



Greenfield

LIVE • WORK • PLAY

Storm Water Utility Plan

City of Greenfield, MN

Adopted October 20, 2015

Executive Summary

This report presents the rationale and methods that guided the creation of the Greenfield Storm Water Utility (SWU). The benefits of this utility are also discussed. Implementing a storm water utility creates a dedicated funding source for storm drainage improvements, maintenance, and water quality projects. The City of Greenfield realizes the following potential benefits from a well-funded improvement and maintenance program:

- Flood control and drainage
- Enhanced water quality in area rivers, lakes and waterways
- Improved maintenance of existing infrastructure
- Erosion and sediment control
- An enhanced storm water conveyance system

This report includes a methods discussion for defining the “Residential Equivalency Factor” (REF), which is the basic unit for the fee structure. One REF represents the runoff volume generated by a typical single family residence. The utility assigns REFs to other properties based on their size and percentage of impervious surface.

The storm water utility bases all individual charges on the number of REFs assigned to a particular parcel. This report includes a summary of the SWU charges and storm water improvements and maintenance items the SWU charges intend to fund. These budget items are intended to encompass the City’s storm water improvements and maintenance items. In addition, the SWU includes a budget for the implementation of programs and projects to address the water quality issues within the City of Greenfield.

1. Introduction

1.1 CURRENT AVAILABLE FUNDING SOURCES

Most commonly, cities draw from the general fund to finance municipal storm water improvements projects. A storm water utility is generally considered a more equitable mechanism for funding storm water improvement projects because the charge is based upon the amount of runoff generated from a property. Storm water utility charges are also applied to tax exempt properties like churches and schools – all of whom are part the municipal storm water system.

1.2 PURPOSE OF STORM WATER UTILITY

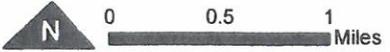
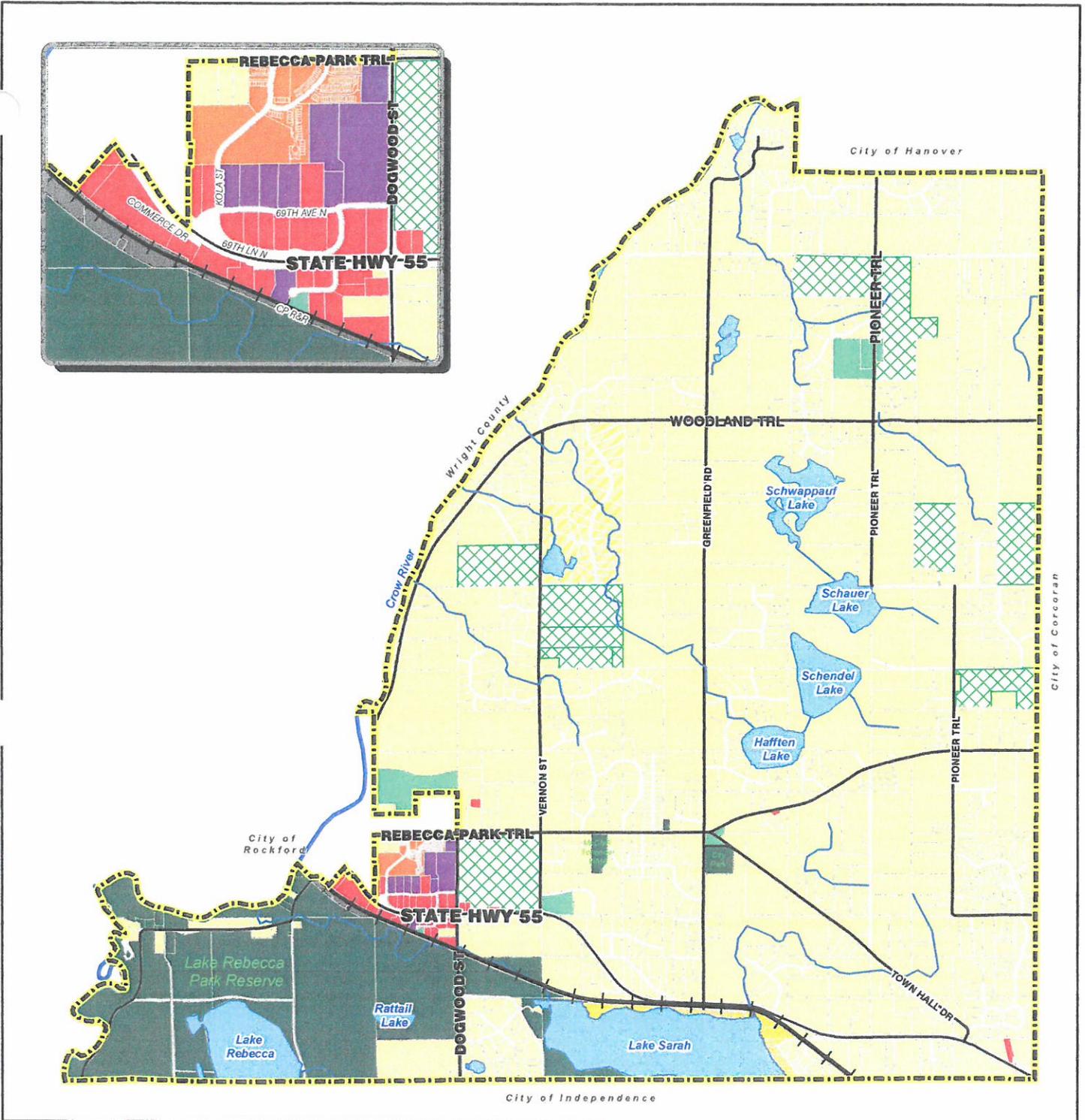
Municipalities create storm water utilities so that dedicated funds are available to operate, maintain, manage, construct or reconstruct their municipal storm water drainage systems. A storm water utility is a dedicated revenue source intended to alleviate the burden on general funds. Essentially, the storm water utility is identical to a water or sanitary sewer utility, in which the utility's users finance the utility's infrastructure costs. The storm water utility charge is not associated in any way with property value, property taxes, or the owner's income.

Greenfield's storm water utility defines a "user" as any property that contributes storm water runoff to the storm drainage system. The users include all existing land use categories, with exception of the following:

- Public parks and recreation parcels
- Public open space parcels
- Public right-of-way parcels
- Wetland credit for parcels over 40 acres in size (if wetland credit puts parcel into different size category)

Typically, the City charges a storm water utility fee to all "users" within the City based on the amount of runoff that each property generates and contributes to the storm water system. As a rule, the runoff generated relates directly to the amount of hard surface, or impervious area, found on the property. Hard surfaces such as rooftops, driveways, and parking lots prevent rainfall from infiltrating into the ground, thus increasing the amount of runoff that a property generates. Consequently, a property with more impervious area uses the system to a greater extent than a property with less hard surface. The existing land use and current parcel coverage within the City of Greenfield used for the generation of this SWU can be found on Figure 1. (Existing Land Use Map)

Figure 1 – Existing Land Use Map.



March 26, 2015
 Source: Hennepin County Assessor
 and City of Greenfield

Legend

- Agriculture Preserve
- General Business
- Rural Residential
- Industrial
- Sewered Residential
- Institutional
- Private Sewered Residential (Whisper Creek)
- Park
- Residential Townhomes
- Railroad
- City Boundary
- Railroad
- Lake
- River and Streams



Existing Land Use (2014)

2. Storm Water Utility Activities and Benefits

2.1 STORM WATER UTILITY BENEFITS

Because of the increasing competition for funding among the City's various needs, certain storm water system activities are left unfunded or underfunded. The purpose of creating and implementing a storm water utility is to provide an equitable, dedicated funding source for additional or improved storm water management services. Some benefits that can be realized by these services and potential activities that can be realized by these services and potential activities that can help the City realize these benefits are:

- Water quality
 - Comprehensive water quality management plan
 - Monitoring
 - Wetland restoration
 - Water quality system improvements
 - Projects such as addressing TMDL pollutant load allocations
- Erosion and sediment control
 - Street sweeping
 - Storm sewer pipe, catch basin, and pond inspection, maintenance, and improvements
- Enhanced storm water conveyance
 - Rehabilitation and replacement
 - Facility improvements
 - Operation and maintenance
- Flood control
 - Comprehensive storm water management plan
 - Storm sewer system improvements

The total amount to be initially funded by this storm water utility will be based on the proposed 2016 budget of \$107,487.

These budgeted costs, as well as the items identified as being funded by this SWU, should be reviewed and adjusted as necessary on an annual basis by the City Council.

2016 Proposed Storm Water Budget

<u>Category</u>	<u>Annual Cost</u>
Pond dredging & Cleaning	
32+ runoff ponds	
\$10-15,000/pond - \$320-\$480,000	
Clean every 20 years	\$24,000
Ditching and Culverts	
90 miles of ditch	
# of culverts ??	
Culvert replacement	\$15,000
Watershed	
Dance Hall Creek sub-watershed	
Top 23 projects = \$583,000	
Grant \$=1/2 or \$291,000	
Watershed = 10% or \$29,000	
City Share = \$262,000	
Capital Projects = \$262,000 for 10 years	
City Projects	\$20,000
2016 Dues	\$37,487
Dues + Projects	\$57,487
Stormwater Basins	
Provide funding for infrastructure improvements in Industrial Zone	
\$10,000/yr	\$10,000
Administrative Initial Cost	<u>\$ 1,000</u>
Total Budget	<u>\$107,487</u>

3. Proposed Storm Water Utility Fees

3.1 PROPOSED FEES

Storm water utility fees are based on the user’s share of the costs to be funded by the utility. This is the most equitable and practical means of financing these ongoing operations. Conceptually, users pay a storm water utility fee in proportion to the amount of storm water runoff generated by their property.

The average lot size for Rural Residential land use is 3.5 acres and defines the SWU fee structure’s base unit, the “Residential Equivalency Factor” (REF). This typical residential lot is not representative of any particular residential lot and is used only as a means to calculate REFs per acre for properties with certain existing land use designations as identified in Table 3.1. The REF per acre values for parcels of 10 acres or more are based on comparative amount of runoff generated by certain existing land use designations to the amount generated by a typical single family residential lot. All Rural Residential under 10 acres receive 1 REF. Sewered Residential (public) under 1 acre and Residential Townhomes receive .5 REF. Agriculture Preserve is incorporated with the Rural Residential.

The REF calculations are based on the Existing Land Use (ELU) designation. A summary of REFs assigned to each existing land use and an inventory of the current total number of REFs per existing land use category in the City is presented in Table 3.1.

Table 3.1.

Existing Land Use	Ave. Lot Size	Typical % Impervious	Imp. Factor	REFs Per parcel	REFs Per acre	Total REFs
Rural Residential						
Less than 1 acre	.9	30%	.27	1	--	126
Over 1 to 2.5 acres	2	15%	.3	1	--	154
Over 2.5 to 5 acres	3.5	10%	.35	1	--	411
Over 5 to 10 acres	7.5	5%	.38	1	--	218
Over 10 to 20 acres	15	4.5%	.68	2	--	204
Over 20 to 40 acres	30	2.5%	.75	3	--	171
Over 40 to 100 acres*	70	2.5%	1.75	7	--	364
Over 100 acres*	133	1.5%	2.0	10	--	40
Sewered Residential						
Less than 1 acre	.5	35%	.175	.5	--	19.5
Greater than 1 acre are included with the Rural Res. calculation						
Sewered Residential-Private						
Included in Rural Res.						
Residential Townhomes	.05	100%	.05	.5	--	54.5
General Business	2.2	75%	1.60	--	5 REF/Ac	332
Industrial	5	60%	3	--	8 REF/Ac	320
Institutional – These parcels are calculated on their individual stats, not on average						48
* Wetland credit applied, then put in corresponding category						
					TOTAL	2462

The total estimated revenue collected each year is directly proportional to the utility charge per REF. At this time the City estimates that 2016 it will need \$107,487 funded by the storm water utility. The following equation shows how the charge per Residential Equivalency Factor is determined:

$$\begin{aligned} \text{Total annual revenue needed} / \text{Total number of REFs} &= \text{Fee per REF per year} \\ \$107,487 / 2462 &= \$43.66 \text{ (REF per year) or } \$3.64/\text{month.} \end{aligned}$$

3.2 REQUIREMENTS TO IMPLEMENT

To implement the Greenfield storm water utility, the City Council will need to adopt an ordinance outlining the specifics of the storm water utility. A storm water utility ordinance establishes the user fee system as the principal funding mechanism for the City's storm water management program. A separate storm water utility fund will be created to capture the income and expenditures.

4. RECOMMENDATION

The recommended actions necessary to proceed with the implementation and integration of the storm water utility fee are as follows:

1. Mail the newsletter explaining the storm water utility to all property owners in Greenfield.
2. Hold a public hearing to present the storm water utility
3. Adoption of an ordinance establishing the user fee system
4. Establish procedures to bill and collect the user fee revenues
5. Integration of the new storm water funding mechanism into the existing city systems

The recommended actions necessary to maintain the storm water utility are:

1. Add new parcels to the system as development projects are closed out
2. Review and update these existing land use designations as necessary as development proceeds
3. Annual review of charge rate
4. Annual update of storm water Capital Improvement Plan and annual cost to be funded by the SWU
5. Periodically review the billing list