

City of East Bethel
City Council Agenda
Work Meeting - 6:30 PM
Date: Monday, June 10, 2013



Item

- | | | |
|---------|------------|--------------------------|
| 6:30 PM | 1.0 | Call to Order |
| 6:31 PM | 2.0 | Adopt Agenda |
| 6:32 PM | 3.0 | MIDS Presentation |
| 8:30 PM | 4.0 | Adjourn |



City of East Bethel City Council Agenda Information

Date:

June 10, 2013

Agenda Item Number:

Item 3.0

Agenda Item:

Minimum Impact Design Standards

Requested Action:

Review MIDS project that has been discussed with the Planning Commission since 2011.

Background Information:

Minimum Impact Design Standards is a program used in conjunction with existing stormwater management practices to help communities deal with development and how to best address storm sewer and surface water runoff. As an MS 4 Community, the City of East Bethel is already required to address best management practices related to storm sewer. The State of Minnesota has mandated that these practices **include** minimum impact design standards. Jay Michels of Emmons and Olivier will be presenting information on MIDS and next steps for the City of East Bethel.

Attachments:

MIDS COMMUNITY ASSISTANCE PACKAGE

Fiscal Impact:

Recommendation:

Staff is requesting that the Council provide feedback so that we are able to put together the final MIDS project recommendations.

City Council Action

Motion by: _____

Second by: _____

Vote Yes: _____

Vote No: _____

No Action Required: _____



Minimal Impact Design Standards
for enhancing stormwater management in Minnesota

Community Assistance Package Pilot Community Draft



June 2013

insert document code

Acknowledgements

The Minimal Impact Design Standards (MIDS) Community Assistance Package results from the contributions of many individuals and organizations.

The Minnesota Pollution Control Agency (MPCA) and the MIDS Steering Committee guided the project and developed the performance standards and credit calculator that are integral to the project. The development of the Community Assistance Package as part of the St. Croix MIDS Pilot Community Project was funded by a U.S. Environmental Protection Agency Clean Water Act Section 319 Grant to the MPCA. The grant was managed by the Washington Conservation District with input from the St. Croix MIDS Pilot Community Project Steering Committee. The St. Croix MIDS Pilot Community Project was established to help St. Croix Basin communities meet state water quality regulatory requirements and provide a real testing ground for the application of the new MIDS performance goals, credits and calculators, and the community assistance package. For information on the St. Croix MIDS Pilot Community Project, contact Jay Riggs, District Manager, Washington Conservation District, 651-275-1136 Ext. 20, jay.riggs@mnwcd.org.



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The Community Assistance Package drew on example resources developed by several agencies, local governments and organizations. We would like to acknowledge the following for sharing their work:

City of Hanover, Minnesota
City of Stillwater, Minnesota

Center for Watershed Protection
Washington Conservation District

Stearns County, Minnesota

Minnesota Pollution Control Agency "From Policy to Reality: Model Ordinances for Sustainable Development" available at: <http://greenstep.pca.state.mn.us/modelOrdinances.cfm>

For more information about the MIDS project, contact Anne Gelbmann at 651-757-2384. Or visit the MIDS project website at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-minimal-impact-design-standards-mids.html>.

Additional funding for the MIDS project came from the Clean Water Fund of the Clean Water Land and Legacy Amendment.

This document is available in alternative formats ([insert document code](#)).



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Minimal Impact Design Standards (MIDS) Background

The State of Minnesota has undertaken a major effort to promote Low Impact Development (LID) in conjunction with existing stormwater rate control practices, to:

- Reduce runoff volumes and rates;
- Improve runoff quality; and
- Develop a unified crediting system for practitioners and the MPCA to document pollutant load reductions.

This effort is the Minimal Impact Design Standards (MIDS) project. MIDS represents the next generation of stormwater management.

Sparked by the anticipation of impending Municipal Separate Storm Sewer System (MS₄) permit updates that included antidegradation compliance and outstanding resource value waters (ORVW) requirements, the MIDS concept was initiated by a unique coalition of the Minnesota Cities Stormwater Coalition, MS₄ communities, the League of Minnesota Cities, the Builder's Association of the Twin Cities, environmental advocacy organizations, local watershed districts, the Stormwater Steering Committee of the Minnesota Pollution Control Agency (MPCA), and key state legislators interested in water quality protection. The support and testimony of the partnership's broad membership was critical to the successful legislative effort authorizing and funding the project.

The coalition's goal was to authorize a process by which permittees could be certified by MPCA as in compliance with Clean Water Act antidegradation requirements and state ORVW requirements through the adoption of a package of minimal impact design standards. The package would include a performance standard, a method of calculating stormwater credits for best management practices, and model ordinances for adoption by cities. The coalition met its goal through its transformative support for the MIDS legislation. Adoption and implementation of the MIDS community assistance ordinance package can help your community comply with regulatory requirements related to antidegradation and Total Maximum Daily Loads.

The MIDS project is authorized under Minnesota Statutes enacted in 2008, Chapter 115 Water Pollution Control Act, 115.03 Powers and Duties.

Subdivision 5c. Regulation of storm water discharges.

(c) The agency (*Minnesota Pollution Control Agency*) shall develop performance standards, design standards, or other tools to enable and promote the implementation of low-impact development and other storm water management techniques. For the purposes of this section, "low-impact development" means an approach to storm water management that mimics a site's natural hydrology as the landscape is developed. Using the low-impact development approach, storm water is managed on-



site and the rate and volume of predevelopment storm water reaching receiving waters is unchanged. The calculation of predevelopment hydrology is based on native soil and vegetation.

As authorized by statute, the Minnesota Pollution Control Agency is leading the effort to develop technical criteria and products. MPCA is working closely with the MIDS Work Group and stakeholders throughout the state. Detailed information on the MIDS process is available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-minimal-impact-design-standards-mids.html>.

The MIDS project will result in several significant products to assist communities and permittees in complying with antidegradation requirements, ORVW requirements, and Total Maximum Daily Load (TMDL) allocations. The products include:

- A higher clean water performance goal for new development and redevelopment that will provide enhanced protection for Minnesota's water resources. In April 2011, MIDS Work Group members agreed on the following performance goal for new development: For new, nonlinear developments that create more than one acre of new impervious surface on sites without restrictions, stormwater runoff volumes will be controlled and the post-construction runoff volume shall be retained on site for 1.1 inches of runoff from impervious surfaces statewide. The Work Group is working on a performance goal for redevelopment and linear projects.
- New modeling methods and credit calculations that will standardize the use of a range of "innovative" structural and nonstructural stormwater best management practices (BMPs).
- Design specifications for a variety of green infrastructure stormwater BMPs.
- A credits system and ordinance package that will allow for increased flexibility and a streamlined approach to regulatory programs for developers and communities.

This Community Assistance Package is designed to help communities adopt local ordinances and implement BMPs as a step toward antidegradation, ORVW, and TMDL compliance. However, communities discharging into a receiving water with an approved TMDL, should review the specific TMDL requirements for the receiving water as higher/additional performance standards may apply. Information on TMDLs can be found on the MPCA website: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/tmdl-projects/tmdl-projects-and-staff-contacts.html>. The Community Assistance Package, and other MIDS project products, will be included as part of an update of the Minnesota Stormwater Manual (MSWM) which is designed to provide state-of-the-art tools for improved stormwater management. Builders, developers, public works departments, city development commissions/city planners, design engineers and governmental reviewers should use these products for defining site development options and stormwater management expectations. The current Minnesota Stormwater Manual can be viewed at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-management/minnesota-s-stormwater-manual.html>.



Several concepts are key in the development of MIDS work products. These concepts are:

- **No Net Increase**

Development stormwater controls will result in the same pre-development volume and rate stormwater discharges for all new development and redevelopment to the best extent possible. It is understood that this will mean flexibility to accommodate certain considerations relating to set-aside lands, density of development, linear projects and geographic-based constraints.

- **Effective**

Morphologic impacts on streams from increased volumes of runoff during small to moderate storms are prevented. MIDS techniques will be effective on a site-by-site basis, as well as on a broader watershed-wide scale.

- **Flexible**

Diversity among Minnesota's municipalities shall be accommodated by the guidelines. The diversity in aquatic ecoregions and geology also present major challenges that require flexibility to achieve consistent stormwater management across the state.

- **Technically Sound and Scientifically Based**

MIDS methodologies must be technically sound, peer reviewed and defensible.

Pilot Community Testing of DRAFT Community Assistance Package

During 2012, this DRAFT Community Assistance Package will be tested with several pilot communities. The pilot communities represent both large and small communities. It is expected that refinements will be made to the draft based on learning from work with the pilot communities.

The letter on the following pages provides support from MPCA for communities which adopt local ordinance changes pursuant to MIDS guidance in the FINAL Community Assistance Package. The final Community Assistance Package will not be officially endorsed until work with the pilot communities is completed and resulting refinements to this draft are completed.





Minnesota Pollution Control Agency

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800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employer

June 29, 2011

To: Communities of the St. Croix River Basin

RE: Volunteer Communities Needed for St. Croix Minimal Impact Design Standards Pilots

Dear Community Leaders:

As community leaders in the St. Croix Basin, you know that you live in a very special and rare place and that maintaining the vitality and quality of life of your community are important responsibilities. The St. Croix Basin's precious water resources are highly valued and because of your settings, many communities will likely see substantial urban growth in the years to come. While urban development can contribute to water pollution, there are new and improved urban development techniques that could be included in your future community planning that offer: (1) significant cost savings; (2) visually appealing options; and (3) prevent or minimize unintended consequences (pollution) from urban stormwater runoff on your lakes and streams.

The Minnesota Pollution Control Agency is requesting that you consider volunteering to be a St. Croix Minimal Impact Design Standards (MIDS) Partnership Pilot Community. The purpose is to foster the use of Low Impact Development (LID) runoff management practices. The goal is to prevent degradation to your community's waters and also to prevent unintended degradation of your downstream neighbors' waters in the St. Croix Basin. The St. Croix Partnership will work directly with your community planning, zoning and professional services to tailor effective and appealing development options to meet your community's needs.

What is in it for your community?

- Free hands-on training and support from widely recognized practitioners
- Reduced costs for developers and reduced future municipal operation and maintenance expenses
- Planning and zoning ordinance goals and examples
- Avoided costly future restoration efforts
- Adoption of the Minimal Impact Design Standards is voluntary and will provide you with:
 - a process that uses the best available information, has broad endorsement including the Minnesota Pollution Control Agency, and helps your community comply with regulatory requirements related to antidegradation and Total Maximum Daily Loads.
 - an efficient link to county water plans, priorities and potential future funding opportunities



ST. Croix River Basin Community Leaders
Page 2
June 29, 2011

The MPCA understands that as a local governmental unit, you are required to meet multiple requirements related to water quality. The intent of the MIDS partnership is to offer tools your community can use to manage stormwater. This “package” of tools includes:

- Performance goals for new development and redevelopment
- Ordinance and code models and goals
- Benefits of using each Best Management Practice via use of a standard calculator

We are hoping to select St. Croix MIDS Partner Communities by August 31, 2011. For further information about this assistance or to schedule a meeting to discuss it further, please contact Jay Riggs at the Washington Conservation District at your convenience at 651-275-1136 ext. 20. Your consideration in these important matters is greatly appreciated.

For additional information on the MIDS project, go to the MIDs webpage at:

<http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-minimal-impact-design-standards-mids.html>.

Sincerely,



Lisa J. Thorvig
Division Director
Municipal Division

LJT/AG:wgp

cc: Jay Riggs, Washington Conservation District



How to Use the MIDS Community Assistance Package

This Community Assistance Package is designed to help Minnesota communities review their existing approach to stormwater management and erosion control and adopt changes to local policies and ordinances to better implement best management practices for antidegradation, ORVW, NPDES/SDS MS₄ permit compliance and TMDL compliance. The Community Assistance Package, and other MIDS project products, will be included as part of an update of the Minnesota Stormwater Manual which is designed to provide state-of-the-art tools for improved stormwater management.

Communities should take the following steps in reviewing and improving their approach to stormwater management:

STEP ONE: Obtain a copy of the Minnesota Stormwater Manual, NPDES Permits, and TMDLs

The Minnesota Stormwater Manual, the NPDES/SDS Construction Stormwater General Permit, your community's NPDES/SDS MS₄ permit (if you are an MS₄ community), and TMDL studies are foundational to understanding the MIDS process.

The current Minnesota Stormwater Manual is available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-management/minnesota-s-stormwater-manual.html>. **The Manual will be updated as part of the MIDS project. It is important to follow the update process until the updates are fully integrated into the Manual.** Detailed information on the MIDS process is available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-minimal-impact-design-standards-mids.html>.

The NPDES/SDS MS₄ General Permit is available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/municipal-stormwater/ms4-general-permit-reissuance-2011.html>

The NPDES/SDS MS₄ General Permit is currently under revision and is expected to be reissued in 2013.

The NPDES/SDS Construction Stormwater General Permit is available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/construction-stormwater/index.html>

The NPDES/SDS Construction Stormwater General Permit is currently under revision and is expected to be reissued in 2013.

Information on in process, public comment, and approved TMDLs can be found on the Minnesota Pollution Control Agency website:

<http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/tmdl-projects/tmdl-projects-and-staff-contacts.html>.



STEP TWO: Audit your existing policies and ordinances

Use the Natural Resource Planning Checklist (page 112) to evaluate your current comprehensive land use plan and other plans and determine if changes are necessary to incorporate Low Impact Development best practices. Similarly, review your local ordinances using the Code and Ordinance Worksheet (page 116) to evaluate your current approach to stormwater management and identify opportunities for improvement.

At a minimum, review the following plans and ordinances:

- Zoning ordinance
- Subdivision ordinance
- Stormwater control ordinance or provisions
- Erosion and sediment control ordinances or provisions
- Shoreland ordinance or provisions
- Wetland ordinance or provisions
- Floodplain ordinance or provisions
- Comprehensive plan provisions related to water, stormwater, or erosion control
- County water plan
- Any policies not in the comprehensive plan that relate to stormwater and erosion control
- Checklists or fact sheets related to stormwater and erosion control
- Watershed District/Watershed Management Organization plans and rules that apply to your community

STEP THREE: Prepare changes to policies and ordinances

Based on the results of your audit of existing policies and ordinances, use the model ordinance materials in this document (pages 17 to 86), to draft changes to your community's policies and ordinances. Guidance for choosing the long form or short form Stormwater and Erosion Control ordinance is included on page 43 with additional reference information and guidance provided on pages 14 to 16.

STEP FOUR: Adopt changes to policies and ordinances

Work with your city council, town board, or county board to adopt the changes necessary to comply with MIDS best practices. A sample resolution for adopting ordinance changes is included on page 110. Adoption of the materials in this Community Assistance Package (**when finalized**) is an approved alternative compliance path for antidegradation requirements.



Long Form MIDS Stormwater and Erosion Control Ordinance

Background

Nonpoint pollution (i.e. sediment, nutrients, toxics, thermal stress, and debris) from stormwater is the number one water pollution problem in the nation. Entire waterbodies are degraded by stormwater runoff and erosion and sedimentation when Best Management Practices (BMPs) are not adequate or not installed and maintained properly. Nonpoint pollution is intermittently regulated and threatens the quality of our water resources. Runoff from construction projects is by far the largest source of sediment from sites under development. Another major source of sediment is streambank erosion, which is accelerated by increases in peak runoff rates and increased water volume due to urbanization. Regulation of stormwater and control of erosion and sediment go hand-in-hand in the protection of water quality and quantity. In addition, federal and state rules require that communities manage stormwater and ensure erosion and sediment control under the National Pollution Discharge Elimination System (NPDES) program of the federal Clean Water Act. Implementation of the NPDES standards, through effective regulation, incentives, and education, offer communities an opportunity to protect the environment, the economy, and social values in the community.

Through regulation of stormwater, erosion, and sedimentation, communities can enhance and protect water resources. Stormwater control consists of BMPs and permanent infrastructure to maintain runoff rates and volumes at or under the pre-development runoff rates and volumes. Management practices include design standards to reduce impervious surfaces and enhance infiltration, treatment of stormwater runoff for water quality, and discharge of stormwater runoff at pre-development runoff rates.

Erosion control consists of BMPs designed to intercept precipitation and prevent soil particles from moving. Management practices that prevent erosion include construction staging, protecting existing vegetation, and tracking of disturbed slopes. Products designed for this include straw, mulch, ground covers, fiber blankets, hydro-seeding, etc. Sediment control consists of BMPs designed to capture soil particles after they have been dislodged and have begun to be carried away from the site. Products designed for this include silt fences, check dams, sedimentation ponds, and similar devices.

Local governments are critical to enforcing stormwater and erosion and sediment control regulation because state and federal agencies simply cannot track the development activities happening to the landscape on a day-to-day basis. Local governments track local development through the building code, development ordinances, tax valuations, and general protection of health, safety, and welfare. Many communities have some form of stormwater performance standards and permitting processes in place. Analysis of our surface and ground water shows, however, that these standards frequently fail to protect water quality. More and more of Minnesota's lakes, rivers, and streams are being designated as impaired. As communities incorporate new permitting requirements into local regulation, they can take the opportunity to address specific local considerations and priorities in managing stormwater, erosion and sedimentation.

Minimal Impact Design Standards (MIDS)

Stormwater management has evolved substantially over the past 20 years. Historically, the goal was to move water off the landscape quickly and reduce flooding concerns. Now we are focusing on keeping the raindrop where it falls and mimicking natural hydrology in order to minimize the amount of pollution reaching our lakes, rivers and streams, and to recharge our ground waters while also reducing flooding. In order to successfully do so, standards are needed to create consistency in design and performance. In response to this need, and advanced by a diverse group of partners, the Minnesota Legislature allocated funds to “develop performance standards, design standards or other tools to enable and promote the implementation of low impact development and other stormwater management techniques.” (Minnesota Statutes, section 115.03, subdivision 5c).

Minimal Impact Design Standards (MIDS) represents the next generation of stormwater management and contains three main elements that address the following challenges:

- A higher clean water performance goal for new development and redevelopment to provide enhanced protection for Minnesota’s water resources.
- New modeling methods and credit calculations that will standardize the use of a range of innovative structural and nonstructural stormwater techniques.
- A credits system and ordinance package that will allow for increased flexibility and a streamlined approach to regulatory programs for developers and communities.

The development of Minimal Impact Design Standards is based on the concepts of Low Impact Development (LID) — an approach to stormwater management that mimics a site’s natural hydrology as the landscape is developed. Using the LID approach, stormwater is managed on site and the rate and volume of predevelopment stormwater reaching receiving waters is unchanged. The calculation of predevelopment hydrology is based on native soil and vegetation. (Minnesota Statutes, section 115.03, subdivision 5c). The model ordinance below is designed to incorporate MIDS performance standards and techniques.

Concepts for Stormwater and Erosion and Sediment Regulation

The following key concepts are emphasized in this model ordinance:

- Implementing MIDS performance standards and credit calculator;
- Providing standards for managing the velocity and volume of runoff;
- Maximizing infiltration given the variety of soil types, topographies, and extent of existing development;
- Adapting standards and regulations for cold weather climates;

- Using buffers and vegetative management to treat stormwater runoff on-site;
- Regulating the amount and types of impervious surfaces;
- Scheduling land disturbing activities to prevent erosion and sedimentation; and
- Maintaining soil stability through effective use of BMPs;
- Implementing a cost effective inspection, maintenance, and enforcement program.

Building upon the requirement of the Minnesota Pollution Control Agency's (MPCA) NPDES/SDS Construction Stormwater and MS4 General Permits, this model ordinance provides alternative language and recommendations explaining how stormwater and erosion and sediment control regulation can be implemented and enforced when land disturbing activities take place. Adoption, implementation, and enforcement of the model will ensure compliance with MPCA antidegradation requirements. The MIDS Community Assistance Package is an approved alternative path to compliance for antidegradation requirements (See page 6 for MPCA letter authorizing alternative compliance path.)

MIDS and this ordinance are intended to assist in meeting total maximum daily load (TMDL) requirements for impaired waters. However, if your community has a discharge into a receiving water with an approved TMDL, higher/additional performance standards may apply as defined by the specifics of the TMDL. Information on TMDLs can be found on the MPCA website: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/tmdl-projects/tmdl-projects-and-staff-contacts.html>.

Non-Urban Stormwater Issues

Finally, virtually all of the language here considers primarily the impacts of development, and primarily for cities or rural subdivisions. Non-urban runoff, primarily agricultural, is also a water quality issue in Minnesota, although it is exempt from much of the NPDES regulation. Many counties address agricultural runoff through programmatic efforts such as education and cost-sharing efforts of county soil and water conservation districts and the U.S. Natural Resources Conservation Service.



Long Form Model MIDS Stormwater and Erosion Control Ordinance Provisions

1. Authorization, Findings, Purpose, Scope, and Interpretation

a. Statutory Authorization

- i. This ordinance is adopted pursuant to the authorization and policies contained in Minnesota Statutes Chapters 103B, 105, 462, and 497; Minnesota Rules, Parts 6120.2500-6120.3900; and Minnesota Rules Chapters 8410 and 8420.
- ii. This ordinance is intended to meet the current construction site erosion and sediment control and post-construction stormwater management regulatory requirements for construction activity and small construction activity (NPDES Permit) as defined in 40 CFR pt. 122.26(b)(14)(x) and (b)(15), respectively.
- iii. This ordinance is intended to meet the Minimal Impact Design Standards (MIDS) developed under Minnesota Statutes, section 115.03, subdivision 5c. This ordinance is intended to meet the antidegradation requirements in Minn. R. 7050.0180 and 7050.0185; meet outstanding resource value waters (ORVW) requirements in Minn. R. 7050.047; and assist in meeting total maximum daily load (TMDL) requirements for impaired waters.

b. Findings

The community finds that uncontrolled stormwater runoff and construction site erosion from land development and land disturbing activity can have significant adverse impacts upon local and regional water resources diminishing the quality of public health, safety, public and private property and natural resources of the community. Specifically, uncontrolled soil erosion and stormwater runoff can:

- i. Threaten public health, safety, property and general welfare by increasing runoff volumes and peak flood flows and overburdening storm sewers, drainage ways and other storm drainage systems;
- ii. Diminish the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing pollutant loadings of sediment, suspended solids,

MIDS Statutory Authority

Minnesota Statutes, section 115.03, Subd. 5c.
Regulation of stormwater discharges.
(c) The agency shall develop performance standards, design standards, or other tools to enable and promote the implementation of low-impact development and other stormwater management techniques. For the purposes of this section, "low-impact development" means an approach to stormwater management that mimics a site's natural hydrology as the landscape is developed. Using the low-impact development approach, stormwater is managed on-site and the rate and volume of predevelopment stormwater reaching receiving waters is unchanged. The calculation of predevelopment hydrology is based on native soil and vegetation.

What is NPDES?

NPDES stands for National Pollutant Discharge Elimination System. NPDES is a program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits under the Clean Water Act. In Minnesota, NPDES permits are issued by the Minnesota Pollution Control Agency. NPDES permits include, among others, those for Construction Stormwater and Municipal Separate Storm Sewer Systems.



- nutrients, heavy metals, toxics, debris, bacteria, pathogens, biological impairments, thermal stress and other pollutants;
- iii. Degrade physical stream habitat by increasing stream bank erosion, increasing stream bed scour, diminishing groundwater recharge, diminishing stream base flows and increasing stream temperatures;
- iv. Undermine floodplain management efforts by increasing the incidence and levels of flooding;
- v. Alter wetland communities by changing wetland hydrology and increasing pollutant loads;
- vi. Impact groundwater by reducing recharge and increasing potential pollutant loading; and
- vii. Generate airborne particulate concentrations that are health threatening or may cause other damage to property or the environment.

c. Purpose

The general purpose of this ordinance is to establish regulatory requirements for land development and land disturbing activities aimed at minimizing the threats to public health, safety, public and private property and natural resources within the community from construction site erosion and post-construction stormwater runoff. Specific purposes are to establish performance standards that will:

- i. Meet Minimal Impact Design Standards performance standards;
- ii. Meet antidegradation requirements of Minn. R. 7050.0180 and 7050.0185;
- iii. Meet NPDES/SDS Municipal Separate Storm Sewer System (MS4) and Construction Stormwater General Permit requirements requirements;
- iv. Assist in meeting Total Maximum Daily Load (TMDL) plan wasteload allocations for impaired waters through quantification of load reductions;
- v. Protect life and property from dangers associated with flooding;
- vi. Protect public and private property and natural resources from damage resulting from stormwater runoff and erosion;

**Alphabet Soup:
MIDS, Antidegradation,
ORVW, and TMDL**

The MIDS Community Assistance Package was designed to provide a single process by which communities could comply with antidegradation requirements for NPDES permits, including outstanding resource value waters (ORVW) requirements, as well as assist in meeting TMDL allocations for impaired waters.

An antidegradation policy was part of the Clean Water Act adopted in 1968 (40 CFR 131.12); and antidegradation standards were part of the first federal Water Quality Standards Regulation in 1975. The CWA was amended in 1987 (section 303(d)(4)(B)) to require antidegradation compliance in updates of NPDES permits. MPCA issued notice in 2010 to Minnesota MS4 communities that antidegradation compliance would be part of regular NPDES permit updates.

Minnesota rules implementing CWA antidegradation requirements (Minn. R. 7050.0180 and 7050.0185) are currently being revised.

Outstanding resource value waters (ORVW) are one tier of antidegradation requirements. ORVW standards provide heightened protection for high-quality waters.



- vii. Ensure the annual stormwater runoff rates and volumes from post development site conditions mimic and/or reduce the annual runoff rates and volumes from predevelopment site conditions;
- viii. Ensure site design minimizes the generation of stormwater and maximizes pervious areas for stormwater treatment;
- ix. Promote regional stormwater management by watershed;
- x. Provide a single, consistent set of performance standards that apply to all developments;
- xi. Protect water quality from pollutant loadings of sediment, suspended solids, nutrients, heavy metals, toxics, debris, bacteria, pathogens, biological impairments, thermal stress and other pollutants
- xii. Promote infiltration and groundwater recharge;
- xiii. Provide vegetated corridors (buffers) to protect water resources from development;
- xiv. Protect functional values of all types of natural waterbodies (e.g., rivers, streams, wetlands, lakes, seasonal ponds); and
- xv. Sustain or enhance biodiversity (native plant and animal habitat) and support riparian ecosystems

d. Scope

No land shall be developed for any use without having provided stormwater management measures and erosion and sediment control measures that control or manage stormwater runoff from such developments.

e. Greater Restrictions

- i. Relationship to WD/WMO Requirements - All stormwater management and erosion and sediment control activities shall comply with all applicable requirements of the watershed districts or watershed management organizations in which the project is located. In the case of provisions in this ordinance and requirements of watershed districts or watershed management organizations that overlap or conflict, the strictest provisions shall apply to the activities.

**Alphabet Soup:
MIDS, Antidegradation,
ORVW, and TMDL (Continued)**

While antidegradation requirements are aimed at maintaining non-impaired waters, total maximum daily load (TMDL) plans are designed to improve impaired waters. In Minnesota, National Pollutant Discharge Elimination System (NPDES) stormwater permits include requirements related to wasteload allocations under an approved TMDL for MS4 permittees (Minn. R Chapter 7090). Adoption of MIDS components can move MS4 communities toward compliance with TMDL requirements, particularly through use of the MIDS Credit Calculator for quantification of stormwater load reductions.

**Water Quality/Quantity
Treatment Beyond NPDES/SDS &
MIDS Standards**

The requirements of NPDES/SDS permits and MIDS standards are sometimes inadequate for meeting local water quality or quantity goals. Communities, counties, watershed organizations and others may set customized standards in response to the condition of waters within their jurisdiction. Designing customized ordinances and rules may be to meet TMDL and water quality protection and improvement goals.



- ii. Relationship to Existing Easements, Covenants, and Deed Restrictions – The provisions of this ordinance are not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance imposes greater restrictions the provisions of this ordinance shall prevail.

f. Severability

The provisions of this ordinance are severable, and if any provision of this ordinance, or application of any provision of this ordinance to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this ordinance must not be affected thereby.

2. Applicability

This ordinance requires that a Stormwater Pollution Prevention Plan (SWPPP) or an Erosion and Sediment Control (ESC) Plan be completed, submitted for review, and approved by the community. Applicants will complete either a SWPPP or an ESC Plan, but not both, as described in Sections a. and b. immediately below.

a. Stormwater Management

An approved Stormwater Management Permit including a Stormwater Pollution Prevention Plan (SWPPP) shall be required prior to any proposed land development activity that meets any of the criteria in i. through iv. immediately below, unless otherwise exempted in this ordinance in section 3.

- i. Any land development activity that may ultimately result in the disturbance of one or more acres of land, including smaller individual sites that are part of a common plan of development that may be constructed at different times;
- ii. A subdivision plat;
- iii. The construction of any new public or private road; or
- iv. Any land development activity, regardless of size, that the community determines is likely to cause an adverse impact to an environmentally sensitive area or other property.

Why do some projects require permanent stormwater management and erosion and sediment control while others require only erosion and sediment control?

Most developments will require either an ESC Plan or a SWPPP. The ESC Plan covers the site preparation and construction period of time and includes erosion and sediment control practices. Erosion and sediment control problems can be caused by stormwater runoff as well as other causes such as wind and the movement of water through natural streams and lakes.

A SWPPP covers stormwater runoff impacts during and after construction. A SWPPP includes erosion prevention measures, sediment controls and permanent stormwater management systems that, when implemented, will decrease soil erosion and sediment transport on a parcel of land and decrease off-site nonpoint pollution. An erosion and sediment control plan provides a baseline level of protection during site disturbance and stabilization for small projects. Larger projects also require erosion and sediment control to avoid soil loss during construction. However, due to the larger size these projects tend to result in more significant long-term impacts if stormwater management is not conducted during and after construction.



b. Erosion and Sediment Control

An Erosion and Sediment Control (ESC) Permit including an Erosion and Sediment Control Plan shall be required prior for any proposed land disturbing activity, that meets any of the criteria in i. through iv. immediately below, unless otherwise exempted in this ordinance in section 3.

- i. Disturbs a total land surface area of between 3,000 square feet and one acre;
- ii. Involves excavation or filling, or a combination of excavation and filling, in excess of 50 cubic yards of material; or
- iii. Involves the laying, repairing, replacing, or enlarging of an underground utility, pipe or other facility, or the disturbance of road ditch, grass swale or other open channel for a distance of 300 feet or more; or
- iv. Is a land disturbing activity, regardless of size, that the community determines is likely to cause an adverse impact to an environmentally sensitive area or other property, or may violate any other erosion and sediment control standard set forth in this ordinance.

3. Exemptions

The following activities shall be exempt from all of the requirements of this ordinance:

- a. Emergency work necessary to protect life, limb, or property.
- b. Routine agricultural activity such as tilling, planting, harvesting, and associated activities. Other agricultural activities are not exempt including activities such as feedlots, storage sheds, and construction of structures.
- c. Silvicultural activity.



4. Permit Review Process

a. Pre- Application Meeting

The community shall facilitate a pre-application meeting with the applicant, community staff, and staff of partner agencies (MPCA, SWCD, WD, WMO, etc.). The meeting shall be mandatory prior to submission of a permit application. The purposes of the meeting are: to understand the general parameters of the proposed project; and to convey the requirements of meeting the provisions of this ordinance.

b. Application Completeness Review

The community shall make a determination regarding the completeness of a permit application within ten (10) days of the receipt of the application and notify the applicant in writing if the application is not complete including the reasons the application was deemed incomplete. A complete application will address the items listed in the Development Application Checklist.

c. Application Review

The applicant shall not commence any construction activity subject to this ordinance until a permit has been authorized by the community. A complete review of the permit application shall be done within fourteen (14) business days of the receipt of a complete permit application from the applicant. The community will work with the necessary state, county, and local agencies to complete the review. The community shall review all information in the permit application including proposed stormwater practices, hydrologic models, and design methodologies and certify compliance with this ordinance.

d. Permit Authorization

If the community determines that the application meets the requirements of this ordinance, the community may issue approval authorizing the project or activity. The approval shall be valid for one year. Approval will be in written form from the community to the applicant.

The importance of the Pre-Application Meeting

The pre-application meeting allows the community staff to understand the proposed project and allows the potential applicant the chance to discuss site requirements with community staff. Pre-application meetings reduce economic risk for the applicant because the basic requirements are understood prior to initiating an application. The meetings also smooth the application review process because community staff and applicants all understand the project and requirements.



e. Permit Denial

If the community determines the application does not meet the requirements of this ordinance the application must be denied. The applicant will be notified of the denial in writing including reasons for the denial. Once denied, a new application must be resubmitted for approval before any activity may begin. All land use and building permits shall be suspended until the applicant has an authorized permit.

f. Plan Information Requirements

The minimum information requirements of the application shall be consistent with the most recent version of the NPDES/SDS Construction Stormwater General Permit requirements and shall include a fully completed Application Checklist

g. Modification of Permitted Plans

The applicant must amend an approved ESC Plan or SWPPP to include additional requirements such as additional or modified BMPs designed to correct problems whenever:

- i. There is a change in design, construction, operation, maintenance, weather or seasonal conditions that has a significant effect on the discharge of pollutants to surface waters or underground waters;
- ii. Inspections or investigations by site operators, local, state or federal officials indicate the plans are not effective in eliminating or significantly minimizing the discharge of pollutants to surface waters or underground waters or that the discharges are causing water quality standard exceedances;
- iii. The plan is not achieving the general objectives of minimizing pollutants in stormwater discharges associated with construction activity; or
- iv. The plan is not consistent with the terms and conditions of the permit.

h. Permit Completion

- i. Before work under the permit is deemed complete, the permittee must submit as-builts and a maintenance plan demonstrating at the time of final stabilization that the stormwater facilities conform to design specifications.

Who is Involved in Reviewing a Permit Application?

The permit application under this ordinance is reviewed by the community. Typically, the community's engineer reviews the site plans and site information to ensure that the proposed project satisfies the requirements of the ordinance.

The proposed project may be reviewed by a number of other soil- or water-related organizations in addition to the community. The requirements for other permits and reviews will depend on the project location, site size, the water resources present, and activities proposed. The other organizations may include:

- County
- Soil & Water Conservation District
- Watershed District or Watershed Management Organization
- Department of Natural Resources
- Minnesota Pollution Control Agency
- Metropolitan Council
- Army Corps of Engineers
- Board of Water and Soil Resources



5. Site Design and Credit Calculator

a. Site Design Process

i. Better Site Design

Infiltration volumes and facility sizes shall be designed using the Better Site Design Techniques of the current version of the Minnesota Stormwater Manual available at <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-management/minnesota-s-stormwater-manual.html>. Better Site Design involves techniques applied early in the design process to preserve natural areas, reduce impervious cover, distribute runoff and use pervious areas to more effectively treat stormwater runoff. Site design should address open space protection, impervious cover minimization, and runoff distribution and minimization, and runoff utilization through considerations such as:

1. Open space protection and restoration
 - (a) conservation of existing natural areas (upland and wetland)
 - (b) reforestation
 - (c) re-establishment of prairies
 - (d) restoration of wetlands
 - (e) establishment or protection of stream, shoreline and wetland buffers
 - (f) re-establishment of native vegetation into the landscape
2. Reduction of impervious cover
 - (a) reduce new impervious through redevelopment of existing sites and use of existing roadways, trails etc.
 - (b) minimize street width, parking space size, driveway length, sidewalk width
 - (c) reduce impervious surface footprint (e.g. two story buildings, parking ramp)

Better Site Design

A major difference between the traditional development process and the MIDS development process is the use of Better Site Design Techniques and site design using low impact development (LID) best management practices.

Traditional development typically treats raindrops as waste products to be conveyed elsewhere. The “traditional” development process relies on NURP and ponding as its major tool of stormwater management. Over the years we’ve found that ponding alone is not as effective as desired for comprehensive stormwater management.

Better Site Design focuses on utilizing and treating rainfall as soon as it hits the ground. The focus is not on conveying runoff, but on reducing and controlling runoff volume and mimicking natural hydrology using a wide variety of stormwater management and treatment methods. Better Site Design methods may include reducing impervious surface, conserving natural areas, and treating stormwater close to where it originates.



3. Distribution and minimization of runoff
 - (a) utilize vegetated areas for stormwater treatment (e.g. parking lot islands, vegetated areas along property boundaries, front and rear yards, building landscaping)
 - (b) direct impervious surface runoff to vegetated areas or to designed treatment areas (roofs, parking, driveways drain to pervious areas, not directly to stormsewer or other conveyances)
 - (c) encourage infiltration and soil storage of runoff through grass channels, soil compost amendment, vegetated swales, raingardens, etc.
 - (d) plant vegetation that does not require irrigation beyond natural rainfall and runoff from the site
4. Runoff utilization
 - (a) capture and store runoff for use for irrigation in areas where irrigation is necessary

ii. **Stormwater Criteria**

The following general criteria shall be incorporated in site design for stormwater runoff to protect surface and ground water and other natural resources by maintaining pre-development hydrological conditions:

1. Reduce impacts on water
2. Protect soils
3. Preserve vegetation
4. Decrease runoff volume
5. Decrease erosion and sedimentation
6. Decrease flow frequency, duration, and peak runoff rates
7. Increase infiltration (groundwater recharge)
8. Maintain existing flow patterns
9. Reduce time to peak flows by increasing the time of concentration to and through storm sewers
10. Store stormwater runoff on-site
11. Avoid channel erosion



iii. Erosion and Sediment Control Criteria

The following general criteria shall be incorporated in site design for erosion and sediment control:

1. Minimize disturbance of natural soil cover and vegetation
2. Minimize, in area and duration, exposed soil and unstable soil conditions
3. Protect receiving water bodies, wetlands and storm sewer inlets
4. Protect adjacent properties from sediment deposition
5. Minimize off-site sediment transport on trucks and equipment
6. Minimize work in and adjacent to waterbodies and wetlands
7. Maintain stable slopes
8. Avoid steep slopes and the need for high cuts and fills
9. Minimize disturbance to the surrounding soils, root systems and trunks of trees adjacent to site activity that are intended to be left standing
10. Minimize the compaction of site soils

b. Use of Credit Calculator

Final site design and choice of stormwater and erosion control treatment practices shall be based on outcomes of the Credit Calculator in the Minnesota Stormwater Manual, and shall meet the performance standards in section 4 of this ordinance. (The credit calculator is available at)

What is the Credit Calculator?

The Credit Calculator is an integral part of the MIDS package. It includes new modeling methods and credit calculations that standardize the use of a range of innovative structural and nonstructural stormwater techniques. MIDS communities will use the calculator to determine stormwater rate control and volume control measures. These rate and volume control measures will then be incorporated in site design using Better Site Design Techniques from the Minnesota Stormwater Manual.

More specifically, the credit calculator:

- Provides an incentive for using low impact development (LID) techniques
- Determines the stormwater volume control required on the site
- Determines annual TP and TSS removal
- Provides volume and pollutant removal credit for BMPs in parallel and in series
- Focuses on pollutant removals for sites with Hydrologic Soil Group D soils
- Does not replace existing models, such as HydroCAD, for calculating and showing conformance to stormwater peak runoff rate requirements



6. Stormwater and Erosion and Sediment Control Performance Standards

Any applicant for a permit as defined in section 2.a. of this ordinance must meet all of the following stormwater standards as applicable to the site:

a. All development: rate control

For all development sites (new development, redevelopment, and linear development) the site design shall provide on-site treatment during construction and post-construction to ensure no increase in offsite peak discharge for the 2-year, 24-hour storm event, the 10-year, 24-hour storm event, and the 100-year, 24-hour storm event.

b. New development: volume control

For new, nonlinear developments on sites without restrictions, stormwater runoff volumes will be controlled and the post-construction runoff volume shall be retained on site for 1.1 inches of runoff from impervious surfaces. For areas of the site where there is no feasible way to achieve the treatment requirement, other treatment options may be considered by the community if the options meet the performance standard listed for sites with restrictions in e. below.

c. Redevelopment: volume control

To be determined by MIDS Work Group

d. Linear development: volume control

To be determined by MIDS Work Group

e. Flexible treatment options for new development volume control

Applicant shall fully attempt to comply with the standard in section 4.a. Options considered and presented shall examine the merits of relocating project elements to address, varying soil conditions and other constraints across the site. If full compliance is not possible, the following flexible treatment options shall be used:

Applicant shall document the flexible treatment options sequence starting with Alternative #1. If Alternative #1 cannot be met, then Alternative #2 shall be analyzed. If Alternative #2 cannot be met than Alternative #3 shall be met. When all of the conditions are fulfilled within an alternative, this sequence is completed.

Volume reduction techniques considered shall include infiltration, reuse & rainwater harvesting, and canopy interception & evapotranspiration and/or additional techniques included in the MIDS calculator and the Minnesota Stormwater Manual.

More Alphabet Soup: The Relationship Between NPDES, SWPPP, ESC Plans, and MIDS

MIDS defines performance standards for stormwater management that differ from those in the NPDES Construction Stormwater permit.

NPDES Construction Stormwater permits also require a SWPPP. The SWPPP developed to meet the requirements in this ordinance can be designed to also satisfy the requirements of the NPDES Construction Stormwater permit.



Higher priority shall be given to BMPs that include volume reduction. Secondary preference is to employ filtration techniques, followed by rate control BMPs.

Factors to be considered for each alternative will include:

- i. Karst geology
- ii. Shallow bedrock
- iii. High groundwater
- iv. Hotspots or contaminated soils
- v. Excessive cost
- vi. Poor soils (infiltration rates that are too low or too high, problematic urban soils)

Alternative #1: Applicant attempts to comply with the following conditions:

- i. Achieve at least 0.55" volume reduction, and
- ii. Remove 75% of the annual TP load, and
- iii. Options considered and presented shall examine the merits of relocating project elements to address, varying soil conditions and other constraints across the site.

Alternative #2: Applicant attempts to comply with the following conditions:

- i. Achieve volume reduction to the maximum extent practicable, and
- ii. Remove 60% of the annual TP load, and
- iii. Options considered and presented shall examine the merits of relocating project elements to address, varying soil conditions and other constraints across the site.

Alternative #3: Off-site Treatment. Equivalent to the new development performance goal of 1.1 " volume reduction, off-site mitigation (including banking or cash) can be used to protect the receiving water body. Off-site compliance and banking credits shall be achieved through a method that protects the receiving water **using a method to be determined later in the MIDS Project.**



f. Minnesota Stormwater Manual

All volume control for water quality and quantity and site design specifications shall conform to the current version of the Minnesota Stormwater Manual.

g. NPDES

All stormwater management and erosion and sediment control shall conform to the current requirements of NPDES/SDS MS₄ and Construction Stormwater General Permits..

h. Protection of Surface Waters

Waterbodies shall be protected from runoff generated during construction and after completion of the development in accordance with Minnesota State Statutes and the NPDES Permit. Runoff shall not be discharged directly into surface waters without appropriate quantity and quality runoff control.

i. Watershed District/WMO Requirements

All stormwater management and erosion and sediment control activities shall comply with all applicable requirements of the watershed districts or watershed management organizations in which the project is located. In the case of provisions in this ordinance and requirements of watershed districts or watershed management organizations that overlap or conflict, the strictest provisions shall apply to the activities.

j. Regional Scale

If the community's preferred method of achieving stormwater and erosion and sediment control performance standards is through their specific stormwater plan on a municipal and/or regional scale then this plan may prescribe regional stormwater devices, practices or systems, any of which may be designed to treat runoff from more than one site prior to discharge to waters of the state.



7. Inspections and Maintenance

a. Inspections and Record Keeping

i. Applicant Responsibilities

The applicant is responsible for inspections and record keeping during and after construction for all privately-owned stormwater treatment practices on the site.

ii. Community Inspections

The community shall conduct inspections on a regular basis to ensure that both stormwater and erosion and sediment control measures are properly installed and maintained prior to construction, during construction, and at the completion of the project. Mandatory inspections are required as follows:

1. Before any land disturbing activity begins;
2. At the time of footing inspections;
3. At the completion of the project; and
4. Prior to the release of financial securities.

b. Fees

A charge of \$____ per hour will be assessed to the applicant for any inspections under this section by the community.

c. Stop Work Orders

In cases where cooperation for inspections is withheld, construction stop work orders shall be issued by the community until stormwater and erosion and sediment control measures meet the requirements of this ordinance. An inspection must follow before work can commence.

- i. **Construction Stop Work Order** - The community may issue construction stop work orders until stormwater management measures meet specifications. A second stormwater management inspection must then be scheduled and passed before the final inspection will be done.
- ii. **Perimeter Breach** - If stormwater and/or erosion and sediment control management measures malfunction and breach the perimeter of the site, enter streets, other public areas, or waterbodies, the applicant shall immediately develop a cleanup and restoration plan, obtain the right-of-way from the adjoining property owner, and implement the cleanup and restoration plan within 48 hours of obtaining permission. If in the discretion of the community, the applicant does not repair the damage caused by the stormwater runoff the community can complete the remedial work required and charge the cost to the applicant. If payment is not made within thirty days, payment will be made from the applicant's financial securities.



- iii. **Actions to Ensure Compliance** - The community can take any combination of the following actions in the event of a failure by applicant to meet the terms of this ordinance:
1. Withhold inspections or issuance of certificates or approvals;
 2. Revoke any permit issued by the community to the applicant;
 3. Conduct remedial or corrective action on the development site or adjacent site affected by the failure;
 4. Charge applicant for all costs associated with correcting the failure or remediating damage from the failure; If payment is not made within thirty days, payment will be made from the applicant's financial securities;
 5. Bring other actions against the applicant to recover costs of remediation or meeting the terms of this ordinance; and
 6. Any person, firm or corporation failing to comply with or violating any of these regulation, shall be deemed guilty of a misdemeanor and be subject to a fine or imprisonment or both. Each day that a separate violation exists shall constitute a separate offense.

d. Long Term Inspection and Maintenance of Stormwater Facilities

i. Private Stormwater Facilities

1. **Maintenance Plan Required** - No private stormwater facilities may be approved unless a maintenance plan is provided that defines who will conduct the maintenance, the type of maintenance and the maintenance intervals. All private stormwater facilities shall be inspected annually and maintained in proper condition consistent with the performance standards for which they were originally designed.
2. **Facility Access** - Access to all stormwater facilities must be inspected annually and maintained as necessary. The applicant shall obtain all necessary easements or other property interests to allow access to the facilities for inspection or maintenance for both the responsible party and the community.
3. **Removal of Settled Materials** - All settled materials including settled solids, shall be removed from ponds, sumps, grit chambers, and other devices, and disposed of properly.
4. **Inspections** - All stormwater facilities within the community shall be inspected by the community during construction, during the first year of operation, and at least once every five years thereafter.



ii. Public Stormwater Facilities

1. Acceptance of Publicly Owned Facilities - Before work under the permit is deemed complete, the permittee must submit as-builts and a maintenance plan demonstrating at the time of final stabilization that the stormwater facilities conform to design specifications. A final inspection shall be required before the community accepts ownership of the stormwater facilities.
2. Inventory of Stormwater Facilities - Upon adoption of this ordinance, the community shall inventory and maintain a database for all private and public stormwater facilities within community requiring maintenance to assure compliance with this ordinance. The community shall notify owners of public and private stormwater facilities of the need for conducting maintenance at least every five years.
3. Maintenance - The community shall perform maintenance of publicly owned stormwater facilities in accordance with their comprehensive stormwater management plan and other regulatory requirements.

8. Financial Securities

a. Amount

The community shall require financial securities from the applicant in an amount sufficient to cover the entirety of the estimated costs of permitted and remedial work based on the final design as established in a set financial security schedule determined by the community.

b. Release

Financial securities shall not be released until all permitted and remedial work is completed.

c. Use by Community

Financial securities may be used by the community to complete work not completed by the applicant.

d. Form of Security

The form of the securities shall be one or a combination of the following to be determined by the community:

What is a typical fee schedule for Stormwater and Erosion Control Financial Securities?

A typical fee schedule for financial securities for erosion and sediment control activity requires that the applicant provide a security for the performance of the work in an amount of whichever is greater:

- \$3,000 per gross acre OR
- \$6,000 per gross acre for work done in special or impaired waters OR
- \$1,500 for each single or twin family home.

This amount typically applies to the maximum acreage of soil that will be simultaneously exposed during the project's construction.

A fee schedule for stormwater management is often based on a specific estimate of the cost to construct the stormwater management practice. Typically the fee is 125% of the estimated construction cost for the stormwater facilities.



- i. **Cash Deposit** - The first \$5,000 of the financial security for erosion and sediment control shall be by cash deposit to the community. The cash will be held by community in a separate account.
- ii. **Securing Deposit** - Deposit, either with the community, a responsible escrow agent, or trust company, at the option of the community, either:
 - 1. An irrevocable letter of credit or negotiable bonds of the kind approved for securing deposits of public money or other instruments of credit from one or more financial institutions, subject to regulation by the state and federal government wherein said financial institution pledges funds are on deposit and guaranteed for payment;
 - 2. Cash in U.S. currency; or
 - 3. Other forms and securities (e.g., disbursing agreement) as approved by the community.

e. Community Indemnity

This security shall save the community free and harmless from all suits or claims for damages resulting from the negligent grading, removal, placement or storage of rock, sand, gravel, soil or other like material within the community.

f. Maintaining the Financial Security

If at any time during the course of the work the amount falls below 50% of the required deposit, the applicant shall make another deposit in the amount necessary to restore the cash deposit to the required amount. If the applicant does not bring the financial security back up to the required amount within seven (7) days after notification by the community that the amount has fallen below 50% of the required amount the community may:

- i. **Withhold Inspections** - Withhold the scheduling of inspections and/or the issuance of a Certificate of Occupancy.
- ii. **Revoke Permits** - Revoke any permit issued by the community to the applicant for the site in question or any other of the applicant's sites within the community's jurisdiction.

g. Action Against the Financial Security

The community may access financial security for remediation actions if any of the conditions listed below exist. The community shall use the security to finance remedial work undertaken by the community, or a private contractor under contract to the community, to reimburse the community for all direct costs incurred in the process of remedial work including, but not limited to, staff time and attorney's fees.

- i. **Abandonment** - The developer ceases land disturbing activities and/or filling and abandons the work site prior to completion of the grading plan.



- ii. **Failure to Implement the SWPPP or ESC Plan** - The developer fails to conform to the grading plan and/or the SWPPP as approved by the Community.
- iii. **Failure to Perform** - The techniques utilized under the SWPPP fail within one year of installation.
- iv. **Failure to Reimburse Community** - The developer fails to reimburse the community for corrective action taken.

h. Proportional Reduction of the Financial Security

When more than one-third of the applicant's maximum exposed soil area achieves final stabilization, the community can reduce the total required amount of the financial security by one-third. When more than two-thirds of the applicant's maximum exposed soil area achieves final stabilization, the community can reduce the total required amount of the financial security to two-thirds of the initial amount. This reduction in financial security will be determined by the community.

i. Returning the Financial Security

The security deposited with the community for faithful performance of the SWPPP or the ESC Plan and any related remedial work shall be released one full year after the completion of the installation of all stormwater pollution control measures as shown on the SWPPP or ESC Plan.

j. Emergency Action

If circumstances exist such that noncompliance with this ordinance poses an immediate danger to the public health, safety and welfare, as determined by the community, the community may take emergency preventative action. The community shall also take every reasonable action possible to contact and direct the applicant to take any necessary action. Any cost to the community may be recovered from the applicant's financial security.

9. Enforcement Actions

a. Notification of Failure of the Permit

The community shall notify the permit holder of the failure of the permit's measures.

- i. **Initial Contact** - The initial contact will be to the party or parties listed on the application and/or the SWPPP as contacts. Except during an emergency action, forty-eight (48) hours after notification by the community or seventy-two (72) hours after the failure of erosion and sediment control measures, whichever is less, the community at its discretion, may begin corrective work. Such notification should be in writing, but if it is verbal, a written notification should follow as quickly as practical. If after making a good faith effort to notify the responsible party or parties, the community has been unable to establish contact, the



community may proceed with corrective work. There are conditions when time is of the essence in controlling erosion. During such a condition the community may take immediate action, and then notify the applicant as soon as possible

- ii. **Erosion Off-site** - If erosion breaches the perimeter of the site, the applicant shall immediately develop a cleanup and restoration plan, obtain the right-of-entry from the adjoining property owner, and implement the cleanup and restoration plan within forty-eight (48) hours of obtaining the adjoining property owner's permission. In no case, unless written approval is received from the community, may more than seven (7) calendar days go by without corrective action being taken. If in the discretion of the community, the permit holder does not repair the damage caused by the erosion, the Community may do the remedial work required. When restoration to wetlands and other resources are required, the applicant should be required to work with the appropriate agency to ensure that the work is done properly.
- iii. **Erosion into Streets, Wetlands or Water Bodies** - If eroded soils (including tracked soils from construction activities) enter or appear likely to enter streets, wetlands, or other water bodies, cleanup and repair shall be immediate. The applicant shall provide all traffic control and flagging required to protect the traveling public during the cleanup operations.
- iv. **Failure to do Corrective Work** - When an applicant fails to conform to any provision of this policy within the time stipulated, the community may take the following actions.
 1. **Stop Work Order** - Issue a stop work order, withhold the scheduling of inspections, and/or the issuance of a Certificate of Occupancy.
 2. **Permit Revocation** - Revoke any permit issued by the community to the applicant for the site in question or any other of the applicant's sites within the community's jurisdiction.
 3. **Correction by Community** - Correct the deficiency or hire a contractor to correct the deficiency.
 - a. The applicant will be required to reimburse the community for all costs incurred in correcting stormwater pollution control deficiencies. If payment is not made within thirty (30) days after costs are incurred

Enforcement Actions

It is likely that your community has general enforcement provisions in zoning, subdivision, or other regulations. It is important to include enforcement provisions that are specific to stormwater and erosion control activities. Permitted stormwater and erosion control activities differ in important ways from other land use activities: they respond to rain events that are not predictable; the management activities required differ from those undertaken during construction to those required after construction is complete; control measures continue long into the future; and specific expertise is required by the person conducting inspections.



by the community, payment will be made from the applicant's financial securities as described in Section 10 above.

- b. If there is an insufficient financial amount in the applicant's financial securities as described in Section 10 above, then the community may assess the remaining amount against the property. As a condition of the permit, the owner shall waive notice of any assessment hearing to be conducted by the community, concur that the benefit to the property exceeds the amount of the proposed assessment, and waive all rights by virtue of Minnesota Statute 429.081 to challenge the amount or validity of assessment.

b. Enforcement

The community shall be responsible for enforcing this ordinance.

c. Misdemeanor

Any person, firm, or corporation failing to comply with, or violating any of these regulations, shall be deemed guilty of a misdemeanor and be subject to a fine or imprisonment or both. All land use and building permits must be suspended until the applicant has corrected the violation. Each day that a separate violation exists shall constitute a separate offense.

d. Right of Entry and Inspection

- i. Powers - The issuance of a permit constitutes a right-of-entry for the community or its contractor to enter upon the construction site. The applicant shall allow the community and their authorized representatives, upon presentation of credentials, to:
 1. Enter upon the permitted site for the purpose of obtaining information, examination of records, conducting investigations or surveys;
 2. Bring such equipment upon the permitted development as is necessary to conduct such surveys and investigations;
 3. Examine and copy any books, papers, records, or memoranda pertaining to activities or records required to be kept under the terms and conditions of the permit;
 4. Inspect the stormwater pollution control measures;
 5. Sample and monitor any items or activities pertaining to stormwater pollution control measures; and
 6. Correct deficiencies in stormwater and erosion and sediment control measures.



10. Definitions

Words or phrases used in this ordinance shall have the meanings as defined by Appendix 1 of the Minnesota Construction Stormwater Permit No: MN R100001 (Construction Permit) available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/construction-stormwater/construction-stormwater.html#spermit>.

If not defined in the Construction Permit, then words or phrases shall be interpreted to have the meaning they have in common usage. Words or phrases shall be interpreted so as to give this ordinance its most reasonable application.

For the purpose of this ordinance, the words “must”, “shall”, and “will” are mandatory and not permissive.

(When definitions are incorporated into the Minnesota Stormwater Manual, then this section can be changed to simply reference the Stormwater Manual definitions. Following are the most relevant definitions from the Construction Stormwater Permit.)

- a. **“Applicant”** means the owner of land submitting an application under the provisions of this ordinance for a stormwater and erosion control permit to be issued by the community.
- b. **“Best management practices (BMPs)”** means erosion prevention and sediment control, and water quality management practices that are the most effective and practicable means of controlling, preventing, and minimizing degradation of surface water, including avoidance of impacts, construction-phasing, minimizing the length of time soil areas are exposed, prohibitions, and other management practices published by the state or designated area-wide planning agencies. The MIDS Credit Calculator includes BMPs that may be considered under this ordinance.
- c. **“Better Site Design”** means the control and management of stormwater quantity and quality through the application of Better Site Design Techniques as outlined in the current version of the Minnesota Stormwater Manual (<http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-management/minnesota-s-stormwater-manual.html>). Better Site Design includes: preservation of natural areas; site reforestation; stream and shoreland buffers; open space design; disconnection of impervious cover; rooftop disconnection; grass channels; stormwater landscaping; compost and amended soils; impervious surface reduction; and trout stream protection.
- d. **“Common plan of development or sale”** means a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.
- e. **“Construction activity”** includes construction activity as defined in 40 CFR pt. 122.26(b)(14)(x) and small construction activity as defined in 40 CFR pt. 122.26(b)(15). This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated stormwater runoff, leading to soil erosion and movement of sediment into surface waters or drainage systems. Examples of construction activity may include clearing, grading, filling, and excavating. Construction activity includes the disturbance of less than one acre of total land area that is a part of a



larger common plan of development or sale if the larger common plan will ultimately disturb one (1) acre or more. (NOTE – The community may wish to change this to a smaller disturbance area. A smaller area is more restrictive than the state/federal requirements, so it would be allowable for a local government.)

- f. **“Development, new”** Any development that results in the conversion of land that is currently prairie, agriculture, forest, or meadow and has less than 15% impervious surface. Land that was previously developed, but now razed and vacant, will not be considered new development.
- g. **“Dewatering”** means the removal of water for construction activity. Dewatering can be a discharge of appropriated surface or groundwater to dry and/or solidify a construction site. Dewatering may require Minnesota Department of Natural Resources (DNR) permits to be appropriated and if contaminated may require other MPCA permits to be discharged.
- h. **“Energy dissipation”** means methods employed at pipe outlets to prevent erosion. Examples include, but are not limited to: concrete aprons, riprap, splash pads, and gabions that are designed to prevent erosion.
- i. **“Erosion prevention”** means measures employed to prevent erosion including but not limited to: soil stabilization practices, limited grading, mulch, temporary erosion protection or permanent cover, and construction phasing.
- j. **“General contractor”** means the party who signs the construction contract with the owner or operator to construct the project described in the final plans and specifications. Where the construction project involves more than one contractor, the general contractor could be the party responsible for managing the project on behalf of the owner or operator. In some cases, the owner or operator may be the general contractor. In these cases, the owner may contract an individual as the operator who would become the co-permittee.
- k. **“Impervious Surface”** means a surface that impedes the infiltration of rainfall and results in an increased volume of surface runoff..
- l. **“Land Disturbance”** means any activity that results in a change or alteration in the existing ground cover (both vegetative and non-vegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to, development, redevelopment, demolition, construction, reconstruction, clearing, grading, filling, stockpiling, excavation and borrow pits.

Routine vegetation management, and mill and overlay/resurfacing activities that do not alter the soil material beneath the pavement base, are not considered land disturbance. In addition, other maintenance activities such as catch basin and pipe repair/replacement, lighting, and pedestrian ramp improvements shall not be considered land disturbance for the purposes of determining permanent stormwater management requirements
- m. **“Linear Project”** means construction or reconstruction of roads, trails, sidewalks, and rail lines that are not part of a common plan of development or sale



- n. **“National Pollutant Discharge Elimination System (NPDES)”** means the program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits under the Clean Water Act (United States Code Title 33, Sections 301, 318, 402, and 405) and its associated rules (United States Code of Federal Regulations Title 33, Sections 1317, 1328, 1342, and 1345).
- o. **“Normal wetted perimeter”** means the area of a conveyance, such as a ditch, channel, or pipe that is in contact with water during flow events that are expected to occur once every year.
- p. **“Notice of termination”** means notice to terminate coverage under a permit after construction is complete, the site has undergone final stabilization, and maintenance agreements for all permanent facilities have been established, in accordance with all applicable conditions of this permit.
- q. **“Operator”** means the person (usually the general contractor), designated by the owner, who has day to day operational control and/or the ability to modify project plans and specifications related to the SWPPP. The person must be knowledgeable in those areas of the permit for which the operator is responsible, (Part II.B. and Part IV.) and must perform those responsibilities in a workmanlike manner.
- r. **“Owner”** means the person or party possessing the title of the land on which the construction activities will occur; or if the construction activity is for a lease, easement, or mineral rights license holder, the party or individual identified as the lease, easement or mineral rights license holder; or the contracting government agency responsible for the construction activity.
- s. **“Permanent cover”** means surface types that will prevent soil failure under erosive conditions. Examples include: gravel, asphalt, concrete, rip rap, roof tops, perennial cover, or other landscaped material that will permanently arrest soil erosion. A uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of 70% of the native background vegetative cover for the area must be established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures. Permanent cover does not include the practices listed under temporary erosion protection.
- t. **“Permittee”** means a person or persons, firm, or governmental agency or other institution that signs the construction permit application submitted to the MPCA and is responsible for compliance with the terms and conditions of the construction permit.
- u. **“Public waters”** means all water basins and watercourses that are described in Minn. Stat. 103G.005 subd. 15.
- v. **“Redevelopment”** means any development that is not considered new development.
- w. **“Retain”** means manage stormwater on site using a low-impact development approach so that the rate and volume of predevelopment stormwater reaching receiving waters is unchanged. (This definition is derived from the MIDS legislation.)
- x. **“Saturated soil”** means the highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water. Saturated soil is evidenced by the presence of redoximorphic features or other characteristics.



- y. **“Sediment control”** means methods employed to prevent sediment from leaving the site. Examples of sediment control practices include: silt fences, sediment traps, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection, and temporary or permanent sedimentation basins.
- z. **“Small construction activity”** means small construction activity as defined in 40 CFR part 122.26(b)(15). Small construction activities include clearing, grading and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five (5) acres.
 - aa. **“Stabilized”** means exposed ground surface has been covered by appropriate materials such as mulch, staked sod, riprap, erosion control blanket, mats or other material that prevents erosion from occurring. Applying mulch, hydromulch, tackifier, polyacrylamide or similar erosion prevention practices is not acceptable stabilization in temporary or permanent drainage ditches or areas where concentrated overland flow occurs. Grass seeding is not stabilization.
 - bb. **“Standard plates”** means general drawings having or showing similar characteristics or qualities that are representative of a construction activity or practice.
 - cc. **“Stormwater”** is defined under Minn. R. 7077.0105, subp. 41(b), and includes precipitation runoff, stormwater runoff, snowmelt runoff, and any other surface runoff and drainage.
 - dd. **“Stormwater Pollution Prevention Plan” (SWPPP)** means a plan for stormwater discharge that includes erosion prevention measures, sediment controls and permanent stormwater management systems that, when implemented, will decrease soil erosion on a parcel of land and decrease off-site nonpoint pollution.
 - ee. **“Surface water or waters”** means all streams, lakes, ponds, marshes, wetlands, reservoirs, springs, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public or private.
 - ff. **“Temporary erosion protection”** means methods employed to prevent erosion. Examples of temporary erosion protection include; straw, wood fiber blanket, wood chips, and erosion netting.
 - gg. **“Underground waters (Groundwater)”** means water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined, or perched conditions, in near surface unconsolidated sediment or regolith, or in rock formations deeper underground. The term groundwater shall be synonymous with underground water.
 - hh. **“Waters of the State”** (as defined in Minn. Stat. § 115.01, subd. 22) means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.



- ii. **“Water quality volume”** means runoff from the new impervious surfaces created by a project and is the volume of water to be treated in the permanent stormwater management system.
- jj. **“Wetland” or “Wetlands”** is defined in Minn. R. 7050.0130, subp. F and includes those areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state. Wetlands must have the following attributes:
 - i. A predominance of hydric soils;
 - ii. Inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition; and
 - iii. Under normal circumstances support a prevalence of such vegetation.

