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Commercial

Stormwater Charge Credits

Applicant Guide

February 2022

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1.0 General Information

1.1 Overview

The City of Minneapolis (City) collects a stormwater utility charge that is used for stormwater management. The City sets the amount based on how much impervious area a property has. Properties that provide certain types of stormwater management may be eligible for a reduction in the stormwater charge. The reduction is referred to as the stormwater charge credit. This guide is intended to be used by potential applicants, describing the Commercial Stormwater Charge Credits (commercial credits) and the process to apply for these credits.

This Commercial Credits is applicable to all properties except for single-family homes, and triplexes.

> ***Note:*** *Residential properties including single-family homes, duplexes and triplexes should refer to the Single-family Residential Credits Guide to apply for Residential Credits.*

1.2 Stormwater Charge

Minnesota City Council established a Stormwater Utility and stormwater charge, pursuant to Chapter 510 of the Minneapolis City Code, to provide a designated source of revenue to fund the City stormwater system's operations and maintenance and capital improvement.

The stormwater charge is based on the impervious area on a property.

The stormwater charge rate is reviewed annually and adjusted accordingly through city council.

For the purpose of this guide, the commercial credits apply to all properties, unless the property is single-family residential, residential duplex, or residential triplex. Single family residential, residential duplex, or residential triplex parcels may qualify under the residential credits program described in a separate guide.

Property owners who install City-approved BMPs may be eligible for a reduction in their stormwater charge through the application process described in this guide.

2.0 Commercial Stormwater Charge Credits

2.1 Purpose

The purpose of the Stormwater Credits program is to enable property owners to seek reduction in stormwater charges if approved stormwater management practices have been implemented onsite to reduce or treat runoff. The Stormwater Credit program has been revised, effective January 1, 2022.

2.2 Objective

The key objectives of the Stormwater Credits program are as follows:

i. Aid the City in its efforts with stormwater quality and quantity management to protect the water quality of its receiving waters and mitigate impacts of runoff.
ii. Support the City's NPDES and MS4 stormwater (see *List of Acronyms*) permit compliance obligations.
iii. Afford stormwater charge reduction opportunity for properties that engage in stormwater management practices to reduce the impact on the City's stormwater system and services.
iv. Incentivize "Above and Beyond" efforts in stormwater management.

2.3 Types of Credits

The types of commercial credits depend on whether the credits were obtained prior to 2022 and are described as follows:

2.3.1 Stormwater Credit Program

The City revised the Stormwater Credits program effective January 1, 2022. Properties eligible for commercial credits may apply for one or more of the five (5) types of credits shown in Table 1. 1. The table provides a summary overview of the above-referenced five types of Commercial Credits. Additional details on each credit type are provided thereafter.

A Basic Chloride Management Plan (CMP) is required for all commercial stormwater utility credit applications. A template plan will be available on the City's website.

Table 1: Five Types of Commercial Credits

No.	Credit Type	Description	% of Stormwater Charge	Applied to
1	Chapter 54	Meet the minimum standards for water quality treatment, peak discharge rate control, and volume control of Chapter 54 as a part of development approval.	10%	Property area meeting the standard.
2	Advanced Chloride Management Plan (CMP)	Implement a comprehensive site-wide CMP that demonstrates chloride reduction.	Up to 30%	Portions of property where winter site management is required.

No.	Credit Type	Description	% of Stormwater Charge	Applied to
3	Voluntary/Unregulated	a. Voluntary BMPs (not required as a part of development) meeting water quality treatment, peak discharge rate control, and volume control standards as outlined in Chapter 54. *Only non-Chapter 54 properties are eligible for this credit*	50%	Property area meeting the standard.
		b. Water quality treatment: remove at least 75% of the total phosphorus (TP) on an average annual basis.	Up to 30%	
4	Above and Beyond	a. Volume reduction: Capture and retain on-site 2.0" of runoff from impervious surfaces	20%	Property area meeting the standard.
		b. Peak discharge rate control: Maintain peak discharge rates at or below the pre-settlement rates for the 10-, and 100-year storm events	60%	
5	Equity	Credit added for implementing vegetated Green Stormwater Infrastructure (GSI) practices on properties located in Green Zones	10%	Must be associated with another Credit Type; cannot be applied alone.

Note:

1. For this guide, property area refers to the impervious portions of a property.

The maximum allowable aggregate commercial credit is 70% of the stormwater charge, except in locations where the Equity Credit applies, in which case the maximum allowable commercial credit is 80%. Additional information about meeting each credit requirement is as follows:

i. **Chapter 54**: A stormwater charge credit of 10% is available for properties where the applicant has implemented stormwater management facilities required by the City's Chapter 54 Stormwater Management Ordinance requirements, per the Plan Development Review (PDR) process and is deemed fully compliant with those requirements. The credit will be granted for the portion of the impervious area that drains to the stormwater management facilities.

ii. **Advanced CMP Credit**: A stormwater charge credit of up to 30% is available for properties that complete and implement an Advanced CMP on the property. The credit will be available for the portions of the site that are used for pedestrian and vehicle traffic (driveways, parking, etc.).

iii. **Voluntary Credits**: The two types of voluntary credits are:
   a. Voluntary Implementation of Stormwater Management Practices: A stormwater charge credit of 50% is available where the applicant can show the property meets the stormwater management that would be required under the standards of the City's Chapter 54 Ordinance but was not required as a condition of approval through the PDR process.
   b. Water Quality Treatment (Phosphorous removal): A stormwater charge credit of up to 30% is available for properties that remove at least 75% of the total phosphorus load on an average annual basis with the use of voluntary BMPs.

iv. **Above and Beyond Credits:** The two types of above and beyond credits are:
   a. Volume Reduction: A stormwater charge credit of 20% will be granted for properties that are capturing and retaining onsite a minimum of 2.0 inches of runoff. This volume of water must be infiltrated or reused and fully retained onsite.
   b. Peak Discharge Rate Control: A stormwater charge credit of 50% will be granted for properties that maintain peak discharge rates at or below the pre-settlement rates for both the 10-year and 100-year storm event.

v. **Equity Credit**: Properties located within a **Green Zone** will be eligible for an additional 10% stormwater charge credit. This extra credit is applicable if the approved on-site stormwater management practices are vegetated. The city strongly encourages the use of native species that encourage deeper infiltration and provide pollinator habitat.

2.3.2 Legacy Stormwater Credit Program (Pre-2022)

Existing credit holders who were awarded commercial credits prior to January 1, 2022 may retain the following two types of commercial credits:

i. **Quality Credits:** Quality credits approved prior to January 1, 2022 may retain up to 50% credit on the monthly stormwater charge. The amount of the quality credit applies only to the impervious area on the parcel treated by the approved stormwater management facilities.

ii. **Quantity Credits:** Quantity credits approved prior to January 1, 2022 for those properties that retain all stormwater onsite for the 10-year design storm or 100-year design storm, may retain 50% credit or 100% credit, respectively.

These credits may be retained if the requirements described in this guide for recertification are met. If the legacy credit has been terminated, the property may apply for credit under the revised credit program rules.

2.4 Eligibility Requirements

The following section presents the requirements that applicants must meet to apply for commercial credits.

2.4.1 Chapter 54 Regulated Properties

The following criteria must be met before a Chapter 54 regulated property may apply for a credit:

- Compliant with all Chapter 54 requirements, including post-construction requirements
- Current with utility bill

2.4.2 Non-Chapter 54 Regulated Properties

- Current with utility bill
- Any construction activities onsite must be complete

2.5 Submittal Requirements

The following section presents the technical documentation that applicants must submit to request commercial credits.

2.5.1 Credit Applications

- Prerequisite: Basic Chloride Management Plan (CMP): A Basic CMP is required for all stormwater utility credit applications. A template plan is presented in Appendix C and is also available on the City's website.
- Supporting Documentation Requirements: The owner or their designee must provide supporting documentation on information including the following:
    i. Basic information consisting of parcel identification number (PIN/PID), utility account number, owner name, site contact, application contact (if different from site contact), parcel address.

  Technical documentation that demonstrates compliance with the stormwater charge credits being sought. These include, but are not limited to the following documents:

    a. Basic CMP
    b. Maps, plans, and diagrams detailing:
        - The drainage for the entire site including:
            1. Drainage area delineations to each stormwater management facility,
            2. Impervious area for each delineation and facility.
        - The stormwater management facilities could include the following:
            1. Bioretention facilities or rain gardens
            2. Pervious Pavement
            3. Green Roofs
            4. Wet Ponds
            5. Iron Enhanced Sand Filter

6. Sand Filters
7. Infiltration Basin
8. Infiltration Trench
9. Underground Infiltration

- All related infrastructure to the stormwater management facilities, including pre-treatment, inlets, outlets, storm pipes, manholes and underdrains
- Any connection points to the City of Minneapolis stormwater system

c. Provide modeling information or calculations to prove that credit criteria are met as follows:
   - Water Quality Credit: Provide water quality model inputs and results using one of these models.
   -
     1. P8 (version 2.4 or newer)
     2. WinSLAMM (version 9.4 or newer)
     3. MIDS Calculator
   - Rate or Volume control credits:
     1. HydroCAD
     2. XP SWMM
     3. EPA SWMM
     4. Volume control: Calculation in conjunction with HydroCAD

d. Operations & Maintenance (O&M) Plan: Include pollution prevention practices for the properties, such as covering material storage areas.

e. Advanced CMP (if applying for Advanced CMP Credit Type): This is separate from the Basic CMP and must demonstrate that winter maintenance practices are reducing and/or eliminating salt use in applicable areas.

ii. The documentation that is submitted, including the detailed engineering calculations, must be signed by a certified professional with experience in stormwater management facilities.

- Certification of Information: By submitting a credit application, the applicant certifies the following:
  - All information included as part of the application is correct.
  - Acknowledge that the City will determine credits based on the information provided.
  - Affirms that the City may access the property as necessary to inspect the facility.
- Technical Review and Inspection: City will initiate the technical review of the credit's application when the City deems the credits application complete per the City's credit program submission requirements. The City will perform site inspections as part of the application review, as necessary.
- Properties Under Construction or Not Fully Functional: Commercial credits will not be provided for stormwater management practices that are under construction and/or are not fully functional and/or are not properly maintained.

2.5.2 Commercial Credits Recertification Application

Commercial property credit holders are required to submit a credits recertification application once every five (5) years. The commercial stormwater charge credit recipients are categorized into the following tiers based on the amount of annual credit they receive on their stormwater charge.

Table 2 : Stormwater Charge Credit Tiers

Credit Tier	Credit Amount Per Year
Tier 1	$1-$1,200
Tier 2	$1,201-$5,000
Tier 3	$5,001-$24,000
Tier 4	>$24,000

2.5.3 All Applicants – Documentation Requirements

The following documentation must be submitted by All Applicants seeking credits recertification. However, these documents need not be submitted by a certified professional.

i. An application with complete site details; address, owner, and contact information
ii. Map detailing the site conditions, including impervious area totals, size and location of the stormwater facilities, and flow path from the impervious areas to those facilities.
iii. Copy of the Operations and Maintenance Plan (O&M Plan)
iv. Field documentation of the BMP – pictures/video
v. Annual inspection and maintenance records. The records should reflect that inspections were done at least annually and where appropriate, more frequently as per the O&M Plan
vi. Chloride Management Plan

In addition to the above listed documentation that all applicants seeking recertification of credits must submit, applicants in each of the following Credits Tier, must also submit the following corresponding documents along with their commercial credits recertification application.

2.5.4 Tier 1 Applicants – Documentation Requirements

The following documentation must be submitted by applicants that are in Credit Tier 1:

i. Submittals required of All Applicants (as listed in 2.5.3)
ii. Checklist or simple form, provided by the City, for assessment for small sites/BMPs (this does not have to be completed by a certified or licensed professional)

2.5.5 Tier 2 Applicants – Documentation Requirements

The following documentation must be submitted by applicants that are in Credit Tier 2:

i. Submittals required of All Applicants (as listed in 2.5.3)
ii. A map detailing the drainage for the entire site including:
    a. All infrastructure relating to stormwater BMPs (i.e. inlets/outlets, storm pipes, manholes, underdrains, etc.)
    b. Any connection points to the City of Minneapolis stormwater system or discharge off-site

c. Functional assessment of the BMPs, demonstrating that the BMPs are functioning as designed

iii. Documents must be signed by a certified professional

2.5.6 Tier 3 Applicants – Documentation Requirements

The following documentation must be submitted by applicants that are in Credit Tier 3:

i. Submittals required of All Applicants (as listed in 2.5.3)
ii. Submittals required of Tier 2 Applicants (as listed in 2.5.5)
iii. Hydraulic and hydrologic modeling demonstrating compliance (must be signed off on by a licensed professional)
iv. If previous modeling exists, then applicants can submit that documentation with verification by a certified professional that site conditions have not changed.

2.5.7 Tier 4 Applicants – Documentation Requirements

The following documentation must be submitted by applicants that are in Credit Tier 4:

i. Submittals required of All Applicants (as listed in 2.5.3)
ii. Submittals required of Tier 2 Applicants (as listed in 2.5.5)
iii. Submittals required of Tier 3 Applicants (as listed in 2.5.6)
iv. Certification by a licensed professional (engineer or landscape architect) that the stormwater facilities have been constructed and they continue to function under the standards of the stormwater charge credits program.

2.6 Administrative Procedures

This section presents the administrative procedures that govern the City's commercial credits program.

2.6.1 Credit Application

Commercial parcels that install City-approved stormwater management facilities are eligible to apply for commercial credits. Applicants will be able to apply for commercial credits during the application period, from May through September (Commercial Stormwater Credits - City of Minneapolis (minneapolismn.gov)). To request commercial credits, the property owner or the designee must submit a complete application along with all the requisite supporting submittal requirements. Applicants must submit applications and required supporting documentation through the City's website.

2.6.2 Application Fee

There is no application fee for applying for commercial credits.

2.6.3 Legacy Commercial Credits

Differences for the legacy commercial credits include:

- Maximum credits: The maximum allowable aggregate commercial credits for legacy commercial credit holders are 100% of the monthly stormwater charge.
- Recertification: Legacy commercial credit holders will be required to recertify according to the program described in this guide.

- Loss of legacy commercial credits: Legacy commercial credit holders must reapply under the current program requirements if credits are terminated for any reason as described within section 2.5.12

2.6.4 Recertification of Credits

The approved commercial credits are valid for a five-year (5) term, with the credits expiring on December 31st of the fifth year of the credits. Recertification of commercial credits is contingent on the applicant submitting a Stormwater Credits Recertification form (available on the City's website at: Stormwater Credits Recertification) by **July 15th** of the calendar year in which the credits are due to expire.

For example: Properties that are awarded commercial credits in 2022 need to submit a recertification application by **July 15, 2026**.

2.6.5 Credit Adjustments

Commercial credits will be applicable only from the month in which a fully completed commercial credits application is received. There will be no retroactive stormwater charge adjustments for bills issued prior to the month of receipt of the fully completed commercial credits application.

2.6.6 Stormwater Charge Payment

A pending commercial credits application shall not constitute a valid reason for non-payment of the currently assessed stormwater charge. All stormwater charges that are outstanding at the time of submission of the commercial credit's application must be paid in full prior to the City commencing the technical review. Any stormwater charges unpaid on accounts after the commercial credit is awarded will be cause for credit removal.

2.6.7 Documentation Costs

The City will not reimburse any costs that the applicant incurs in the preparation of the required documentation and/or the commercial credits application package.

2.6.8 Burden of Proof

The burden of proof shall be on the applicant to demonstrate the validity of the commercial credit's application and all supporting documentation consistent with the City's application and documentation requirements.

2.6.9 Right-of-Entry

Following submission of a commercial credits application, the City shall have an automatic Right-of-Entry into the parcel for the sole purpose of inspecting the stormwater management facilities, or system in the parcel for which the commercial credit is requested. The City will attempt to notify the applicant prior to entering the property but may enter the property without a response from the applicant. Commercial credit holders are

responsible for notifying the City of changes to contact information.

2.6.10 Decision

The City will review and send a written Decision Letter to the property owners and/or the designee within 60 days of the receipt of the fully completed credits application. The City will notify the applicant if additional review time is necessary.

2.6.11 Appeal

On receipt of the City's decision on the commercial credit's application, the applicant may file an appeal, should the applicant disagree with the City's decision. The applicant must file the appeal with the Director of the Department of Public Works Surface Water and Sewers. The applicant can file an appeal if the applicant disagrees with:

i. Whether their property is entitled to a commercial credit
ii. Whether their property is granted continuation of a commercial credit
iii. Amount of commercial credit

The parcel owner must file a written notice of appeal to the Director at the Director's customary offices within 10 days of the notice of that determination.

2.6.12 Termination of Credits

The City may terminate a property's commercial credits for any of the following reasons:

i. Property is sold or transfers ownership
ii. Facility no longer meets the program requirements
iii. Failure to submit a recertification application and maintenance records with the recertification by the stated deadline (applicable to commercial parcels only). If the credit holder does not submit required documentation by **July 15 of the calendar year in which the credits expire**, the existing credits on the property will be revoked on December 31 of that calendar year.
iv. Failure to remain current with the utility account receiving the credit
v. Property is modified or facility is removed or modified
vi. City inspection results in a determination that facility is not functioning properly

If a commercial credit is removed, the property is eligible to reapply for a commercial credit under the most current commercial credit program standards, at the time of reapplication. Any credit awarded will not be granted retroactively before the date that the application is submitted.

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3.0 Terms and Acronyms

This section presents a list of terms and acronyms used in this guide.

3.1 Glossary of Terms

i. **Applicant:** An owner of a single family residential property or commercial property in the City of Minneapolis that is seeking a Commercial stormwater charge credit.

ii. **Commercial property:** For the purpose of this Applicant Guide, it includes all properties except single family homes, duplexes and triplexes.

iii. **Equivalent Stormwater Unit (ESU):** A unit of measure that is equal to the average impervious area of single-family residential developed property that falls within the medium class, with a single-family detached dwelling unit located thereon and within the city's limits, as established by city council resolution or ordinance, as provided for herein.

iv. **Equivalent Stormwater Unit Rate (ESU Rate):** The storm sewer charge imposed on single-family residential developed property within the medium class, as established by city council resolution or ordinance, as provided herein.

v. **Green Zone** is a place-based policy initiative aimed at improving health and supporting economic development using environmentally conscious efforts in communities that face the cumulative effects of environmental pollution, climate change, as well as social, political and economic vulnerability. Green Zones in Minneapolis are defined by the Office of Sustainability and can be found on the City's website.

vi. **Impervious Area** means the number of square feet of hard surface areas that either prevent or retard the entry of water into the soil matrix, as it entered under natural conditions as undisturbed property, and/or cause water to run off the surface in greater quantities or at an increased rate of flow from that present under natural conditions as undisturbed property, including, but not limited to, roofs, roof extensions, driveways, pavement and athletic courts.

vii. **Other residential developed property:** For the purposes of commercial credits, developed property upon which multi-family dwellings with four (4) or more units are located.

viii. **Runoff Coefficients:** Numbers approved by the city council that are used to estimate the impervious area for each non-single family classified property.

ix. **Single-family residential developed property:** For the purposes of Residential Credits, single-family residential developed property refers to developed property upon which single-family homes, duplexes and triplexes are located.

x. **Stormwater Charge:** A charge authorized by Chapter 510 of Minneapolis Code of Ordinance, Minnesota Statutes 2004, Section 444.075, and other applicable law, and further as set forth in resolution or ordinance heretofore or hereafter adopted or hereafter amended by the city council, which is established to pay operation and maintenance, costs of capital improvements, debt service associated with the stormwater management system and other costs included in the operating

budget.

xi. **Stormwater Charge Credits:** A system of credits, which may reduce a property's stormwater charge that is imposed on developed or undeveloped property.

xii. **Surface Waters:** Receiving water bodies including lakes, rivers, creeks, and wetlands.

xiii. **Undisturbed property:** Real property that has not been altered from its natural condition in a manner that disturbed or altered the topography or soils on the property to the degree that the entrance of water into the soil matrix is prevented or retarded.

xiv. **Vacant land:** Real property upon which there is no structure, as shown in the records of the city assessor's office, which is not designed for or regularly used for commercial or residential purposes, and which is not used in connection with another piece of property. Vacant land includes undisturbed property and land with no building used as a community garden.

xv. **Water Quality:** Stormwater runoff characteristics resulting from a land disturbing activity that relate to the chemical, physical, biological, or radiological integrity of water.

xvi. **Water Quantity:** Stormwater runoff characteristics that relate to the rate and volume of the stormwater discharged resulting from land disturbing activities.

3.2 List of Acronyms

i. BMP Best Management Practices
ii. CMP Chloride Management Plan
iii. ESU Equivalent Stormwater Unit
iv. MIDS Minimal Impact Design Standards

3.2 List of Acronyms

BMP	Best Management Practices
CMP	Chloride Management Plan
ESU	Equivalent Stormwater Unit
MIDS	Minimal Impact Design Standards
MPCA	Minnesota Pollution Control Agency
MS4	Municipal Separate Stormwater System
NPDES	National Pollutant Discharge Elimination System
PDR	Preliminary Development Review
SSAt	Smart Salting Assessment Tool
SWS	Surface Water and Sewers
TP	Total Phosphorus

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Appendix – A: Commercial Credits Calculation Examples

The following examples illustrate the calculation procedures that would be applied in the assessment of monthly stormwater charges if stormwater charge credits are approved for a parcel. This method may also be used to calculate other credits in conjunction with the current utility rate. The 2021 rate was $13.62 per Equivalent Stormwater Unit (ESU), where one ESU is 1,530 sq. ft.

A.1.1 Water Quality Treatment Credit

The following example shows the credit calculation and the billable monthly stormwater charge for a parcel that is granted a water quality treatment credit for a stormwater facility that removes 75% total phosphorus (TP) from the entire impervious area on a property.

i. Monthly stormwater charge (*without commercial credits*) = $1,362.00
ii. Approved water quality treatment credit: 30%
iii. Monthly water quality treatment credit: 30% x $1,362.00 = $408.60
iv. Monthly stormwater charge (*after applying water quality treatment credits*): $1,362.00 - $408.60 = $953.40

A.1.2 Advanced CMP Credit

The following example shows the credit calculation and the billable monthly stormwater charge for a parcel that is awarded a 30% advanced CMP credit for the walkways and parking lot that consist of 76,500 sq. ft., or half of the property's impervious area.

i. Monthly stormwater charge (*without commercial credits*) = $1,362.00
ii. Impervious area treated by the stormwater facility = 76,500 sq. ft.
iii. Approved advanced CMP credit: 30%
iv. Monthly advanced CMP credit: 76,500 sf x 30% x $13.62 / 1,530 sf= $204.30
v. Monthly stormwater Charge (*after applying advanced CMP credits*): $1,362.00 - $102.15 = $1157.70

A.1.3 Equity Credit

The following example shows the credit calculation and the billable monthly stormwater charge for a parcel that is granted the equity credit in addition to a water quality treatment credit for the treating all impervious area on the property.

i. Monthly stormwater charge (*without commercial credits*) = $1,362.00
ii. Approved water quality treatment credit: 30%
iii. Approved equity credit: 10%
iv. Monthly commercial credit: (30% + 10%) x $1,362.00 = $544.80
v. Monthly stormwater charge (*after applying water quality treatment credit and equity credit*): $1,362.00 - $544.80 = $817.20

A.1.4 Total Credit

The following example shows the credit amount calculation and the billable monthly stormwater charge for a parcel that is granted water quality treatment credit, advanced CMP credit, and equity credit discussed in previous examples.

i. Monthly stormwater charge (*without commercial credits*) = $1,362.00
ii. Approved water quality treatment credit: 30%
iii. Approved advanced CMP credit: 30%
iv. Approved equity credit: 10%
vi. Aggregate of all approved credits: $204.30 + $544.80 = $749.10
vii. Monthly stormwater charge (*after applying all approved credits*): $1,362.00 - $749.10 = $612.90

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Appendix B : Basic Chloride Management Plan

Purpose: This form provides an example template for meeting the prerequisite requirement of a chloride management plan. Due to the toxic nature and limited treatment options for chlorides, all properties applying for a stormwater charge credit must provide the minimum level of chloride management reported in their CMP. Properties that go above the basic plan to demonstrate substantial reduction in chloride use in their winter maintenance may be eligible for the enhanced chloride management plan credit type.

B.1.1 Basic Winter Maintenance Plan Cover Sheet

Date:

Property Manager Name:

Name of Development:

Address of Development:

Watershed:

Winter Maintenance Management Plan Used:

☐ Basic

☐ Advanced

I will work to reduce salt use at this location to protect our natural resources.

Signed: _____

B.1.2 Basic Winter Maintenance Plan Criteria

Required information:

☑ Individual responsible for the winter maintenance at this site
- Name:
- Relation to property:
- Phone number:
- Email:

☑ Fill out Salt Stewardship Pledge – Minneapolis Salt Mini-Course
- Go through the Salt Mini-Course and fill out the pledge
- Proof of pledge from at least one person involved in winter maintenance operations at this site

☑ Smart salting certificate of at least one person involved in winter maintenance operations at this site**:**
- Name:
- Company:
- Phone number:
- Email:
- Proof of Certificate:

  *MPCA list of certified applicators
  *MPCA-approved salt training calendar

Recommended:
Other low-salt practices (as described in Advanced Plan)

*Parking lot manual (includes recommended practices for lowering salt use).

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B.1.3 Basic Winter Maintenance Plan Example

Property Manager Name: Julie Jones

Name of Development: Park N Ride West

Address of Development: 123 main street, Wayzata MN 55391

Date: 7/3/21

Watershed: Minnehaha Creek

Winter Maintenance Management Plan Used: Basic

I will work to reduce salt use at this location to protect our natural resources.

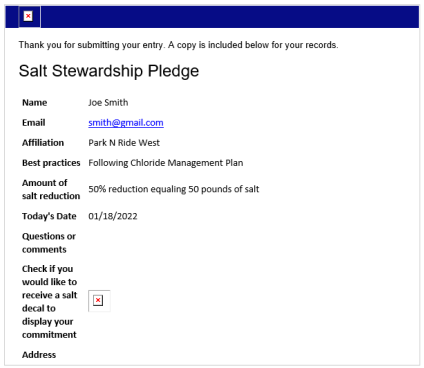
Signed: *Julie Jones*

☑ Individual responsible for the winter maintenance at this site

- **Name:** Joe Smith
- **Relation to property:** Contractor
- **Phone number:** 688-876-3445
- **Email:** Smith@gmail.com

☑ Fill out Salt Stewardship Pledge – Minneapolis Salt Mini-Course from at least one person involved in winter maintenance operations at this site

- Go through the Salt Mini-Course and fill out the pledge
- Proof of pledge from at least one person involved in winter maintenance operations at this site



Thank you for submitting your entry. A copy is included below for your records.

Salt Stewardship Pledge

Name	Joe Smith
Email	smith@gmail.com
Affiliation	Park N Ride West
Best practices	Following Chloride Management Plan
Amount of salt reduction	50% reduction equaling 50 pounds of salt
Today's Date	01/18/2022
Questions or comments	
Check if you would like to receive a salt decal to display your commitment	☒
Address	

☑ Smart salting certificate of at least one person involved in winter maintenance operations at this site:

- **Name:** Sarah Kinney
- **Company:** FCI
- **Phone number:** 123-321-1234
- **Email:** Sarah@Fortinconsulting.com
- **Proof of Certificate**: 4/5/21

Appendix C : Advanced Chloride Management Plan

C.1.1 Advanced Winter Maintenance Plan Cover Sheet

Date:

Property Owner Contact:

Name of Development:

Address of Development:

Watershed:

Winter Maintenance Management Plan Used:

☐ Basic

☐ Advanced

I will work to reduce salt use at this location to protect our natural resources.

Signed:

C.1.2 Advanced Winter Maintenance Plan Criteria

Includes all components of the Basic Plan

Required information:

- ❑ Individual responsible for the winter maintenance at this site
  - Name
  - Relation to Property
  - Phone number
  - Email

- ❑ Fill out Salt Stewardship Pledge – Minneapolis Salt Mini-Course
  - Go through the Salt Mini-Course and fill out the pledge
  - Proof of pledge from at least one person involved in winter maintenance operations at this site

- ❑ MPCA Smart salting certificate of at least one person involved in winter maintenance operations at this site
  - Name
  - Company
  - Phone number
  - Email
  - Proof of Certificate

  *MPCA list of certified applicators
  *MPCA-approved salt training calendar

Choose from recommended fields:

Easy to verify:

- ❑ X% of winter maintenance crew are MPCA Smart Salting certified https://stormwater.pca.state.mn.us/index.php/Smart_Salting_(S2)_training_information

- ❑ Subcontractors' organizations are Level 2 MPCA Smart Salting certified https://stormwater.pca.state.mn.us/index.php/Smart_Salting_(S2)_training_information

Easy to observe:

- ❑ No granular salt on surfaces after the event
- ❑ Proper storage of granular deicers
- ❑ Proper storage of liquid deicers

- ❑ Proper storage of snow (not in waters of the state)
- ❑ Educational signs on property

*Proper liquid storage requirements
*Smart salting resources for applicators

Choose from the recommended list:

- ❑ Documentation
  - ❑ Map or spreadsheet
    - ❑ Size of entire maintenance area
    - ❑ Estimated amount of deicer per pass*
    - ❑ Size of each maintenance area (i.e. main parking lot, front sidewalk…)
    - ❑ Level of service for each area
    - ❑ Estimated amount of deicer needed per pass for each area
  - ❑ Annual report
    - ❑ Total deicer use (in lb./gal)
    - ❑ Challenges in reducing salt use
    - ❑ Successes in reducing salt use
    - ❑ Plans for smart salting next year

Choose from the list of best practices:

- ❑ Remove snow before applying deicer
  - ❑ Snow removal early and often to prevent compaction
  - ❑ Better and or more snow removal tools (brooms, segmented blades, blowers, underbody blades, shovels by salt bucket...)
- ❑ Measure pavement temperature and trend. Use this information to guide deicer selection and application rates.
- ❑ Have available a variety of deicer/abrasive materials so you can select the product that will work best in the lowest commodity depending on the conditions.
  - ❑ If deicers are being use, they should include liquid deicers
- ❑ Improve salt bucket situation (educate users, provide alternatives like shovels and brooms, provide application rate guidance, restrict use, provide small scoops)
- ❑ Calibrate spreaders, put calibration card on spreaders.
  - ❑ Use equipment capable of spreading at low rates suggested in MPCA parking lot manual or work towards this goal as you acquire new equipment.

- ❑ Create application rate charts so applicators can see calibration card, and application rate guidance and be able to choose most appropriate setting on their spreaders
- ❑ If your application rate charts are more than twice the rate of the MPCA Smart Salting application rate charts explain why this is necessary

- ❑ Sweep up extra salt after events

- ❑ Hold post storm meetings or debrief with maintenance crew on what went well and how to continue to work toward smart salting goals.

- ❑ Educate building and grounds users on smart salting and the role they play with safe driving and walking practices

- ❑ Close areas not needed in winter so there is less surface area to salt

- ❑ Consider areas where you might change level of service from bare pavement to not bare pavement (I.e. Salted walking path to unsalted eco-path for dog walkers

- ❑ Other

C.1.3 Advanced Winter Maintenance Plan Example

Property Owner Contact: Julie Jones

Name of Development: Park N Ride West

Address of Development: 123 main street, Wayzata MN 55391

Date: 7/3/21

Watershed: Minnehaha Creek

Winter Maintenance Management Plan Used: Advanced

I will work to reduce salt use at this location to protect our natural resources.

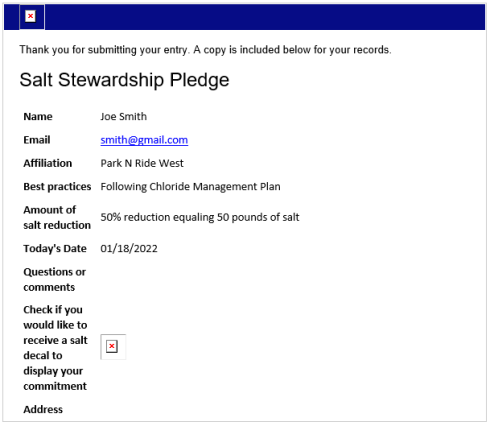
Signed: *Julie Jones*

☑ **Individual responsible for the salt management onsite:**

- **Name:** Joe Smith
- **Relation to Property:** Contractor
- **Phone number:** 688-876-3445
- **Email:** Smith@gmail.com

☑ **Fill out Salt Stewardship Pledge –** Minneapolis Salt Mini-Course

- Go through the Salt Mini-Course and fill out the pledge
- Copy of pledge from at least one person involved in winter maintenance operations at this site



Thank you for submitting your entry. A copy is included below for your records.

Salt Stewardship Pledge

Name	Joe Smith
Email	smith@gmail.com
Affiliation	Park N Ride West
Best practices	Following Chloride Management Plan
Amount of salt reduction	50% reduction equaling 50 pounds of salt
Today's Date	01/18/2022
Questions or comments	
Check if you would like to receive a salt decal to display your commitment	☒
Address	

☑ **Smart salting certificate of at least one person involved in winter maintenance operations at this site:**

- **Name:** Sarah Kinney
- **Company:** FCI
- **Phone number:** 123-321-1234
- **Email:** Sarah@Fortinconsulting.com
- **Proof of Certificate**: 4/5/21

Smart Salting for Parking Lots & Sidewalks

This is to certify that

[name]

completed the Smart Salting for Parking Lots & Sidewalks training requirements on behalf of the

[organization name]

for learning and pledging to reduce their salt use.

Your actions will help protect Minnesota lakes, streams and groundwater

SAFER FOR LAKES & STREAMS CERTIFIED SMART SALTER SAFE FOR PEOPLE

Brooke Asleson
Resource Management and Assistance Division

Issue Date: 03-06-2020

Certificate expires 5 years from issue date

☑ 50% of winter maintenance crew are MPCA Smart Salting certified.
- 10-person full time crew, 50% certified. More part time crew will be added during winter months and will work under the direction of the full-time crew. It is up to our subcontractors to train their own crew. We request that the subcontractor's organization be level 2 certified as shown below.

Certified Crew and Date of Certification:

- Sarah Kinney, 4/5/2021
- Tom Johnson, 5/18/2021
- Maggie Holloway, 5/4/2021
- Trish Johnston, 5/7/2021
- Luis Lopez, 4/18/2021

☑ Subcontractors' organizations are level 2 MPCA Smart Salting certified

Certified subcontractors and Date of Certification:

- Jose's Snow and Ice, 5/6/21
- Walleye Landscaping, 6/8/21

☑ No granular salt on surfaces after the event

- We will strive to use the right amount. However, if we've overapplied, we will recover the extra and use it at a different event.

☑ Proper storage of granular deicers

- Our granular deicers will be stored under a cover and on an impermeable surface.

☐ Proper storage of liquid deicers

- We do not use liquid deicers

☑ Proper storage of snow (not in waters of the state)

- Snow will not be pushed into wetland #215 or Plymouth Creek.

☑ Educational signs on property

- Educational signage about smart salting use will be posted for our tenants at entrances from November through March.

☑ Documentation

☑ Map or spreadsheet

☑ Size of entire maintenance area: 52,450 sq. Ft

☑ Estimated amount of deicer per pass*: 30 lbs.

*This is very close to the recommended rates in the MPCA Smart Salting for Parking Lots and Sidewalk manual.

☑ Size of each maintenance area (i.e., main parking lot, front sidewalk…): (see map/spreadsheet)

☑ Level of service for each area: (see map/spreadsheet)

☑ Estimated amount of deicer needed per pass for each area: (see map/spreadsheet)

Minneapolis
City of Lakes

Stormwater Credit Chloride Reduction

Sample Map

Full Salt
Half Salt
No Salt
Public Sidewalk

Location	Area	Lbs. per Pass	Target	How Fast
Full Salt	20,480 sq. ft.	12	Bare pavement	24 hrs. after snow
Half Salt	22,270 sq. ft.	6	Patches of snow	48 hrs. after snow
No Salt	8,460 sq. ft.	0	Compacted snow	24 hrs. after snow
Public Sidewalk	1,240 sq. ft.	12	Bare pavement	24 hrs. after snow

*Public Right-of-Way (ROW) not eligible for credits.
*Use abrasive if needed for traction on the compacted snow.

☑ **Annual report**

- ☑ Total deicer use (in lb./gal) per pass: 625 pounds
  - *Salting Events: 25; 18 snow events, 5 freezing rain events, 2 melt and refreeze events*
- ☑ Challenges in reducing salt use
  - *It is difficult to stay within the MPCA Smart Salting Guidelines. We really want to add more salt than that, we are trying it out as an experiment. Our maintenance crew changed throughout the season, so it was difficult to get them in a training class.*
  - *We had a big snow event, and a lot of users of park-and-ride complained that they wanted higher salt use.*
- ☑ Successes in reducing salt use
  - *By the end of the season, most of the crew had at least one experience using liquid deicers.*
- ☑ Plans for smart salting next year
  - *Next year, we will improve performance by using more liquid deicers.*
  - *We hope to do a better job of sticking to the level of service plans highlighted in our spreadsheet.*

Best Practices:

- ☑ Remove snow before applying deicer
  - ☑ Snow removal early and often to prevent compaction
    - *We will remove snow before applying deicer. We will do our best do remove it early and often so that compaction doesn't occur.*
  - ☐ Better and or more snow removal tools (brooms, segmented blades, blowers, underbody blades, shovels by salt bucket...)

☐ Measure pavement temperature and trend use this information to guide deicer selection and application rates.

☑ Have available a variety of deicer/abrasive materials so you can select the product that will work best in the lowest commodity depending on the conditions.

- *We will have more than one type of deicer available and choose the most effective one based on our pavement temperature and trend.*

☐ If deicers are being use, they should include liquid deicers

☑ Improve salt bucket situation (educate users, provide alternatives like shovels and brooms, provide application rate guidance, restrict use, provide small scoops)

- *The salt bucket by the entrance to the park-and-ride booth will contain a very small scooper and a sign about why we want to reduce salt use. ("Chloride pollutes our waters. Please use salt sparingly.")*

☑ Calibrate spreaders, put calibration card on spreaders.
- *We will calibrate our spreaders before the first snow.*

☐ Use equipment capable of spreading at low rates suggested in MPCA parking lot manual or work towards this goal as you acquire new equipment.

☐ Create application rate charts so applicators can see calibration card, and application rate guidance and be able to choose most appropriate setting on their spreaders.

☐ If your application rate charts are more than twice the rate of the MPCA Smart Salting application rate charts explain why this is necessary.

☐ Sweep up extra salt after events

☑ Hold post storm meetings or debrief with maintenance crew on what went well and how to continue to work toward smart salting goals.
- *We will start conducting post-storm meetings, discussing the challenges and successes we had with salt use.*

☑ Educate building and grounds users on smart salting and the role they play with safe driving and walking practices.
- *We are going to educate the grounds crew and work staff at the Park-and-Ride about the lower salt use and why it is necessary. We will encourage them to walk and drive carefully to avoid falls/crashes*.

☐ Close areas not needed in winter so there is less surface area to salt

☐ Consider areas where you might change level of service from bare pavement to not bare pavement (I.e. Salted walking path unsalted to eco-path for dog walkers

☑ Other
- We will speak about our efforts to reduce salt at the annual Minnesota Park-and-Ride meeting.