

Technical Memorandum

To: Phil Belfiori, VLAWMO
From: Chris Otterness PE
Houston Engineering, Inc.
Subject: VLAWMO SSU Fee
Date: August 5, 2025
Project: R007057_0018

Introduction

The purpose of this memorandum is to describe Vadnais Lake Area Water Management Organization's (VLAWMOs) process for determining its Storm Sewer Utility (SSU) fee. The Minnesota Legislature adopted special legislation (2008 Minn. Laws Chap. 366, Art. 6, Sec. 47) to provide VLAWMO the authority to impose SSU fees and charges under Minn. Stat. §§ 103B.211 or 444.075 (see **Appendix A**). The SSU fees imposed by VLAWMO provides revenue for VLAWMO's annual budget through a fee mechanism that establishes a charge on all eligible land parcels within VLAWMOs boundary. See **Appendix B** for the 2007 rule. This charge is based on the allocation of a portion of the revenue needed for VLAWMOs annual budget to each land parcel relative to the amount of runoff discharged from that parcel.

This memorandum includes a description of:

- Parcels or portions of parcels that are eligible and ineligible for the charge;
- The mechanism for the SSU fee determination;
- The process for addressing parcel and land use changes; and
- Conclusions and recommendations

Eligible and Exempt Parcels/Land

Per VLAWMO policy, the following land uses are exempt from the charge:

- Vacant land;
- Parks;
- Cemeteries;
- Public road right-of-way; and
- Railroad right-of-way

Per this policy, "eligible land parcels" are those that have a land use (as identified in County parcel data) not meeting the exemption categories.

In addition, the SSU policy exempts portions of eligible land parcels that are wetlands (as identified in the most current National Wetland Inventory GIS layer) or public waters (as identified in the MnDNR Public

Waters Inventory GIS layer). The area of eligible land parcels that does not carry a wetland/public waters exemption is referred to as “eligible parcel acreage.”

The primary reason the exemptions on vacant land, parks, cemeteries, and wetlands is that these land uses generally do not significantly increase the burden upon the stormwater management infrastructure compared to presettlement conditions. Public road and railroad rights-of-way are exempted due to the challenges of collecting charges from land tracts that do not have an assigned property identification number (PIN).

Mechanism for Storm Sewer Utility Fee Determination

The SSU mechanism for calculating parcel charges is similar to those used by other water management organizations and watershed districts¹ that apply charges based on stormwater runoff contribution. It allocates the cost of management of surface water in VLAWMO via a fee system, ***proportional to the amount of runoff from a given property for a 2” rainfall event***. This apportionment is appropriate for a stormwater management charge in the Twin Cities metropolitan area as long term costs of managing stormwater infrastructure are most often roughly proportional to the volume of runoff managed, and the majority of annual runoff comes from rainfalls that are 2-inches or less in magnitude. The methodology uses GIS land parcel data from Ramsey and Anoka Counties, and specifically the “USETYPE2” field, which corresponds to the land use categories for REF calculation and exemptions (see **Table 1**).

Table 1 – County Parcel Data Land Use Correlation

County Property Land Use Descriptions (USETYPE2 field)	VLAWMO Classifications
1A/1B/4A APT 4 + OWNERS	Residential Multi-family (4 or more Units)
1A/1B/4B1 RESIDENTIAL 1-3 UNITS	Residential Single Family (1-3 Units)
1A/1B/4BB RESIDENTIAL SINGLE UNIT	Residential Single Family (1-3 Units)
1A-RESIDENTIAL SINGLE UNIT	Residential Single Family (1-3 Units)
2a AGRICULTURAL	Agricultural
2A/1B/4BB AGRICULTURAL	Agricultural
2b RURAL VACANT LAND	Agricultural
3A COMMERCIAL LAND AND BUILDING	Commercial
3A INDUSTRIAL LAND AND BUILDING	Industrial
3A U/P OTHER MACH, IMPLEMENT, TOOLS NP	Institutional: Schools, hospitals, government, churches
4A APARTMENT 4 OR MORE UNITS	Residential Multi-family (4 or more Units)
4B4 UNIMPROVED RESIDENTIAL LAND	Residential Single Family (1-3 Units)
4C12 SEASONAL RESIDENTIAL RECREATION	Residential Single Family (1-3 Units)
4C2 QUALIFY GOLF COURSES	Golf courses
4C5III MFD HOME PARK CLASS 1	Residential Multi-family (4 or more Units)

¹ Rice Creek Watershed District has developed charges for stormwater infrastructure repairs in several Water Management Districts by a similar methodology, as has the Buffalo Creek Watershed District. In each case, project cost has been apportioned proportionate to the amount of runoff generated from each parcel.

County Property Land Use Descriptions (USETYPE2 field)	VLAWMO Classifications
4D QUAL LOW INC RENTAL HOUSING <= LIMIT	Residential Multi-family (4 or more Units)
4D QUAL LOW INC RENTAL HOUSING > LIMIT	Commercial
4D1 NON-HOMESTD QUALIFY LOW INC RENTAL	Residential Multi-family (4 or more Units)
5E CEMETERY-PRIVATE	Exempt
5E CHARITABLE INSTITUTION	Institutional: Schools, hospitals, government, churches
5E CHARITABLE INSTITUTION-RESIDENTIAL	Residential Single Family (1-3 Units)
5E CHURCH	Institutional: Schools, hospitals, government, churches
5E CHURCH-OTHER	Institutional: Schools, hospitals, government, churches
5E CHURCH-OTHER RESIDENTIAL	Institutional: Schools, hospitals, government, churches
5E CHURCH-RESIDENTIAL	Institutional: Schools, hospitals, government, churches
5E COUNTY-PUBLIC SERVICE-OTHER	Institutional: Schools, hospitals, government, churches
5E EXEMPT NOT REPORTED	Exempt
5E FEDERAL PROPERTY	Exempt
5E HOSPITAL-PRIVATE	Institutional: Schools, hospitals, government, churches
5E K-12 SCHOOL-PRIVATE	Institutional: Schools, hospitals, government, churches
5E K-12 SCHOOL-PUBLIC	Institutional: Schools, hospitals, government, churches
5E K-12 SCH-PUBLIC,RES	Institutional: Schools, hospitals, government, churches
5E MUNICIPAL-PUBLIC SERVICE	Institutional: Schools, hospitals, government, churches
5E MUNICIPAL-PUBLIC SERVICE-OTHER	Institutional: Schools, hospitals, government, churches
5E RAILROAD EXEMPT NOT REPORTED	Exempt
5E SPECIAL TAXING DISTRICT	Institutional: Schools, hospitals, government, churches
5E STATE PROPERTY	Exempt
5E TAX FORFEITURE NOT REPORTED	Exempt
5E WETLANDS	Exempt
COUNTY-PUBLIC SERVICE-OTHER - Exempt	Institutional: Schools, hospitals, government, churches
MUNICIPAL-PUBLIC SERVICE - Exempt	Institutional: Schools, hospitals, government, churches
MUNICIPAL-PUBLIC SERVICE-OTHER - Exempt	Institutional: Schools, hospitals, government, churches
RESIDENTIAL 1 TO 3 UNITS	Residential Single Family (1-3 Units)
SPECIAL TAXING DISTRICT - Exempt	Institutional: Schools, hospitals, government, churches
** AS DETERMINED BY VLAWMO STAFF**	Exempt

The equation for determining a fee on any given eligible land parcel is;

$$\text{Fee (F)} = \text{RURF} * \text{REF} * \text{EPA}$$

RURF = Residential Unit Rate Fee (same for all parcels)

REF = Residential Equivalency Factor (same for each land use)

EPA = eligible parcel acreage (*Note: for single family residential properties, EPA is nominalized to equal the average parcel acreage of all single-family residential lots across the watershed. In the original establishment of the charge in 2007, this average was 0.69 acres. Given that the majority of VLAWMO is developed, the average single-family residential parcel acreage is not likely to substantially change, and the EPA for single family residential properties does not need to be recalculated regularly.*)

RURF is calculated by dividing the total SSU revenue generation (as indicated in the VLAWMO annual budget) by the sum product of REF and EPA for each eligible land parcel.

REF for a given land use is equal to the runoff depth from that land use for a 2-inch rainfall, divided by the runoff depth for single family residential land use (thus, single family residential land use has an REF of 1). The 2-inch runoff depth in turn is calculated using the Soil Conservation Service (SCS) method for calculating runoff volumes and an assumed Curve Number (CN) based on the assumed ground cover, percentage of impervious surface, and hydrologic soil group “B” soils. The curve numbers used in this calculation follow SCS guidelines. **Table 2** indicates the REF values for each land type

Table 2 – County Parcel Data Land Use Correlation

Land Use (LU)	Runoff Curve Number (CN)	Retention (inches) (S)	Runoff Depth (Inches) (Q)	Residential Equivalency Factor (REF)
Res. Single-Family	72	3.89	0.29	1
Res. Multi-Family	85	1.76	0.80	2.72
Commercial	92	0.87	1.24	4.23
Industrial	88	1.36	0.97	3.30
Institutional: School, Hospitals, Government, Church	88	1.36	0.97	3.30
Golf Course	69	4.49	0.22	0.74
Agricultural	61	6.39	0.07	0.25

A tabulation of 2025 charges by land use/REF is included in **Appendix C**.

Addressing Land Use, Parcel, and Boundary Changes

Each year, there are changes to the number and land use of land parcels within VLAWMO. These changes generally have occurred via changes to VLAWMOs legal boundary, parcel modifications (subdivisions, merged parcels, etc.) and changes in land use (e.g. rezoning and conditional use permits). There is a two-step process when parcel boundaries change. The first is to address the reapportionment of the current year’s SSU fee from the old parcel(s) to the new parcel(s). This occurs throughout the year

as part of the ongoing division process with each county. The second step is to remove the old parcel(s) and add the new parcel(s) for inclusion in the subsequent year's SSU charge. These changes are reflected in County parcel data that is updated annually. To address these changes, the following process is used in conjunction with the annual development of the SSU charge:

- VLAWMOs finance consultant (currently Ehlers) compares the most current County parcel data with the prior charge tabulation to identify new or deleted land parcels or those with a modified land use
- New parcels and parcels with a modified land use are assigned an REF per Tables 1 and 2.
- VLAWMO, in coordination with its finance consultant, consults with a designated GIS Professional (currently Houston Engineering) to determine the eligible parcel acreage for each new parcel. The GIS Professional calculates the EPA by intersecting NWI and Public Waters Inventory layers with the parcel layer and calculating the non-overlapping areas on each new parcel.
- VLAWMOs finance consultant recalculates the SSU charges using the budgeted revenue generation and the updated parcel data.
- Changes in parcel boundaries, land use, and taxable status are then summarized annually and presented to the VLAWMO Board as part of the annual SSU fee calculation.

All charges (including those with parcel/land use changes and those without changes) are certified to Ramsey and Anoka Counties annually.

Conclusions/Recommendations

The SSU charge, the framework for which was originally developed in 2007 and is articulated in detail with this memorandum, is a reasonable method for equitably apportioning the costs of managing stormwater within VLAWMO to the landowners/land use practices that create the need for the stormwater management. The framework contains a uniform process which is scientifically derived. This process allocates charges based on a nominal rainfall volume which is calculable and proportionate to the burden placed on stormwater infrastructure, which necessitates the activities of WMO as specified within its Watershed Management Plan. The framework is resilient, as it includes a detailed, objective process to address parcel geometry and land use changes. As such, the SSU charge framework is appropriate for continued use by VLAWMO.

We recommend that VLAWMO continue to implement its SSU charge pursuant to the framework detailed within this memorandum, including modification of charges consistent with the section, "Addressing Land Use, Parcel, and Boundary Changes." We further recommend that VLAWMO review the appropriateness of this charge at a minimum of every ten years in conjunction with the update of its Water Management Plan.

APPENDIX A - 2008 MN LAWS CHAP. 366, ART. 6, SEC. 47

Sec. 47.

VADNAIS LAKE AREA WATER MANAGEMENT ORGANIZATION; STORM SEWER UTILITY FEES.

Notwithstanding any other law to the contrary and pursuant to joint powers agreements authorized under Minnesota Statutes, sections 103B.211 and 471.59, the Vadnais Lake Area Water Management Organization may certify to the county auditor any fees or charges imposed by the organization under Minnesota Statutes, section 103B.211 or 444.075, and the parcels on which the charges are imposed. The county auditor shall extend the charges on the property tax statements. The amounts must be certified by November 30 to appear on statements for taxes payable in the following year. The charges, if not paid, become delinquent and are subject to the same penalties, the same rate of interest, and become a lien upon the property in the same manner, as real property taxes. The charges shall be paid to the Vadnais Lake Area Water Management Organization by the county auditor in the same manner and at the same time as property taxes. The county auditor may charge the Vadnais Lake Area Water Management Organization a fee in the amount necessary to recover the costs of administering the charges.

EFFECTIVE DATE.

This section is effective the day following final enactment.

Link (2014): <https://www.revisor.leg.state.mn.us/laws/?year=2008&type=0&doctype=Chapter&id=366>

VLAWMO website (10-14):

http://www.vlawmo.org/files/1613/9845/0209/Storm_Water_Utility_Fee.pdf

APPENDIX B - 2007 RULE

Storm Sewer Utility Rule
Vadnais Lake Area Water Management Organization (VLAWMO)

I. Storm Sewer Utility Established. Storm Sewer Utility (SSU) shall be operated as a public utility pursuant to Minn. Stat. § 444.075. This Rule is established by the VLAWMO Board of Directors as authorized by the VLAWMO Joint Powers Agreement, Section VI, Responsibilities and Duties of the Board of Directors, Subdivision 1 and Subdivision 24.

II. Definitions. The following words, terms and phrases, when used in this chapter, shall have the meaning ascribed to them in this section, except where the context clearly indicates a different meaning:

(1) The Vadnais Lake Area Water Management Budget is the annual budget approved by the Board of Directors for surface water management including planning, engineering, monitoring, capital expenditures, personnel and equipment and operation of the surface water utility, in accordance with established VLAWMO policy.

(2) Storm Sewer Utility Fee is an annual charge developed for each parcel on nonexempt property in the watershed for the management of surface water.

(3) Rate for Land use is the ratio of runoff volume, in inches, for a particular land use, to the runoff volume, in inches for a residential household, assuming a 2" rainfall and Soil Conservation Service (SCS) "Type B" soil conditions.

III. Storm Sewer Utility Fee. Effective November 1, 2007, the utility factors for various land uses are as follows:

Classification Land Use Residential Equivalency Factor

1 Residential Single Family	1.00
2 Residential Multi-Family (4 or more units)	2.72
3 Commercial	4.23
4 Industrial	3.30
5 Institutional: schools, hospitals, Government, churches	3.30
6 Golf Courses	0.74
7 Agricultural	0.25
8 Vacant, Parks, Cemeteries	exempt
9 Road and Railroad Right-of-Way	exempt
10 Wetland / Public Waters	exempt

The Storm Sewer Utility Fee shall be determined by using the Natural Resources Conservation Service (NRCS) runoff equation to determine relative amounts of runoff for the differing land use types. Single family land use is the basis of this calculation. The ratio of runoff generated from other land use types to runoff generated by the single-family parcel is shown as the Residential Equivalency Factor (REF). The REF is then multiplied by the rate per acre for the single-family land use to calculate the rate for each of the other land uses. The average single-family lot size within the VLAWMO was determined to be 0.69 acres, calculated by dividing 8114 parcels into 5604 total acres of low density residential land use.

The Storm Sewer Utility Fee for all individual parcels shall be defined as the product of:

Storm Sewer Utility Rule

(1) The Residential Unit Rate Fee (per acre), (2) the appropriate Residential Equivalency factor based on land use, and (3) the total acreage of the parcel.

IV. The Storm Sewer Utility Fee for Residential Multi-family shall be charged to the property owner described in the County tax roles.

V. Credits. The Board may adopt policies, by resolution, for adjustment of the storm sewer utility fees. Information to justify a fee adjustment must be supplied by the property owner. Such adjustments of fees shall not be retroactive.

VII. Exemptions. The following land uses are exempt from the surface water management fee:

- (1) Public Right-of-Way
- (2) Undeveloped (unimproved) land.
- (3) Lakes and wetlands

VIII. Payment of Fee. The Storm Sewer Utility Fee shall be invoiced annually. The amount due as shown on the invoice shall be payable within 30 days of the date of the invoice or as described on the invoice.

IX. Penalty for Late Payment. The penalty for late payment beyond the due date indicated on the invoice shall be 10% of the SSU fee or a minimum of \$4.

X. Check returned for Non-Sufficient-Funds (NSF) shall be charged a \$30 NSF fee. Fees not paid by the Certification date will be added the list of Delinquent fees.

XI. Certification of Delinquent Fees - Action to Collect Charges. Annually a date in December shall be established at which time all unpaid fees shall be considered delinquent and shall be certified to the Ramsey and Anoka County Auditors together with a legal description of the premises served. A Delinquency charge of \$10 or 10% whichever is greater shall be assessed in addition to the charges set forth in Part IX. The County Auditor shall thereupon enter such amount as part of the tax levy on said premises to be collected during the ensuing year.

APPENDIX C - 2025 CHARGES

VLAWMO Pay 2025 Storm Water Utility Fee by Property Classification

Storm Sewer Utility Fee			
Code	VLAWMO Classifications	REF	Revenue
1	Residential Single Family (1-3 Units)	1.00	709,042.20
2	Residential Multi-family (4 or more Units)	2.72	50,132.88
3	Commercial	4.23	168,699.79
4	Industrial	3.30	150,856.08
5	Institutional: Schools, hospitals, government, churches	3.30	104,624.35
6	Golf courses	0.74	16,104.78
7	Agricultural	0.25	9,733.94
8	Vacant, parks, cemeteries	-	-
9	Road and Railroad right-of-ways	-	-
10	Wetland / public waters	-	-
11	Other Exempt	-	-
99	Manual Override / Exempt	-	-
			1,209,194.02