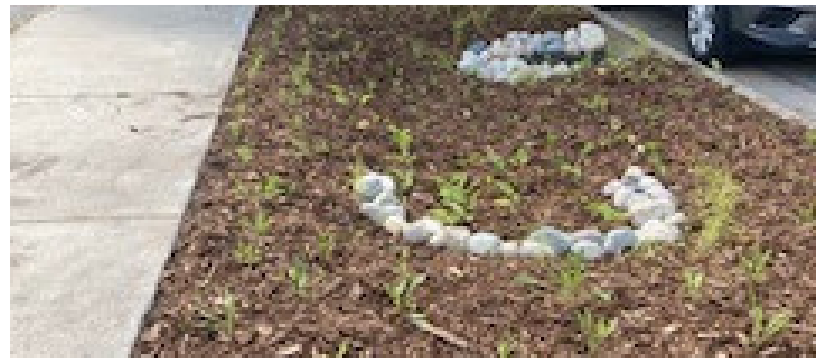




ALTERNATIVE STORMWATER COMPLIANCE GUIDE

a guide to stormwater management alternatives for water quality and channel protection requirements at development and redevelopment sites in the City of Grand Rapids, Michigan



STARTING A NEW OR RE-DEVELOPMENT PROJECT?

MAJOR PERMITTING CHANGES IN 2022:

- Green Infrastructure Solutions
- Updates to Water Quality requirements
- NEW! Channel Protection Requirement
- Flexible Options for Compliance

STORMWATER COMPLIANCE OVERVIEW

Stormwater runoff, or rainfall and melting snow across hard surfaces in urban areas carries pollutants and containments into the Grand River, it's tributaries and Lake Michigan.

Protecting our water resources for public health and vibrant economies requires managing stormwater sustainably; slow it down, spread it out, and soak it in. Stormwater runoff from municipal separate storm sewer systems (MS4s), including from new development and redevelopment projects are regulated by the EPA's National Pollutant Discharge Elimination System (NPDES) Permit Program. As a provision in its MS4 NPDES permit, the City of Grand Rapids is required to set specific standards for managing stormwater and reducing adverse impacts to waterways. Applicants for Land Use Development Services (LUDS) Permits requiring post-construction stormwater controls will find new and revised regulations and alternative compliance options.

MS4 POST-CONSTRUCTION STORMWATER REQUIREMENTS:

As a result of its new MS4 permit, the City of Grand Rapids' has Revised stormwater standards and permitting requirements that apply to new and redevelopment projects. Projects subject to post-construction stormwater requirements are generally described below:

- New development and redevelopment projects that increase on-site impervious area by 1,000 square feet or more;
- New development and redevelopment sites with an earth change of 2,500 square feet or more.

Table 1 outlines the City of Grand Rapids' new post-construction stormwater management requirements for new and redevelopment projects.

Standard	
UPDATED Water Quality	Treat the runoff generated from 1 inch of rain over the project site through BMPs
UPDATED Channel Protection	Retain on-site the increase between the pre-development and post-development runoff volume and rate for all storms up to and including the 2-year, 24-hour rainfall event. Retention can be provided through infiltration, or interception, and evapotranspiration or reuse. *Additional specific requirements for sensitive watershed areas.
Flood Control	Collection and Conveyance: Design storm sewers, open channels, and swales for the 10-year storm. Detention and Retention: Store runoff from the 25-year storm with a maximum release rate of 0.13 cfs/acre (minimum rate of 0.26 cfs for sites less than 2 acres) *Additional specific requirements for sensitive watershed areas.

Source: City of Grand Rapids, 2022



The MS4 permit allows alternative compliance in cases where infiltration or retention onsite is infeasible. The infeasibility criteria are based on multiple criteria and not solely limited to the difficulty or cost of implementing Best Management Practice (BMP's) onsite. Criteria for infeasibility includes:

- Limited area of the lot outside of the building footprint to create the necessary infiltration capacity even with amended soils.
- Soil instability as documented by a thorough geotechnical analysis.
- A site use that is inconsistent with capture and reuse of stormwater.
- Too much shade or other physical conditions that preclude adequate use of plants.
- The potential water quality impacts associated with the original project site compared to the benefits realized at the offsite location.

ALTERNATIVES FOR COMPLIANCE:

If onsite compliance for water quality and channel protection is infeasible; applicants have the flexibility in meeting requirements with three options:

1. **Stormwater Credit Trading Program (SCTP)**- Purchase stormwater volume-based retention credits that reflect the appropriate amount of retention provided at an off-site location.
2. **Off-site mitigation** - Construct green infrastructure-based stormwater retention at an off-site location controlled by the developer in the same sub-watershed.
3. **Payment in Lieu-Fee** to the City of Grand Rapids for the cost to implement a green infrastructure practice to achieve equivalent stormwater enhancements.
4. **Extended detention** - Alternative approach per Stormwater Standards Manual

ALTERNATIVE COMPLIANCE THROUGH STORMWATER CREDIT TRADING

WHAT IS STORMWATER CREDIT TRADING PROGRAM?

The SCTP is a flexible compliance alternative for private property owners to meet MS4 stormwater requirements, and increase green stormwater infrastructure (GSI) implementation to improve water quality in the region.

- Cost effective option for new/redevelopment projects to meet regulatory compliance to manage stormwater runoff.
- Projects may comply by purchasing substitute retention capacity at an off-site location.
- Credits will be created by voluntary GSI projects where construction activities do not trigger stormwater management standards or that exceed regulatory minimums.

BENEFITS OF STORMWATER CREDIT TRADING?

- Can be cheaper and easier for development projects to be completed on time
- Maximize buildable area or outdoor capacity
- Greater implementation of GSI
- Distribute sustainability benefits across city

STORMWATER CREDIT CURRENCY:

One stormwater credit (SC) is equivalent to one cubic foot of stormwater infiltrated or retained through green infrastructure practice.

1 SC = 1cft of stormwater

Eligible projects purchase or sell certified stormwater credits (SCs) through the online Stormwater Credit Trading Marketplace. Participating parties negotiate the price for the one-time purchase of SCs, including the cost of ongoing GI maintenance. The parties can negotiate whether these payments will be made periodically or in one up-front transaction. The transaction is certified by the City pending the approved **Purchase Agreement** required between buyer and SC provider.

PARTICIPATION ELIGIBILITY:

- **New and Redevelopment projects** required to meet MS4 Stormwater Retention Requirements. Must be located in one of the three trading areas within Grand Rapids city limits.
- **Private property owners** (individual or collective) can create and sell credits by voluntarily implementing GSI practices that retain at least 350 cft of stormwater runoff from impervious surfaces.

HOW TO PARTICIPATE:

Purchasing Credits		Generating Credits
	STEPS	
Determine eligibility to comply using Offsite Mitigation based on feasibility criteria on pg. 3 and SC amount required through LUDS application	1	Determine eligibility to generate SCs from a green infrastructure project through LUDS application
Approved to purchase SCs by demonstrating required capacity is achieved by Offsite Compliance	2	Approved GSI project to generate SCs for the Stormwater Marketplace
Submit Stormwater Management Plan (SWMP) with LUDS application on Citizen Access	3	Certify SCs by submitting a Stormwater Management Plan (SWMP) for project on Citizen Access
Access Stormwater Marketplace to purchase volume required determined by SWMP	4	Approved volume capacity is listed as SCs in the Stormwater Marketplace
Contact approved seller to purchase credits for volume required at listed price	5	SCs sold to approved buyer through Purchase Contracts
Submit Purchase Agreement and Maintenance Contract for permit approval on Citizen Access	6	Maintain and re-certify GI per permit requirements

MAINTENANCE OBLIGATIONS:

Property owners who install GSI and sell credits through the SCTP have a continuing obligation to comply with stormwater management requirements. Property owners implementing GI for SCTP participation are required to submit a **Maintenance Agreement**, providing responsibility of ongoing maintenance for the life of the GI project.

WHERE DO I REGISTER MY PROJECT?

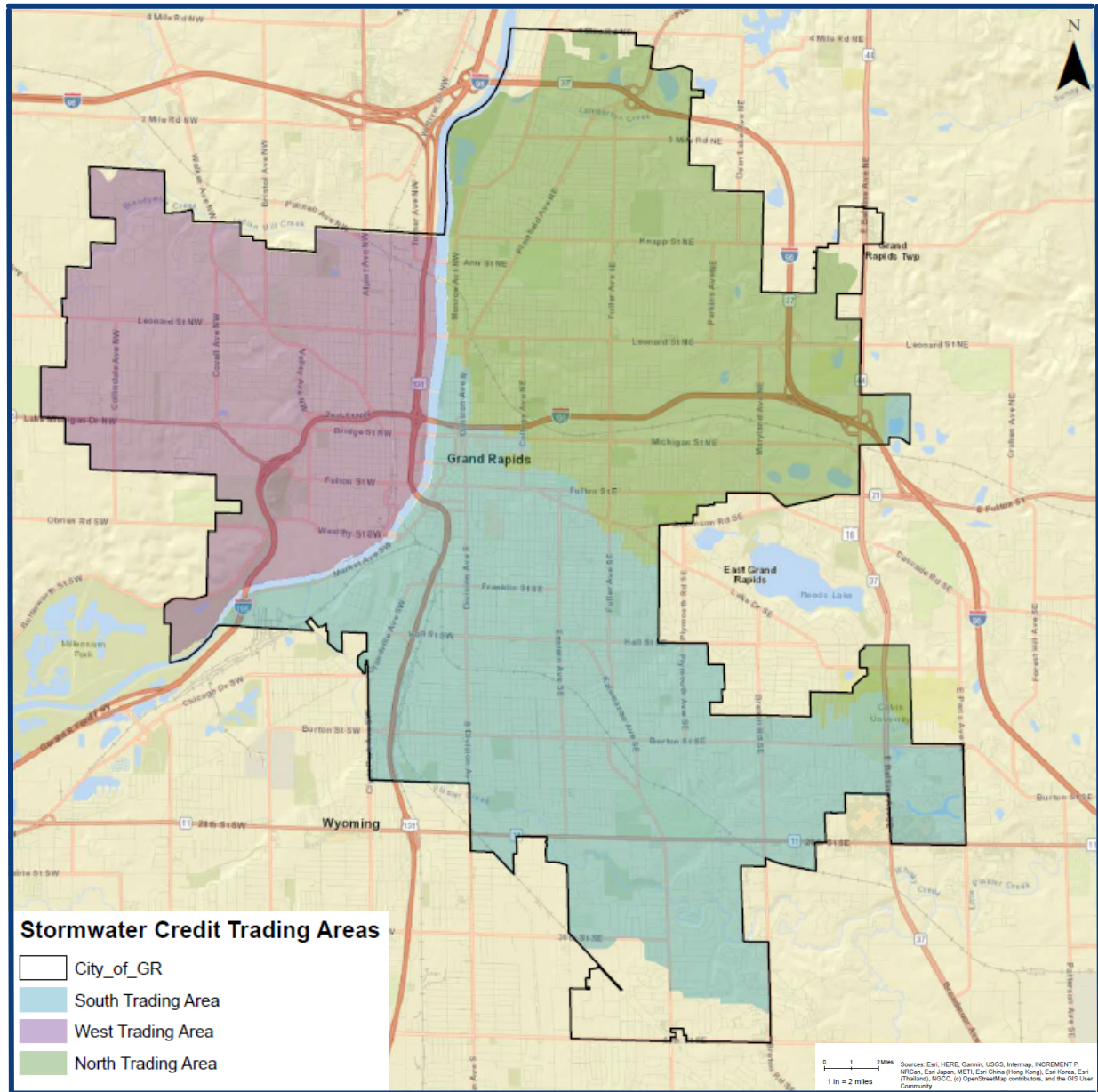
To register your project for purchasing or selling stormwater credits (SCs), or for more information about the program, visit the website at [Grand Rapids Stormwater Credit Trading Program](#)

ADDITIONAL RESOURCES ONLINE:

- [Grand Rapids Stormwater Standards Manual](#)
- [Grand Rapids Green Infrastructure Standards](#)
- [LGROW Stormwater Calculator](#)
- Stormwater Credit Trading Manual



Stormwater Credit Trading Areas in Grand Rapids



The Stormwater Credit Trading Program for Grand Rapids created in partnership by the City of Grand Rapids Environmental Services Department, American Rivers and Corona Environmental Consulting.

