expense of focus toward larger threats and opportunities.

Policy Solutions

To remedy this situation, Staff and the Board identified the need to simplify and streamline the rule language and process in a multi-faceted policy shift. First, the administrative process for small-scale projects that pose low natural resource risk needs to be simplified. Most notably, this was to be accomplished by examining the scope of the District's rules and determining if there are alternative means available to process lower risk permit applications.

Second, by communicating rules and procedures in plain language. This action will primarily be accomplished through drafting of the rules themselves, converting the legal and technical language currently woven into the rules into a more user-friendly, approachable dialect as much as possible.

Third, moving away from universal technical submittals, towards a range of acceptable materials. This will involve undertaking an effort to catalog the various means and methods that can be used to meet permit requirements, and outlining these in a comprehensive guidance document. This will be developed after the scope of the rules has been solidified.

Lastly, investing in technology to provide a user-friendly, simple, and efficient means to process permits, store data, and perform key analyses. Developing a GIS-based database and application platform to provide a seamless application

experience for our customers that also allows us to track and unlock the power of the land-use data received through the permitting process. This has been largely completed through the implementation of the ElementsXS system by Novotx.

Eliminating regulatory overlap, aligning standards, and investigating opportunities for municipal partnership:

Issue

MCWD's rules are inconsistent and misaligned with state standards, causing friction, inefficiency, and missed partnership opportunities within the triangulated relationship between MCWD, applicants and communities. In their current state, the rules perpetuate a scenario where each agency operates in its independent lane, causing frustration within the land-use community as they continually endure being bounced between agencies with differing or conflicting regulations.

Policy Solutions

To remedy this situation, Staff and the Board identified the need to shift policy to reduce overlap and align regulatory standards. To accomplish this, Staff and the Board identified the need to align with mandatory state standards, like the MPCA's MS4 permit, to provide a level of consistency that avoids cities and applicants having to bounce between multiple, often competing, regulatory standards. Additionally, as a subset of the MS4 standards, the Board and Staff identified an opportunity for municipal partnerships.

The MS4 permit will require the District to update two of its rules. First, under Erosion Control, MCWD will need update its rule standards to modern, accepted guidance and specifications, which ultimately provides additional protection. Second, under Stormwater Management, the District will need to update the specifications in our rule that are now required through MS4. This includes details like site characteristics that influence what BMPs are appropriate, and circumstances that prohibit infiltration. These are items that have been utilized as best practice by the District, but are now required to be incorporated into rule through the MS4 permit.

Additionally, aligning our rule with MS4 will require us to meld our existing treatment standards with new rule triggers. While MS4's treatment standards are limited only to volume control, the permit most notably moves away from classifying sites as new development versus redevelopment, by varying levels of site disturbance, or impervious disturbance. Instead, it requires all sites disturbing over 1 acre of land to provide volume control. Given the District has an established history of protecting resources through rate control and water quality control provisions, the rules will be melded so that 1) all permits will now adhere to specific MS4 thresholds, and 2) continues to provide essential protection through rate and water quality controls.

With District rules and municipal requirements having consistency after this effort, this presents an opportunity for municipal partnership. One where the District through an exchange of services, can assist municipal partners in meeting inspection or permit review requirements in exchange for joint compliance enforcement, inclusion of the District's permitting process in the municipal zoning process, or other items.

Methods & Process

To revise the rules in support of these policy shifts, staff undertook a cross-department effort in conjunction with the expertise of MCWD legal counsel and the District Engineer. Over the course of a year, the group worked to dissect each rule, analyzing a range of items, including: the intent of the rule; how has it or is it regulated by others; what issues have staff identified that need to be addressed; what alternatives were present; what tradeoffs those presented; what level of input was needed organizationally, or through the TAC; among others.

The results of this scoping effort were supplemented with analysis and research conducted by Stantec and Smith Partners. These documents have been included as Attachments 5 and 6, respectively. A timeline illustrating the process has been included in Table 1 below.

Activity Description	Date
CAC Engagement to identify categorical issues with District rules	August 2018 – January 2019
CAC & Board Engagement to identify policy solutions	February 2019 – March 2019
Scope of work development	March 2019 – September 2019
Internal Scoping Discussions	December 2019 – November 2020
Analysis and Additional Research	January 2021 – June 2021
Board Consensus	June 2021
External Meeting Preparation	June 2021 – September 2021
Rule Drafting	July 2021 – Q4 2021
External Meetings	Q4 2021
45-Day Comment Period	Q1 2022
Board Adoption	Q1 2022

Table 1: Rule Revisions Project Schedule

A summary of the rule changes has been outlined below, identifying the primary issues present, the changes and direction proposed, and the rationale supporting the change. Changes for the Erosion Control, Stormwater Management, and Wetland Protection rules have been included in table format as well, for easier reading (Attachments 2, 3, and 4). Underpinning the changes outlined here, each rule will be simplified, as much as feasible, into plain language through the drafting process.

Additional detail will be provided in the Board presentation in order to facilitate a guided discussion.

Erosion Control

Issue: The rule is out of compliance with the MPCA’s MS4 permit and Construction Stormwater guidance.

Direction: Align the District’s Erosion Control standards with that of the MPCA’s MS4 permit. This will effectively make the rule applicable for sites only disturbing over 1 acre or more of land. The District is recommending the alignment of the Erosion Control rule with MS4 standards in tandem with implementation of a ‘General Permit’ approach for sites under 1 acre to ensure there is no loss in protection.

Rationale: The District is a regulated MS4, and required to implement this change.

Issue: There is significant duplication of this authority at the municipal level for sites less than one acre in size.

Direction: Develop formal partnerships with our member cities to reduce duplication, outline roles and responsibilities, and reserve the right and discretion to compel compliance should issues arise.

Rationale: Cities are already examining these sites through their building permit process.

- Half (14) of the District’s member cities have equally restrictive rules, but have not assumed sole regulatory authority for erosion control.

- These sites are generally uninspected by the District under current conditions unless a complaint is filed with staff. In situations where complaints are filed with the District, the City is also contacted by the concerned party, or District Staff to assist with in resolving non-compliance.

Issue: The processing of permits triggering only erosion control for sites under 1 acre creates high administrative overhead for relatively low natural resource risk applications.

Direction: Utilize a 'General Permit' for sites disturbing less than 1 acre.

- This will require prospective applicant's to log their address and a brief description of the work to take place through the online permitting portal. After providing the appropriate information, the applicant will be notified of site requirements and expectations to which they must agree, then issued a general permit.
- This interaction will be able to take place through the District's online permitting system, and operate autonomously, without intervention from staff. Information will be shared with cities to ensure they are aware that applicants must be directed to the District for permit coverage.
- The site information will allow the District to track where work is taking place, and investigate compliance should an issue arise.
- Safety mechanisms will be built into the online portal that prevents certain land-uses from qualifying, such as non-single family sites, or sites containing wetlands.
- Spot check protocols will be developed to audit site compliance across the District.

Rationale: There is natural resource value in regulating sites proposing under 1 acre of disturbance.

- However, single-family homes under 1 acre in size, triggering only erosion control comprise:
 - Over a 10 year average: 53% of the District's annual permit load which equates to 312 out of 590 permits per year.
 - Over a 5 year average: 57% of the District's annual permit load which equates to 385 out of 675 permits per year.
- In addition, it is estimated that the District receives approximately 500 requests, inquiries, and permit applications annually regarding sites under 1 acre that ultimately do not require a permit.
 - A significant amount of staff time – through coordination, managing process, and reviewing permits is spent on review of projects under 1 acre in size, triggering only erosion control.
- Processing these requests as a General Permit will continue to require the same level of natural resource protection, and preserves the District's ability to compel compliance should an issues arise.

Stormwater Management

Issue: The rule is out of compliance with the MPCA's MS4 permit, specifically the post-construction stormwater standards and requirements. Additionally, the current rule is complicated and confusing.

Direction: Align the District's Stormwater Management rule with the standards/requirements of the MS4/CSW permit.

- Simplify the District's stormwater standards by eliminating rule thresholds that are no longer applicable (exemptions for 'new development' scenarios, sites reducing impervious surface, and linear projects that incorporate less than 10,000 sq. ft. of impervious surface).
- Continue to exempt single-family homes and agricultural activity.
- Exceptions:
 - Retain regulation of sites under 1 acre in size with current requirements
 - Retain 50% impervious surface threshold to ensure large-scale projects are bringing an entire site into compliance once exceeded.
 - Retain rate control, water quality control, and bounce and inundation provisions.

Rationale: By integrating MS4 requirements with the District’s current stormwater treatment scope, we can simplify the rule, while maintaining a greater level of resource protection. This can be accomplished by:

- Applying the rule for sites above or below one acre in size, rather than for sites only disturbing one acre or more of land.
- Continuing to regulate sites under 1 acre in size.
 - MS4 does not require consideration or review of these sites.
 - Out of our 29 member communities, all but 7 have hardcover restrictions. However, only 3 of our communities have stormwater rules applying to these sites.
 - Of the 513 stormwater permits issued from 2010 – 2020, 38% of those were for sites under 1 acre in size.
 - a. For these sites, the incorporation of BMPs is required with no treatment scope. This means there is no measured volume, rate, or water quality removal from these facilities.
 - b. There is no current, available data for quantifying the contribution of sites under 1 acre to water quality or quantity issues across the watershed.
- Continuing to require sites disturbing more than 50% of the existing impervious to treat the entire site.
 - Under MS4 requirements, all sites, regardless of disturbance, are only required to treat the sum of the new and fully reconstructed impervious surface.
 - Including this provision will preserve the District’s ability to have large projects treat the entire site’s impervious surface, similar to current conditions, and is likely the only chance to do so within a 10 – 50 year period (until the site develops again).
 - This will also preserve the ability of the District to track the evolution of a site, requiring full site compliance once the 50% threshold is exceeded, by cumulative examination of changes dating back to the implementation of the new rules.
 - This is something that is in place under current rules, and is unlikely to be perceived as a change by our partners or the development community.
- Retaining the District’s current rate control, water quality control and bounce and inundation requirements.
 - MS4 does not mandate rate reductions nor water quality removal goals.
 - Rate, water quality, and bounce and inundation standards have become industry standards to address water quantity and quality issues, and have been effective for the District since their inception.
- Continuing the exemption of agricultural activity and of single-family homes, per previous Board direction.

Issue: There is a duplication of efforts amongst the District and its member cities in implementing stormwater management on sites over 1 acre in size.

Direction: Develop formal partnerships with our member cities to reduce duplication, outline roles and responsibilities, and establish spot-check protocols.

Rationale: Because MS4 is a ubiquitous requirement across all the District’s member cities, the change provides an opportunity for the District to partner with cities, to meet the permit review requirements associated with the revised MS4 standards. The District already provides this function, where many cities may be faced with a decision to hire additional technical staff, or enlist the assistance of a consultant to meet MS4 standards.

Issue: The stormwater contribution of sites under 1 acre in size is not well understood by the District or its member cities.

Direction: Separate from this process, the District will explore options for addressing the regulatory gap for non-single family home sites less than one acre in size, and revisit it as part of subsequent climate adaptation discussions.

Rationale: There is limited available data to quantify the stormwater contribution of sites under 1 acre. Quantifying this contribution can be addressed through the District's upcoming 2-d modeling effort.

Wetland Protection

Issue: Determining buffer width for a project is an unnecessarily complicated, and rigid process.

Direction: Consider alternatives for applying simplified wetland buffers.

- Forego the use of management classes traditionally used by MCWD to determine buffer widths in favor of using wetland community types – focusing on additional protection for those wetland types with a standing water component.
 - This would be a simplified version of the current rule, requiring buffers of 50 ft in width, with a minimum of 25 ft if the wetland has a standing water component.
 - A buffer width of 30 ft would be applied to wetland types without standing water, with a minimum buffer width of 15 ft.
- Develop criteria which applicants can use, based on the merits of site design, to reduce down to the 'minimum buffer width', and eliminate current reductions for 'slope and soils'.
 - This outlines straightforward design criteria that serve to justify an applicant's request to reduce buffer width down to minimums, while maintaining resource protection. Under current conditions, this is a very complex process.
- Continue requiring single-family homes projects to incorporate buffers if wetlands are on-site, with the same width requirements that exist under current rules (25 ft).

Rationale: The Minnesota Rapid Assessment Method (MnRAM), the current method of assessing wetland quality, and one of the primary methods wetland management classes are determined or modified, is no longer being supported by the Board of Water and Soil Resources (BWSR). The software and worksheets utilized by the process have not been updated in several years, and is actively being replaced by BWSR and the Wisconsin DNR. BWSR is discouraging use of MnRAM as the sole means to compare wetlands when making wetland permitting or impact decisions.

- Buffer widths in current rules are based upon management classes. Determining buffers under current rule is a complicated exercise and application. There are distinct differences between base widths, minimum applied widths, averaging widths, and methods to reduce buffer widths depending on site conditions like soils, and gradient change.
- Based on a technical review by Stantec, wetland community type provides a more universal ecological indicator of the buffer needed to protect a wetland from water quality impacts, where management classes distinguish buffer widths based on quality of the wetland, which is a highly subjective process.
 - Wetland community type is information that is provided with any delineation report and would not require additional analysis to determine. MnRAM classifications are a separate analysis that must be run and are often subjective. Applicants will often run MnRAMs to lower the management class of on-site wetlands, and reduce buffer width requirements

applicable to a site. Assigning buffer widths based on wetland community type would prevent this.

- Wetland community types can be separated into two simple categories – those with standing water and those that are without. The logic of this system lies in Stantec’s analysis, and boils down simply to: wetland communities with standing water components, harboring aquatic life and emergent plants are more sensitive to degradation, and warrant wider buffer widths.
- In terms of buffer widths, Stantec has cited a 2011 study performed by MnDOT detailing that pollutant removal efficiency of buffers begins to taper at approximately 30 ft in width, with significant diminishing returns at 50 ft.
 - Buffer widths of 75 feet versus 50 feet do not result in proportional returns in wetland protection.
 - This study also found buffer widths as little as 15 ft are highly effective at reducing total suspended solids (TSS) and total phosphorus (TP) from entering a wetland.
 - The study further found that sufficient habitat is likely to occur for several species of amphibians, reptiles, and birds in buffer widths of 50 ft.
 - a. However, many species require significant buffer widths, on the order of 300 ft for sufficient habitat. These widths are not possible to achieve through a regulatory program without significant disruption to the use of property. The width recommendation of 50 ft is consistent with maximum buffer width required by the Minnesota State Buffer Law for lakes, streams, and rivers.
- To reduce to the minimum wetland buffer width, applicants previously relied on site characteristics to justify reductions. However, these criteria are confusing, and do not account for site design.
 - Tying minimum buffer width to site design ensures that practices are implemented to further protect the wetland, easing the need for wider buffers.
 - These site design criteria include:
 - a. If on-site slopes adjacent to the wetland are 3:1 (H:V) or less; and,
 - i. The drainage from upstream impervious surface is directed away from the wetland; or,
 - ii. The drainage from upstream impervious surface is redirected and treated prior to discharging to the wetland;
 - b. If all new impervious surface is treated before discharging to the wetland.

Issue: Several cities that act as the Wetland Conservation Act (WCA) Local Government Unit (LGU), do not administer the District’s Wetland Protection rule. This creates confusion amongst applicants and inefficiencies between the city and the District.

Direction: Encourage cities who currently retain authority as the WCA LGU to pursue authority for the Wetland Protection rule for continuity; and, work with cities that do not have authority to clearly outline the District’s process, particularly for single-family homes. Establish this understanding through formal agreements.

Rationale: Cities administering the WCA have rules nearly consistent with MCWD.

- Having separate agencies administer the WCA and Wetland Protection rules creates unnecessary administrative overhead, and confusion amongst applicants.

Issue: There are components of the rule that conflict, or are unclear.

Direction: Clarify language and definitions within the rule to streamline process, specifically: allowing grandfathered structures and exempting restoration projects from including buffers.

Rationale: Components of the rule language, including the lack of definition around pre-existing structures, or restoration projects, create difficult administrative situations often resulting in unnecessary variances even when the intent of the rule is being met.

Issue: Long term maintenance of buffers is difficult to assess and enforce.

Direction: Encourage cities to place buffers on outlots.

Rationale: The long-term viability of buffers is most often impacted by ownership changes of property. New owners are often unaware of the intent and utility of buffers, and buffer disturbance often results. Moving buffers onto municipal outlots, particularly in larger developments, creates a delineation of public and private property, and provides a greater chance of long-term preservation of the buffer.

Waterbody Crossings & Structures

Issue: There is a gap in regulation regarding downstream impacts associated with the upsizing of storm sewer infrastructure.

Direction: Revise the rule to clarify the District's Waterbody Crossings and Structures rule applies only to the impact of the physical structure itself (i.e. findings related to: hydraulic impact, flood stage, water quality, minimal impact solution, preserving navigational capacity, etc.).

- While a gap exists, the rule is not the best place to address the issue.
- An analysis of potential infrastructure changes can be incorporated into the 2-d modeling efforts. This will assist the District in setting goals and evaluating potential solutions – through local water plan requirements, regulatory functions, or other potential avenues.
- Through coordination plans, ask cities to identify areas where storm infrastructure will be upsized, and engage the District in the land-use planning and capital project planning process.

Rationale: The Waterbody Crossings & Structures rule is one of the three rules the District regulates under a general permit with the DNR.

- The rule is intended to preserve hydraulic capacity and/or navigational capacity of waterbodies, limit the use of the bed or bank for utilities and infrastructure, ensure no impairments to water quality, and identify the minimal impact solution.
 - The core purpose of the rule is protecting the physical integrity of the bank and surrounding riparian system.
 - The trigger for the rule, contacting the bed or the bank, is arbitrary for the purpose of reviewing storm sewer infrastructure, particularly for changes to regional stormwater flows and flood management. Even if the pipe is dramatically upsized, the District has no authority to review if the outlet is not touched, or is not in contact with the bed or bank of the watercourse.
 - The District can review for impacts to flood stage in the receiving system.
 - a. However, the organization is in the process of developing, but does not yet have, a modeling tool to assess upgradient or cumulative impacts of altering municipal storm systems.
 - b. Designs coming to the District have gone through capital planning and a land-use process.
 - c. Providing regulatory review of the end product would essentially require unwinding of previous municipal capital process and land-use decisions.

- i. Doing so would be to interject District authority in regional conveyance system design, and city land-use and capital planning decisions.
- o Approaching the issue from a planning framework, would allow the District to provide comment and guidance, engage with cities in a timely fashion, and respect the discretion of cities in planning realms.

Issue: The process for replacing low-risk, in-kind storm sewer pipes is difficult, and overly complicated.

Direction: Create a 'fast-track' option for in-kind replacement of storm sewer infrastructure.

Rationale: In-kind replacements of storm infrastructure do not pose hydraulic concerns, and are necessary to maintain storm sewer system grids. Developing a fast-track permit will streamline lower-risk requests, with established engineering guidelines, while reducing administrative overhead associated with these projects.

Issue: The wildlife passage requirements are overly detailed and complicated.

Direction & Rationale: Streamline and simplify the wildlife passage requirements to reduce confusion and unnecessary complexity.

Shoreline and Streambank Stabilization

Issue: Demonstrating the need for a particular shoreline or streambank practice is difficult for applicants, and often subjective.

Direction: Simplify the process by identifying alternatives to the erosion intensity and shear stress calculations.

Rationale: The intent of the rule is to protect shorelines/streambanks from erosion, while ensuring practices are tailored to the amount of erosion experienced at a given location.

- Determining the amount of erosion at a given location is currently an exercise that often requires a consultant, or engineer.
- Other metrics exist that can adequately determine the amount of erosion experienced at a given location, that are far simpler than the equations and methods that are in place, and do not require licensed expertise to use or understand.

Issue: Vague language in the retaining wall section of the rule does not actively discourage their incorporation into key shoreline and streambank areas.

Direction: Explore options for incentivizing natural channel design and discouraging use of retaining walls.

Rationale: Retaining walls and associated structures are the least favorable option for stabilizing a shoreline or streambank, and represent a significant impact to natural areas.

- The rule language in this section is vague, and does not actively discourage their use.

Issue: The majority of the rule includes complex language and standards for relatively simple requirements.

Direction & Rationale: Simplify and streamline the rule language to create more approachable, informative content.

Floodplain Alteration

Issue: There is a lack of clarity around what actions constitute a fast-track permit.

Direction: Clarify rule language by exempting certain activities or specific, limited fill quantities rather than requiring a fast-track permit.

Rationale: The fast-track permit guidance is subjective, providing a depth of material allowed, rather than exempting particular activities or providing a volume. The additional specificity will prevent confusion or conflict in future applications.

Issue: The rule is inconsistent with FEMA freeboard requirements, which are utilized by all of the District's member cities.

Direction: Determine whether or not to continue regulating freeboard with the TAC.

Rationale: FEMA requires cities to implement Floodplain ordinances, in order to participate in the National Flood Insurance Program (NFIP). All of the District's member cities currently participate in the NFIP.

- This requires cities to implement 2 ft of freeboard between the 100 yr flood elevation and the lowest floor.
- This is more protective than regulating the lowest opening, as it removes the possibility of constructing basements in flood zones.
- Moving toward the low floor standards would make rules consistent for applicants, but redundant with city review.
- The TAC may have more insight on the District's implementation of freeboard requirements, and if there is utility in continuing to incorporate this provision in the District's rules.

Dredging

Issue: MS4 requirements require operators (cities) to clean outfalls with regular frequency. This often trips the rule, and even though it is a low-risk, standard request, the rule does not discriminate between this type of project and dredging for navigation.

Direction: Develop a fast-track option and/or simplify the requirements for sediment removal at outfalls.

Rationale: Cities are required to routinely schedule out-fall cleanings in public waters. In these circumstances, there is generally low natural resource risk, and minimal work taking place. Instituting a fast-track permit with clear standards will ease administrative overhead, and provide a service to our member cities as they meet their MS4 obligations, while not sacrificing protections to natural resources.

Illicit Discharges

Issue: There is no clear MS4 jurisdiction defined for the rule.

Direction: Clearly delineate the District's MS4 (the drainage areas contributing to our owned ponds and county/jurisdictional ditches) and limit the rule to these areas. Refer issues outside of our MS4 jurisdiction to member cities.

Rationale: Additional clarity surrounding the District's MS4 responsibilities will reduce confusion and ambiguity when illicit discharges are identified in the field.

Appropriations

No changes proposed

Erosion Control

Rule	Issues Solving For	Direction	Rationale
Erosion Control	The rule is out of compliance with the MPCA's MS4 permit and construction stormwater guidance.	Align the District's Erosion Control standards with the MPCA's MS4 permit.	As a regulated MS4, the District is obligated to incorporate the standards and requirements of the permit in its rule language.
	There is significant duplication of authority at the municipal level for sites less than 1 acre in size.	Develop formal partnerships with cities to reduce duplication, outline roles and responsibilities, and reserve the right and discretion to compel compliance should issues arise.	Cities are already examining these sites through their building permit process.
			Half (14) of the District's member cities have equally restrictive rules, but have not assumed sole regulatory authority.
			These sites are generally uninspected under current conditions, unless a complaint is filed
	Processing permits for sites under 1 acre, triggering only Erosion Control creates high administrative overhead for relatively low natural resource risk applications.	Utilize a general permit for sites disturbing less than 1 acre, triggering only erosion control.	In non-compliance and enforcement scenarios, the District typically involves the City.
			There is natural resource value in regulating sites proposing under 1 acre of disturbance.
			Single Family Home sites, on average, have constituted 57% of the District's annual permit load over the last 5 years. This equates to approximately 385 permits per year, out of the 675 permits we process on average.
		In addition to permits, the District receives approximately 500 requests, inquiries, or permit applications annually that do not require a permit the District.	

Table 2: Proposed Erosion Control Changes

Stormwater Management

Rule	Issues Solving For	Direction	Rationale
Stormwater Management	The rule is out of compliance with the MPCA's MS4 permit, specifically the post-construction stormwater standards and requirements.	Align the District's Stormwater Management rule with the standards/requirements of the MS4 permit, with the following exceptions:	The MS4 standards are mandated by the state.
			Integrating MS4 requirements with aspects of the District's current treatment scope simplifies the rule, while maintaining resource protection.
		<u>Exception 1</u> : Retain regulation of sites under 1 acre in size with current requirements.	MS4 does not require consideration or review of these sites.
			Out of our 29 member communities, only 3 have stormwater rules applying to these sites.
			Of the 513 stormwater permits issued from 2010 – 2020, 38% (195) were for sites under 1 acre.
			For these sites, current rules require the incorporation of a BMP with no treatment scope (i.e. no measured volume, rate, or water quality requirements).
		<u>Exception 2</u> : Retain the 50% impervious disturbance threshold to compel large projects to treat the entire site.	There is no current data available to quantify the contribution of sites under 1 acre to water quality or quantity issues across the watershed.
			This is an existing criteria in the current iteration of the rules. MS4 does not require this threshold.
			Including this provision will preserve the District's ability to have large sites treat its entire site's impervious surface, and is likely the only chance to do so within a 10 – 50 year period (until the site develops again).
	<u>Exception 3</u> : Retain rate control, water quality control, and bounce and inundation provisions.	Preserves the ability to track the evolution of a site, requiring treatment once the 50% threshold has been exceeded.	
		The standard is in place under our current rules and is unlikely to be perceived by a change by our partners or the development community.	
	There is a duplication of efforts amongst the District and its member cities in implementing stormwater management on sites over 1 acre in size.	Develop formal partnerships with our member cities to reduce duplication, outline roles and responsibilities, and establish spot-check protocols.	These standards are in place under MCWD's current rules, and have become industry standards to address water quantity and quality issues. These standards have been effective in protecting natural resources in the District since their inception.
			MS4 standards are required across all cities in the District.
The District has an established regulatory program and technical expertise to review permits on a city's behalf.			
The stormwater contribution of sites under 1 acre in size is not well understood by the District or its member cities.	Separate from this process, the District will explore options for addressing the regulatory gap for non-single family home sites, less than 1 acre in size, and revisit it as part of subsequent climate adaptation discussions.	The District can provide this service in exchange for municipal actions such as joint compliance, incorporation of permitting into local land-use processes, or other services.	
		There is limited available data to quantify the need to address sites under 1 acre. Quantifying this contribution can be addressed through the District's upcoming 2-d modeling effort, and discussed as part of climate adaptation discussions.	

Table 3: Proposed Stormwater Management Changes

Wetland Protection

Rule	Issues Solving For	Direction	Rationale
Wetland Protection	Determining buffer applicability, buffer width, and buffer width reduction is an unnecessarily complicated, and rigid process.	Forego the use of management classes, traditionally used by MCWD to determine buffer widths, in favor of using wetland community types – focusing on additional protection for those wetland types with a standing water component. <ul style="list-style-type: none"> • Requiring buffers of 50 ft in width, with a minimum width of 25 ft if wetlands have standing water. • Requiring buffers of 30 ft in width, with a minimum width of 15 ft for wetland without standing water. 	MnRAM is no longer being updated or maintained by BWSR, and is actively being replaced. MnRAM is principally used to determine management classes of wetlands. Management classes are how current MCWD buffer widths are determined.
			Wetland community type provides a more universal ecological indicator of the buffer needed to protect a wetland from water quality impacts, where management classes distinguish buffer widths based on quality of the wetland, which is highly subjective.
			Wetland community types do not require additional analysis to determine, they are a component of standard delineation reports.
			Wetland community types with standing water components, harboring aquatic life, vegetation, and invertebrates are more sensitive to degradation and warrant wider buffer widths, than those without.
			The pollutant removal efficiency of buffers begins to taper at 30 ft. in width, with significant diminishing returns at 50 ft.
			Buffer widths of 15 ft. are highly effective at reducing TSS and TP from entering a wetland.
			Several species of amphibians, reptiles, and birds are likely to occur in buffer widths of 50 ft.
			The 50 ft. width maximum is consistent with the Minnesota State Buffer Law for lakes, streams, and rivers.
		Develop criteria which applicants can use, based on site design, to reduce buffer width down to the minimum, and eliminate current reductions for ‘slope and soils’.	Tying minimum buffer width to site design ensures that practices are implemented to further protect wetlands, easing the need for wider buffers, rather than relying on site characteristics.
		Continue requiring single-family homes to incorporate wetland buffers of 25 ft.	This width of buffer has proven effective at reducing pollutant loading, is consistent with current practice, and balances natural resource protection with property use.
Several cities are the Wetland Conservation Act (WCA) Local Government Unit (LGU), but do not administer the District’s Wetland Protection rule creating confusion amongst applicants and inefficiencies between the city and the District.	Encourage cities who currently retain authority as the WCA LGU to pursue authority for the Wetland Protection rule. Work with cities that do not maintain authority for either to clearly outline the District’s process. Establish this understanding through formal agreements.	Cities administering the WCA have rules nearly consistent with MCWD.	
		Having separate agencies administer the WCA and Wetland Protection rules creates unnecessary administrative overhead, and confusion amongst applicants.	
Components of the rule are unclear, and in some instances, conflict.	Clarify language and definitions within the rule to streamline the process, specifically: allowing grandfathered structures within buffers, and exempting restoration projects from including buffers.	Components of the rule language, including the lack of definition around pre-existing structures, or restoration projects, create difficult administrative situations often resulting in unnecessary variances even when the intent of the rule is being met.	

Table 4: Proposed Wetland Protection Changes

To:	Thomas Dietrich, Permitting Program Manager, Minnehaha Creek Watershed District	From:	Erik Megow, P.E., Stantec Chris Meehan, P.E., C.F.M., Stantec
Reference:	Program Alignment Rule Scoping DRAFT	Date:	June 7, 2021

The Minnehaha Creek Watershed District is in the process of realigning its programming around its new mission, vision, goals, and strategic priorities, in addition to the balanced urban ecology policy. As a part of the overall Program realignment process, the District is revising the scope and standards of its Rules. The revision of the District Rules aims to:

- Simplify and streamline rule language and processes.
- Eliminate regulatory overlap, align rules, and investigate opportunities for municipal partnership.
- Promote early engagement.
- Define how the District can add value for permit applicants.
- Refine the compliance framework.

To begin updating the Rules, Stantec has reviewed and provided background information and analysis for updating specific sections of the rules to better align with the overall goals of the District Rules revision process, as outlined above. This memorandum outlines the preliminary, proposed scope and standard updates for portions of the following Rules:

1. **Wetland Protection** – Buffer Width and Reduction Criteria
2. **Waterbody Crossings & Structures** – Fast-track Recommendations and Guidance
3. **Stormwater Management** – Stormwater Standards Update and MS4 Alignment
4. **Compliance** – Inspection Guidance and Financial Assurance

The following sections provide guidance and justification for the preliminary, proposed updates for the Rules listed above.

1. **Wetland Protection – Buffer Width and Reduction Criteria**

The goal of the Wetland Protection update is to develop buffer width requirements regardless of management class and provide criteria to justify reduction to the minimum buffer width. The objective of this approach is to simplify a currently complex process and improve program efficiency, while maintaining the same level of natural resource protection. The following Table outlines the proposed guidelines for Average and Minimum buffer widths for two categories of wetlands.

Wetland Community Type	Suggested Buffer Width Average	Suggested Buffer Width Minimum
Circular 39 ¹ Types 3/4/5 (Cowardin Hydrology Modifiers ² C, F, G, H)	50 ft	25 ft
Circular 39 ¹ Types 1/2/6/7/8 (Cowardin Hydrology Modifiers ² A & B)	30 ft	15 ft

1. https://bwsr.state.mn.us/sites/default/files/2018-12/WETLANDS_delin_Circular_39_MN.pdf
2. <https://www.fws.gov/wetlands/documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf>

Reference: Program Alignment Rule Scoping

The development of these guidelines is based on wetland community type, specifically those with a hydrology modifier that may present with standing water during the growing season. The approach of using two categories, wetlands with standing water (Type 3, 4, 5) and wetland typically without standing water (Type 1,2, 6, 7, 8), shifts the focus to reducing water quality impacts, rather than based on wetland quality regardless of hydrologic regime. Wider buffer widths are required for wetlands with standing water which harbor aquatic life such as amphibians, invertebrates, and emergent plants more sensitive to degraded water quality. In lieu of an accepted functional assessment tool that is intended for determining wetland sensitivity to Total Suspended Solids (TSS) and Total Phosphorus (TP), using wetland hydrologic regime as the basis for determining appropriate buffer width is a reasonable and available approach.

Furthermore, wetland community types are a useful framework on which to base buffer widths that is not dependent on a wetland quality valuation, like MnRAM. MnRAM is no longer supported by BWSR and has not been updated in several years.. Currently, BWSR and the Wisconsin DNR are kicking off an initiative to develop a new method of wetland functional assessment, however no BWSR supported functional assessment tool is currently in place(<https://www.bwsr.state.mn.us/wisconsin-minnesota-wetland-functional-assessment-initiative>).

The new, proposed Average and Minimum buffer widths is based on a 2011 evaluation by MnDOT. Based on this evaluation TSS and TP removals were found to taper beginning at approximately 30-foot buffer width, with significant diminishing returns above a 50-foot buffer width. From a water quality perspective, 50 and 30 feet are appropriate benchmarks to achieve desirable removals; above 50 feet, the increase in percent reduction is very incremental with additional width (<http://www.dot.state.mn.us/research/TS/2011/2011-06.pdf>). See figures below extracted from this report.

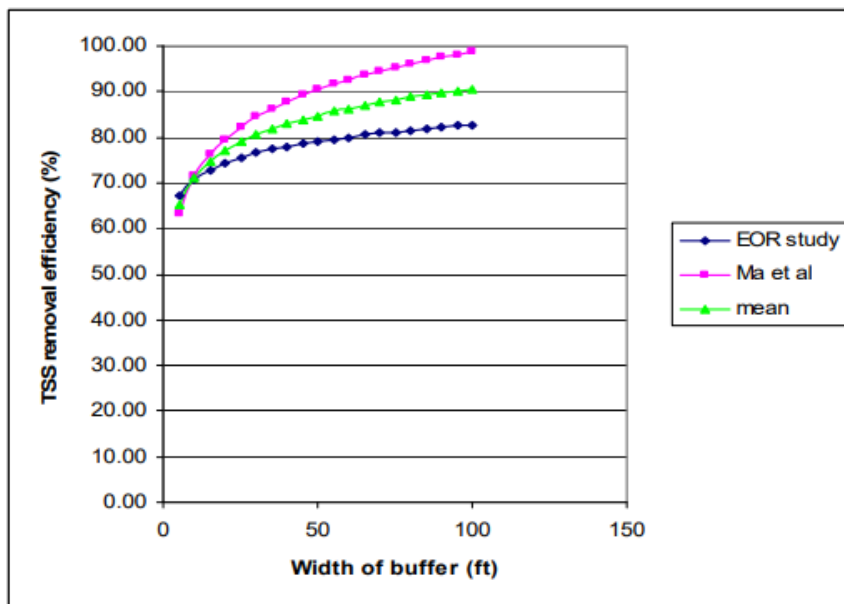


Figure 5.1 TSS removal efficiency based on buffer width. The equation used for the tool is the one for the mean described by the equation: $y = 8.50 \ln(x) + 51.53$.

Reference: Program Alignment Rule Scoping

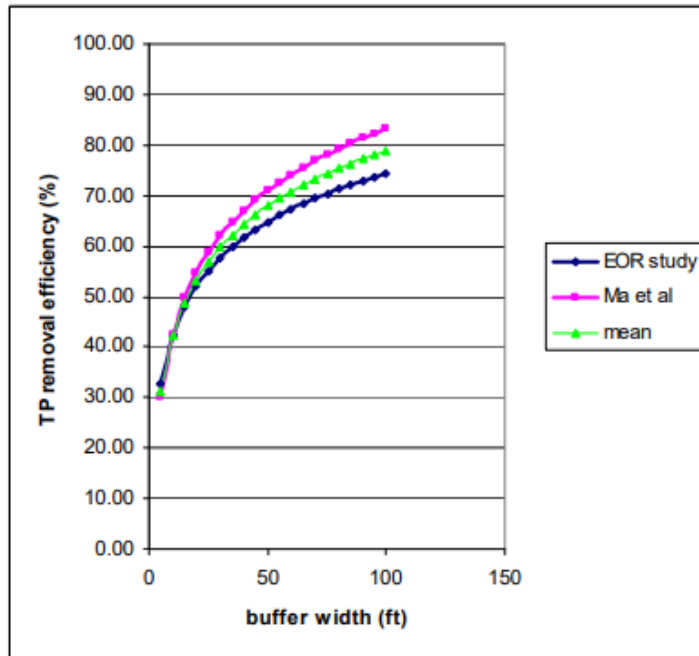


Figure 5.2 Total phosphorous (TP) removal efficiency based on buffer width. The equation for the tool is the one for the mean described by the equation: $y = 15.84 \ln(x) + 5.9$.

The 2011 MnDOT report referenced above also included an evaluation of wildlife uses in its Appendix A. Evaluated wildlife include several species of amphibians, reptiles, and bird. This life history summary table indicated that most evaluated wildlife life cycle stages may occur within buffer widths of 50 feet (15m), though some groups require a significant buffer width of up to 100m+. Overall, sources evaluated indicate that wildlife use of buffers varies greatly by species and is difficult to generalize.

As shown Figure 5.1 and 5.2, buffer width of 75 feet versus 50 feet does not result in a proportional return in wetland protection. Both figures indicate that reduction in TSS and TP begin to level off at a width of 50 feet. In addition to the limited additional benefit of a 75-foot buffer versus a 50-foot buffer, the 75-foot buffer creates a greater constraint on development potential of a site. The challenge of incorporating a 75-foot buffer is even greater on small sites. It is important to note that the 50-foot buffer width is the maximum required by the Minnesota State Buffer Law for lakes, streams, and rivers.

Buffer width as little as 15 feet are highly effective at reducing TSS and TP from entering a wetland. The equations shown in Figure 5.1 and 5.2 show a 75% reduction in TSS and a 49% reduction in TP with a 15 foot buffer. As 15 feet is utilized as the minimum width for Type 1,2, 6, 7, & 8 wetlands, it is important to consider that the average width of 30 feet will provide even greater reductions in pollutants entering the wetland.

Reduction Criteria: The District may consider providing reduction criteria in the rule, where if applicants can demonstrate that the projects meet certain criteria, the minimum buffer width can be utilized. For example, applicants can be allowed to use the minimum buffer width if they are able to meet the following criteria:

Reference: Program Alignment Rule Scoping

- For existing impervious surface, the applicant can use the minimum buffer width if onsite slopes adjacent to wetland are less than 3:1, and:
 - The existing, upgradient impervious surface is redirected to a different outfall, away from the wetland, or
 - The existing, upgradient impervious surface is redirected and treated (via 1.0" of abstraction).
- For new Impervious Surface, the applicant can use the minimum buffer width if all new, upgradient impervious surface is treated (via 1.0" of abstraction), before being discharged to the wetland.

Other Considerations:

Wetland Classification: The District may consider maintaining the current wetland management classification system (Management 1, 2, 3 & Preserve) which relies on the District's Functional Assessment of Wetlands instead of using the Circular 39 classifications. The proposed base (50' and 30') and minimum (25' and 15') buffer width could be used for the current classification, but the reliance on re-classification through the Minnesota Routine Assessment Method (MnRAM) should be revised as MnRAM is no longer supported by BWSR and has not been updated in several years. Using the Circular 39 classification will also streamline the wetland protection permitting for applicants as it is a standard classification system used throughout Minnesota and applicants are very familiar with it.

Enhanced Vegetative Buffer Considerations: The District may consider reduction criteria for applicants that provide buffers with greater vegetative diversity and buffer planting plans that match the existing vegetative cover of adjacent wetland and buffer communities. For example, this may include planting shrubs adjacent to wetlands with shrubby vegetative cover, or trees and shrubs adjacent to other forested corridors to provide contiguous habitat for wildlife. This will require further evaluation to be quantifiable within the rules.

Single Minimum Buffer Width: If it is desirable to apply a single, minimum buffer width for all wetland types, a buffer width of 15 feet could be considered as this width is still highly effective at reducing TSS and TP from entering a wetland. The equations shown in Figure 5.1 and 5.2 show a 75% reduction in TSS and a 49% reduction in TP for a buffer width of 15 feet. However, if a single minimum buffer width is considered, some additional reduction criteria should be added to ensure wetlands with standing water have adequate protection for aquatic wildlife.

2. Waterbody Crossings & Structures - Fast-track Recommendations and Guidance

The goal in updating the Waterbody Crossing & Structures rule is to provide applicants with clear, simplified guidelines on when a fast-track permit would be permissible. The simplified guidelines will also improve staff capacity through streamlining the permitting process for these culvert replacement projects.

A fast-track permit may be permissible if certain culvert restoration/replacement activities are proposed under the Waterbody Crossing and Structures rule. If a culvert will be restored using a liner, or it will be replaced in a manner similar ("in-like and in-kind") to existing conditions, the applicant should complete the "Culvert Change Analysis" (**Appendix A**) spreadsheet calculator provided by MCWD. The spreadsheet calculator requires the following information:

1. Describe the proposed changes of the culvert crossing (i.e. diameter, material, storm sewer or culvert)
2. Describe or name the waterbodies upstream and downstream of the culvert being altered
3. Use spreadsheet calculator to calculate the proposed changes in full flow capacity based on Manning's equation

Reference: Program Alignment Rule Scoping

Required inputs:

- Type of pipe (RCP, CMP, etc.) and inside diameter of pipe (in)
 - Upstream and Downstream invert elevations (ft)
 - Length (ft) – [Note: exclude any pipe aprons or flared end sections]
4. Evaluate change in full flow capacity and justify any changes greater than 3%
 5. Describe how the proposed changes will not adversely affect water quality
 6. Provide two (2) alternatives to the culvert changes and describe how the proposed change represents the “minimal impact” solution

Types of proposed changes that will require further review by District Engineer and/or further Hydraulic & Hydrologic analysis:

- Proposed conditions that result in full flow capacity changes greater than 3%
 - It should be noted that this is only applicable for culverts outside of FEMA Flood Hazard Zones, culverts within FEMA FHA Zones will still need a No Rise Analysis.
- Upstream invert elevation of pipe raised by more than 0.1-foot

3. Stormwater Management – Stormwater Standards Update and MS4 Alignment

The goal in updating the Stormwater Management Standards is to:

- Align the MCWD Stormwater Standards with the MS4 Standards to meet State Standards and create a consistent regulatory framework with partner cities.
- Simplify the criteria for applicants and improve program efficiency, and
- Provide equivalent resource protection as the existing MCWD Stormwater Standards.

The following Table provides a draft Stormwater Management Requirements Table that achieves all of three of the goals.

Project Type	Trigger	Treatment Scope	Requirements
Linear	1.0 acre (or more) of: •New impervious surface •Fully reconstructed impervious surface •A combination of both	The greater of: •1" over the new impervious surface •0.5" inches over the sum of the new and fully reconstructed impervious surface	Volume Control – abstraction of 1.0" over the impervious Rate Control – must maintain 1-, 10-, 100-yr events at all points where SW leaves the site Phosphorus – met with 1.0" of abstraction (Volume Control)
Development/Redevelopment (Site Area < 1.0 acres): Includes: •Commercial •Industrial •Institutional •Public Facility Improvements	New or fully-reconstructed impervious surface	None	Incorporate Stormwater BMP
Development/Redevelopment: (Site Area ≥ 1.0 acres): Includes: •Commercial •Industrial •Subdivisions (3+ lots) •Institutional •Med/High Density Residential •Public Facility Improvements	New or fully-reconstructed impervious surface	< 50% Disturbance of Existing Impervious = •Treatment of the additional and/or fully reconstructed impervious surface	Volume Control – abstraction of 1.0" over the impervious Rate Control – must maintain 1-, 10-, 100-yr events at all points where SW leaves the site Phosphorus – met with 1.1" of abstraction (Volume Control)
		≥ 50% Disturbance of Existing Impervious = •Treatment of the entire site's impervious surface.	Volume Control – abstraction of 1.0" over the impervious Rate Control – must maintain 1-, 10-, 100-yr events at all points where SW leaves the site Phosphorus – met with 1.0" of abstraction (Volume Control)
Single Family Homes	Exempt	Exempt	Exempt
Agriculture	Exempt	Exempt	Exempt

The proposed Stormwater Management Requirements Table aligns our current requirements with MS4, while maintaining our current level of natural resource protection by:

- Continuing to require BMPs for sites/disturbances of less than 1 acre, and
- Requiring major redeveloping sites to bring their entire site in conformance with current stormwater standards.

These two requirements are above-and-beyond MS4 Standards and have some advantages and disadvantages that require further consideration:

- 50% Disturbance of Existing Impervious Treatment Scope Criteria
 - The advantage of keeping this criteria is that most of the large Stormwater Permits are for redevelopment and for projects where they are disturbing greater than 50% of the Existing Impervious Surfaces, this may be the District's one chance in the next 10-50 years to bring the entire parcel up to current standards. The District currently has criteria to enforce that the entire site's impervious surface require treatment, however, the current criteria is triggered when a site disturbs greater than 40% of the site or increases impervious surface by greater than 50%.
 - Focusing on the disturbance of existing impervious surface will align the criteria with the new, proposed rule triggers, which focus on the amount of new or fully-reconstructed impervious surface.
 - Instances where this treatment scope criteria were triggered in the past disproportionately affected schools, where the entire site required treatment when greater than 40% of the site was disturbed. In these instances, it was very difficult to treat existing impervious surfaces, such as buildings, where existing stormwater is routed internally or directly to storm sewer. With the new focus on the amount of existing impervious surface disturbed, this will hopefully target sites capable of bringing their entire site in conformance with current stormwater standards without causing an undue burden on the applicant.
 - The disadvantage of using this criterion is the need to track Phased and Connected disturbances of impervious surface, however, this could be simplified by only going back as far as '*when the new rules go in place*' (expected 2022), instead of 2005. This will allow the District to track permits and disturbances in the new geodatabase and Permitting software.
- Incorporating BMPs for sites with Disturbance of < 1 ac
 - The advantage of keeping this requirement is that it maintains the current standard to require BMPs for sites less than 1 acre.
 - Although these projects will still be required to provide a BMP, there are some disadvantages:
 - Most projects that fall into this category simply satisfy the rule by including an insignificant BMP (i.e. – a 'sump' manhole or catch basin) that does not provide significant water quality.
 - These projects take up a lot of Staff and Engineer review time. From 2011-2020, there were 513 Stormwater Permits, and 38% of those (195) were for sites less than 1 acre.
 - If the District were to keep this rule, it would greatly benefit the efficacy of the rule by defining a treatment scope. Currently, there is no water quality or volume abstraction target for these sites, so most sites implement a sump catch basin or sump manhole that provides a very small amount of treatment. For example, a 0.25-0.50" of volume control for new and disturbed impervious surfaces, or a TP or TSS removal could be established, to require more substantial BMPs.

Reference: Program Alignment Rule Scoping

4. Compliance – Inspection Frequency and Financial Assurance

Compliance

The goals in updating the inspection frequency guidelines within the Permitting Department is to make sure District Staff:

- Prioritize high risk and high priority projects,
- Develop Site Prioritization Criteria to meet MS4 Requirements, and
- Develop a baseline frequency for Low-High Priority Sites to help focus District Staff resources.

To accomplish these goals, all project types were given an initial Site Priority based on the project type and the likely resources that would be affected. Then inspection frequencies and additional Site Prioritization Criteria was developed to help further define Site Priority. This is broken down further in **Appendix B**.

- Overall, the following Site Priority Projects should be inspected at the respective frequencies:
 - Very High to High Priority Projects – 50% of these projects should be Inspected at a schedule and priority outlined in the Table.
 - Medium Priority Projects – 25%
 - Low Priority Projects – 10%
 - Single Family Homes Projects – 5% (~10 per year).

These suggested frequencies should give the District a good sample size of the different projects then the frequencies can be adjusted based on compliance issue findings. Within those Project types, further priority should be given to Projects based on the following Site Prioritization Criteria:

- Steep slopes (3:1 or greater), dewatering activities, high erosion potential
- Level of activity and stage of construction
 - Grubbing and clearing
 - Grading
 - Streets, curb, storm, utilities
 - Surface stabilization
 - Building construction
 - Landscaping and final stabilization
- Proximity to natural resources, sensitive or special waterbodies, and impaired waters
- SWPPP reviewer and inspector's professional judgement
- Complaints: Complaints received from the public, reports from District staff, or referrals from other agencies (City, State, LGUs, etc.)
- Compliance: Compliance history of site, timeliness of addressing non-compliance, recordkeeping, and submittal of self-inspections

Based on these additional Site Prioritization Criteria, some project types might move from High Priority to Low Priority or from Low Priority to High Priority.

Financial Assurance

The goals for updating the Financial Assurance Equations were::

- Simplify the equations,
- Rely on modern criteria,
- And match what we are seeing on a Local and National level.

The following Table outlines the Proposed Financial Assurances for each Project Type, while a comparison other local and national criterion can be found in **Appendix C**.

Reference: Program Alignment Rule Scoping

Category	MCWD - Proposed	
Erosion / Grading	Errosion Control	
	<1 acre disturbed	\$0
	1-5 acre	\$3,000
	5-10 acre	\$5,000
	10 acre	\$7,500 + \$200/acre over 10
Wetland Protection	Wetland Protection	
	Wetland Alteration*	\$5000 + \$10,000/acre max is \$25,000
	*Alteration is Impact or replacement	
Dredging	Dredging	
	Dredging	equal to price of project
Shoreline / Streambank	Shoreline Stabilization	
	rip rap, sand blankets, retaining walls, boat ramps, etc.	\$5000 + or total shoreline impacted times \$100/ft
	annual rate	\$25,000
Stormwater Management	Stormwater Management	
	Stormwater Management Facilities	\$5,000/acre*
	* acre is in reference to impervious area to be treated	
Floodplain Management		
Near Public Waterbody		
Financial assurances may be required by the Minnehaha Creek Watershed District (MCWD) to cover potential liabilities. These include the cost of installing and maintaining protective measures as described in the permit, as well as the cost of addressing damage that results from permit noncompliance.		

Reference: Program Alignment Rule Scoping

Following is an overview of the updated Financial Assurances and the justification:

- Erosion Control
 - The fees are now based on acres of disturbed area.
 - The current ranges were kept, but costs for each range were updated and increased to match Local and National watershed levels/pricing.
- Wetland Protection
 - Increased maximum and per-acre pricing to match pricing.
- Dredging
 - No change.
 - Current assurance level is consistent with other watersheds.
 - If the current assurance calculation is not desirable, a \$/CY could be implemented. This equation would be somewhere between \$100-500/CY
- Shoreline/Streambank
 - No change.
- Floodplain Alteration
 - With the current requirement of an as-built survey, a financial assurance for Floodplain alteration is not needed.
- Stormwater Management
 - Updated to reflect current technology and base it on the treatment scope for simplicity.
 - Pricing has been updated to median pricing around the Greater Twin Cities and Nationally.
 - Pricing also reflects an approximate 3% surety based on treatment volume. Stantec reviewed stormwater costs for filtration and infiltration BMPs within the Greater Metro Area and found that it costs approximately \$160,000/acre of treatment (assuming 1.0" of abstraction). A 3% surety based on acre of treatment would be approximately \$4,800. Therefore, \$5000/acre of treatment was used.
 - At \$5,000/acre of stormwater treatment, the District, enough budget should be available to re-construct stormwater facilities that are installed or constructed incorrectly.
 - A cost analysis should be performed every 3-5 years to see if the \$160,000/acre for stormwater facilities increases significantly and then the financial assurance can be adjusted (increased) accordingly.

Culvert Change Analysis Example

Culvert Change Analysis

Step 1: Describe the proposed changes of the culvert crossing.

Step 2: Describe the waterbodies (i.e. Wetland, stream, Lake, etc) and provide waterbody name and/or Wetland Management Type (i.e. - Manage 1,2,3, or Preserve).

Upstream Waterbody:

Downstream Waterbody:

Step 3: Calculate the changes in full flow capacity.

<u>Culvert Characteristics</u>	<u>Existing</u>	<u>Proposed</u>	
Type (RCP, CMP, etc.)	RCP	HDPE	User Selection
Upstream Invert ¹ (ft)	931.15	931.19	User Input
Downstream Invert (ft)	930.05	930.09	User Input
Length (ft)	40	40	User Input
Size: Inside Diameter ² (in.)	32	31	User Input
Manning's n	0.012	0.011	Calculated
Full Flow Capacity (cfs)	87.76	87.97	Calculated
Change in Full Flow Capacity (%)		0.24%	Should be < 3%

Step 4: Effects or changes in flood stages, water quality, and aquatic and wildlife passage.

4A. For all changes in full flow capacity, provide an explanation for how the changes will not result in upstream or downstream increases in flood stage. If changes are greater than 3%, an H&H Analysis may be needed.

4B. Describe how the changes will not adversely affect water quality.

4C. Provide two (2) alternatives to the culvert changes and describe how the proposed change represents the "minimal impact" solution.

NOTES

1. If the upstream invert increases greater than 0.1', an H&H Analysis may be needed. Also, take into account an changes in diameter via lining when calculating the proposed Inverts.
2. If lining an existitng culvert, please subtract the liner thickness (x 2) from the existing diame

Risk Analysis and Site Prioritization Matrix

Project Type	MCWD Regulatory Rules Likely Triggered							Recommended Inspection Frequency	Site Prioritization Criteria	Site Priority	Resources likely affected	Basis/Justification	
	Erosion Control	Stormwater Management	Floodplain Alteration	Wetland Protection	Waterbody & Structures	Streambank & Shoreline Stab.	Dredging						
Large-scale (>20 ac, >10 lots) residential development or redevelopment	X	X		X	X			<ul style="list-style-type: none"> •Steep Slopes (3:1 or greater) •High erosion potential •Dewatering •Level of disturbance (tiered based on previous projects) •Level of activity or stage of construction •Proximity to natural resources, sensitive or special waterbodies, and impaired waters •SWPPP reviewer and inspector professional judgement •Complaints •Compliance: Compliance History, timeliness of addressing non-compliance, recordkeeping, self-inspections 	<ul style="list-style-type: none"> •High Priority (50% Frequency) <ul style="list-style-type: none"> •Initial, monthly, final •Level of activity or stage of construction •Medium Priority (25% Frequency) <ul style="list-style-type: none"> •Initial, quarterly, final •Level of activity or stage of construction •Low Priority (10% Frequency) <ul style="list-style-type: none"> •Initial, Final •Level of activity or stage of construction •Complaint and compliance based 	<ul style="list-style-type: none"> •Complaint and compliance follow ups •Complaint and compliance follow ups •Complaint and compliance based 	Very high	Wetlands, streams, adjacent (upstream & downstream) waterbodies, forest/wooded areas, and natural grassland areas	Large residential development and redevelopment projects tend to provide the highest risk to natural resources by project type. These projects tend to alter the natural hydrology of the landscape most drastically with waterbody crossings and structures needed for roadways and wetland mitigation likely needed to fit density requirements and the footprints of stormwater BMPs. These larger re-/development projects greatly decrease natural habitat and many times replace more natural pervious areas with lawns.
New linear transportation (> 10,000 sf of new impervious surface)	X	X		X	X						Very high	Wetlands, streams, and adjacent (upstream & downstream) waterbodies	New linear transportation projects usually consist of wetland impacts and waterbody/structure crossings that can split natural corridors and have a great effect on overall hydrology. Additionally, these projects tend to have limited ROW available for stormwater treatment while they also create large TSS and TP loads.
Smaller-to-medium scale (< 20 ac, 3-10 lots) residential development or redevelopment	X	X		X	X						High	Wetlands, streams, adjacent (upstream & downstream) waterbodies, forest/wooded areas, and natural grassland areas	These projects tend to have many of the same types of impacts as large-scale redevelopment but the problems/issues risk associated with these projects have a higher probability of being mitigated, post-construction.
Waterbody crossings: sanitary sewer crossings and directional drilling for utilities	X				X						High	Wetlands, streams, waterbodies	These sanitary sewer and utility crossings have fairly low risk during installation, but if they are improperly installed or do not have redundancy measures can result in direct leaks or discharges to waterbodies that are very costly to remediate and can take years to mitigate or clean up.
Waterbody crossings: bridge and culvert replacement	X		X	X	X		X				High	Streams, waterbodies	These projects have the ability to create large changes in upstream or downstream water levels or flooding issues if not properly constructed. Many bridge crossings also trigger and affect an analysis under FEMA and regulated floodplains.
Dredging	X		X				X				Medium	Waterbodies, stormwater ponds, and navigable channels.	Although these projects directly disturb natural resources, a majority of these projects are permitted to restore existing or historic, as-built conditions for stormwater ponds, navigable channels, or sedimentation deposits in streams. The longterm effects of these dredging projects are most-often negligible.
Linear transportation re-/construction (<10,000 sf of new impervious surface)	X				X						Medium	Wetlands, adjacent (upstream & downstream) waterbodies	These projects have less of an impact than large-scale linear transportation projects, but can sometimes result in higher loads of TSS/TP and stormwater runoff rates as a large majority of these projects tend to be designed just under the 10,000 sf threshold so additional stormwater treatment is not required.
Slope Stabilization	X		X				X				Medium	Waterbodies and streams	The largest risk of these projects is usually loss of natural habitat along the shoreline when hard-armoring is utilized. However, this loss of natural shoreline usually benefits the waterbody/stream by reducing TSS/TP loads and property loss.
Commercial site redevelopment	X	X									Low	Downstream/receiving waterbodies	Commercial redevelopment projects tend to have increases in impervious surface, but most-likely require stormwater treatment and benefit natural resources. The projects tend to be in urban/developed areas, where direct disturbance to natural resources is not high.
Streambank Stabilization	X		X		X		X				Low	Streams	These projects usually require disturbance of natural habitat along the stream corridor for construction access and can reduce the natural bank environment if hard armoring is required, but these projects are usually a net benefit to the stream as they reduce soil loss and TSS loads at the stream and maintain/restore hydraulic capacity.
Single Family Homes	X							Low	Downstream/receiving waterbodies	These projects are usually permitted as part of a larger re-/development project so they have already been reviewed and there is usually a redundancy of permitting requirements through Cities so the probability and risk of these projects having a large effect on natural resources are low. Additionally, approximately 5% of these projects, or less, require wetland permitting to establish buffer or a hydraulic analysis of address waterbody crossings.			
Shoreline Stabilization	X		X				X	Very Low	Waterbodies (Lakes)	The largest risk of these projects is usually loss of natural habitat along the shoreline when hard-armoring is utilized. However, this loss of natural shoreline usually benefits the waterbody by reducing TSS/TP loads and property loss.			

Financial Assurance Comparison

Category	MCWD - Proposed	MCWD - Current	Coon Creek	Nine Mile
Erosion / Grading	Erosion Control <1 acre disturbed \$0 1-5 acre \$3,000 5-10 acre \$5,000 10 acre \$7,500 + \$200/acre over 10	Erosion Control <1 acre \$0 1-5 acre \$1,500 5-10 acre \$2,500 10 acre \$3500 + \$200/acre over 10	Performance Escrow property size \$2000 + \$500/acre	Erosion and Sed Control property area \$2,500 / acre disturbed erosion BMP's \$2.5 / linear foot of erosion control req
Wetland Protection	Wetland Protection Wetland Alteration* \$5000 + \$10,000/acre max is \$25,000 *Alteration is Impact or replacement	Wetland Protection wetland alteration \$5000 + \$1000/acre max is \$15,000	Wetland Escrow wetland impact \$500 + \$35,000 per acre	Wetland Management for wetlands \$5,000 + \$1000 / acre over 10 acres
Dredging	Dredging Dredging equal to price of project	Dredging Dredging equal to price of project		Sediment Removal sed removal cost of project
Shoreline / Streambank	Shoreline Stabilization rip rap, sand blankets, retaining walls, boat ramps, etc. \$5000 + or total shoreline impacted times \$100/ft annual rate \$25,000	Shoreline Stabilization rip rap, sand blankets, retaining walls, boat ramps, etc. \$5000 + or total shoreline impacted times \$100/ft annual rate \$25,000	Performance Escrow frontage fee on the main channel \$2000 + \$20/ft	Shoreline / Streambank shoreline or streambank \$5,000 or total number of feet of shoreline or streambank affected times \$100
Stormwater Management	Stormwater Management Stormwater Management Facilities \$5,000/acre* * acre is in reference to impervious area to be treated	Stormwater Management sites requiring ponds \$20,000 per acre-ft dead volume \$1,700/ acre		Stormwater Management infiltration basin \$12 / sqft* rain garden \$12 / sqft* underground storage \$980 / acre impervious treated all other facilities 125% of construct and maintenance cost chloride management \$5,000 *sqft is in reference to impervious area
Floodplain Management				
Near Public Waterbody				
Additional Notes	Financial assurances may be required by the Minnehaha Creek Watershed District (MCWD) to cover potential liabilities. These include the cost of installing and maintaining protective measures as described in the permit, as well as the cost of addressing damage that results from permit noncompliance.	Financial assurances may be required by the Minnehaha Creek Watershed District (MCWD) to cover potential liabilities. These include the cost of installing and maintaining protective measures as described in the permit, as well as the cost of addressing damage that results from permit noncompliance.	When appropriate, the District may collect the following Escrows. Escrow amounts are reviewed and established annually by the Board of Managers.	Financial Assurance required for a particular permit will include a 10% contingency and 30% admin cost amount in addition to the amounts calculated according to the schedule above. Minimum financial assurance amount (when required) is \$5000

Category	Capital Region	Rice Creek	Prior Lake - Spring Lake	Virginia
Erosion / Grading	Grading associated with developmen \$2000/acre	Land Disturbance <1 acre \$1,000 1 - 10 acre \$1000 + \$500/acre over 1 10+ acre \$5,500 + \$250/acre over 10	Site Development /Grading grading \$1000/acre	Land Disturbing Permit Bond --> E&S control < or = 1 acre \$1,000 additional disturbed acreage additional \$ 500 / acre
Wetland Protection		Wetland Mitigation wetland mitigation \$25,000/acre of replacement		Stormwater Permit Bond --> E&S control resotoration (grade and vege \$2,500 / acre
Dredging				Stormwater Permit Bond --> Lake evacuation \$15 / cubic yd
Shoreline / Streambank				Stormwater Permit Bond --> Lake lake bank stabilization / restoration
Stormwater Management	Stormwater Management SWM facilities \$5,000 / acre * acre is in reference to impervious area	Stormwater Management treatment \$0.5/cubic ft of treatment required \$2000/acre * cubic ft is in reference to impervious area * treatment depth	Stormwater Management ponds, outlets, infiltration basins, manholes, rain gardens, etc. 125% estimated construction cost	Stormwater Permit Bond --> E&S control sediment trap or basin \$2,500 / runoff acre
Floodplain Management		Floodplain Mitigation mitigation \$7.50/cubic yd mitigation required		
Near Public Waterbody			Construction Near Prior Lake public ditch or water crossing \$2,000 or single-lane, \$5,000 for 2+ lanes grading within 100 ft of Prior Lake \$3000 for dist < 500ft, \$5,000 for a dist >500ft	
Additional Notes	Sureties shall be paid in full prior to issuance of a district permit in the form of a check. The surety will be used to ensure the completion of work in accordance with the permit. ...the unutilized surty will be returned to the applicant	Sureties are generally required of all applicants, and are set by District staff and/or the District engineer after initial review of the project application. A surety is a monetary sum provided by the applicant to the District to ensure the project is completed as designed and in compliance with District Rules. The District returns the money to the applicant after all permit conditions are met and the project is	The District Rules also require cash security or an irrevocable renewable letter of credit to ensure completion of the permitted activity in accordance with the permit and the rules of the District (see Rule L). The Permit Security is due following Board approval of the application, prior to permit issuance.	The bonds are calculated based off a spreadsheet which gets pretty detailed. I included some of the main ticket items that go into the bond calculation for comparison to MCWD, but there calculation involves more than what is listed.



Regulation of Changes in Stormwater Conveyance System Flows Under Waterbody Crossings & Structures Rule

BACKGROUND

The District's present Waterbody Crossings & Structures rule states:

No person shall ... place a road, highway, utility, bridge, boardwalk or associated structure in contact with the bed or bank of any waterbody ... without first securing a permit from the District.

The rule applies when a stormwater outlet structure is installed or replaced in the bank of a stream channel. To approve the structure, the District must find it:

- (a) won't reduce the hydraulic or navigational capacity of the waterbody;
- (b) won't impair water quality; and
- (c) is the "minimum impact" solution to the applicant's need.¹

There's an ambiguity in the rule: Does the District examine the impact just of the physical structure itself? Or does it also examine changes in stream flow or stream water quality due to alteration of the stormwater conveyance system of which the outlet work is a part? (This may include modifying the catchment that flows to the system, extending the system, or changing system configuration or dimensions.)

District staff have tended to apply it to both. However, as the District's specific initiatives - for example, its 2D modeling and broader climate adaptation strategy - lead to a broader District concern for regional flow management, and as cities rework municipal conveyance systems for their own similar purposes, it becomes less clear that the District's engagement in regional stormwater and flood management is best carried out through the regulatory function.

The present District rule review is an apt time to present this question to the Board of Managers, and to receive direction as to how best to advance the District's role in regional stormwater conveyance and flood management.

STAFF RECOMMENDATION

¹ In assessing minimal impact, the District may consider all types of water resource impacts, including but not limited to water quality and quantity, ecological quality, and aquatic and riparian habitat.

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Staff recommends the following:

- In the rule revision, the District clarify that the waterbody crossings and structures rule applies only to the impact of the physical structure itself.
- Changes to stormwater flows from conveyance system alterations are managed by District engagement in city land use and capital project planning.
- As the District advances its programmatic regional flooding and stormwater conveyance initiatives, it will consider whether identified goals can be achieved in part through its regulatory function. At that time, the District would undertake targeted revisions to its rules.

RATIONALE for STAFF RECOMMENDATION

1. The core purpose of regulating structures in stream banks is to protect the physical integrity of the bank and surrounding riparian system so that:

- (a) The structure doesn't reduce the capacity of the channel to carry flows;
- (b) The design doesn't impair navigation or present a safety hazard to navigational users;
- (c) The discharge doesn't cause bank scour or erosion; and
- (d) The structure doesn't physically disrupt aquatic or riparian habitat.

2. The trigger for the crossings rule - impact to the channel bank - is arbitrary for the purpose of reviewing city conveyance system changes to regional stormwater flows and flood management. If the outlet is altered or replaced, the District has review authority. If the outlet is not touched, it does not, even if the system is altered above the outlet in a way that produces dramatic flow changes.

3. The District presently can review conveyance system changes for impact to flood stage in the receiving stream. The District is developing, but doesn't yet have, the modeling tools to assess upgradient or cumulative impacts from altering municipal stormwater conveyance systems.

4. A design that comes to the District for permit review likely has been preceded by land use and capital planning decisions, as well as substantial design activity. District regulatory review that would require project adjustments is untimely and would require unwinding prior city processes and decisions. Coordinating earlier, in a planning mode, both allows the District to bring its concerns to bear and enhances the opportunity for partnered work. In this mode, approaches might include identifying regional storage locations, zoning and subdivision modifications to support regional or decentralized storage, and partnering on projects that achieve mutual flood management, water quality and resource protection goals.

5. District regulation of changes in regional conveyance system discharges unrelated to development on individual sites injects the District into city land use and capital planning decisions and asserts District authority to override those decisions. Approaching city stormwater infrastructure through a planning

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framework, and by means of partnering opportunities, allows the District to timely engage with its cities while respecting city discretion in its planning realms.

STAFF COORDINATION WITH CITIES

In approving local water management plans, the District requires that each city submit a coordination plan that, among other things, obligates the city regularly to transmit land use and capital planning documents to the District and provides for District and city staff to meet annually to review city plans. District staff will work with cities to refine coordination plans to name regional stormwater and flood management priorities, communicate specific needs (for example, areas of local flooding), and support partnering opportunities.

DRAFT

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