city of golden valley

MEMORANDUM

COMMUNITY DEVELOPMENT
Engineering & Environment Division
763-593-8030

Date: October 15, 2026

To: Laura Jester (Bassett Creek Watershed Management Commission)

From: Rikita Patel, Claire Bargman (City of Golden Valley)

Subject: 2025-2026 Effectiveness Report – High Efficiency Street Sweeper

CC: Emma Rakestraw (City of Golden Valley)

A cooperative agreement for the Cost Share Purchase of High Efficiency Street Sweeper BC-12 (sweeper) was finalized on November 21, 2023 between Bassett Creek Management Commission (BCWMC) and the City of Golden Valley (City). As part of the agreement, an annual Effectiveness Report shall be submitted to BCWMC for five years. In accordance with Exhibit A in the agreement, the City shall submit the following items in the Effectiveness Report.

- Zone number and downstream waterbody
- Dates of sweeping
- Lane miles swept
- Estimated pollutant load reduction in mg/kg for total phosphorus and chlorides

This report summarizes the required items in the agreement for the fall of 2025 and spring of 2026. The sweeper was delivered to the City on August 5, 2025. This report includes the laboratory testing results from the street sweeping completed in the fall and spring, which represents the first reporting year. Refer to Figure 3 for the dates and quantity of street materials swept for the reporting year. Note, the City has two active street sweepers and the quantities for 2025 were not separated and cannot be differentiated between active sweepers. The quantities will be separated moving forward.

City staff conducted street sweeping between October 8, 2025 to November 25, 2025. Additionally, in 2026, staff conducted street sweeping between March 5, 2026 to May 29, 2026. The streets for each area/zone were swept at least two times. The high efficiency, Regen X Sweeper covered 638 miles over the fall 2025 sweeping period and 647 miles over the spring 2026 period. Area 2 and 3 both primarily drain towards Bassett Creek. The northwest portion of Area 1 drains towards Medicine Lake while the eastern portion of Area 1 drains towards

Sweeney Lake. Priority was given to Area 1 then Area 2 followed by Area 3. The designated areas are shown in Figure 1.

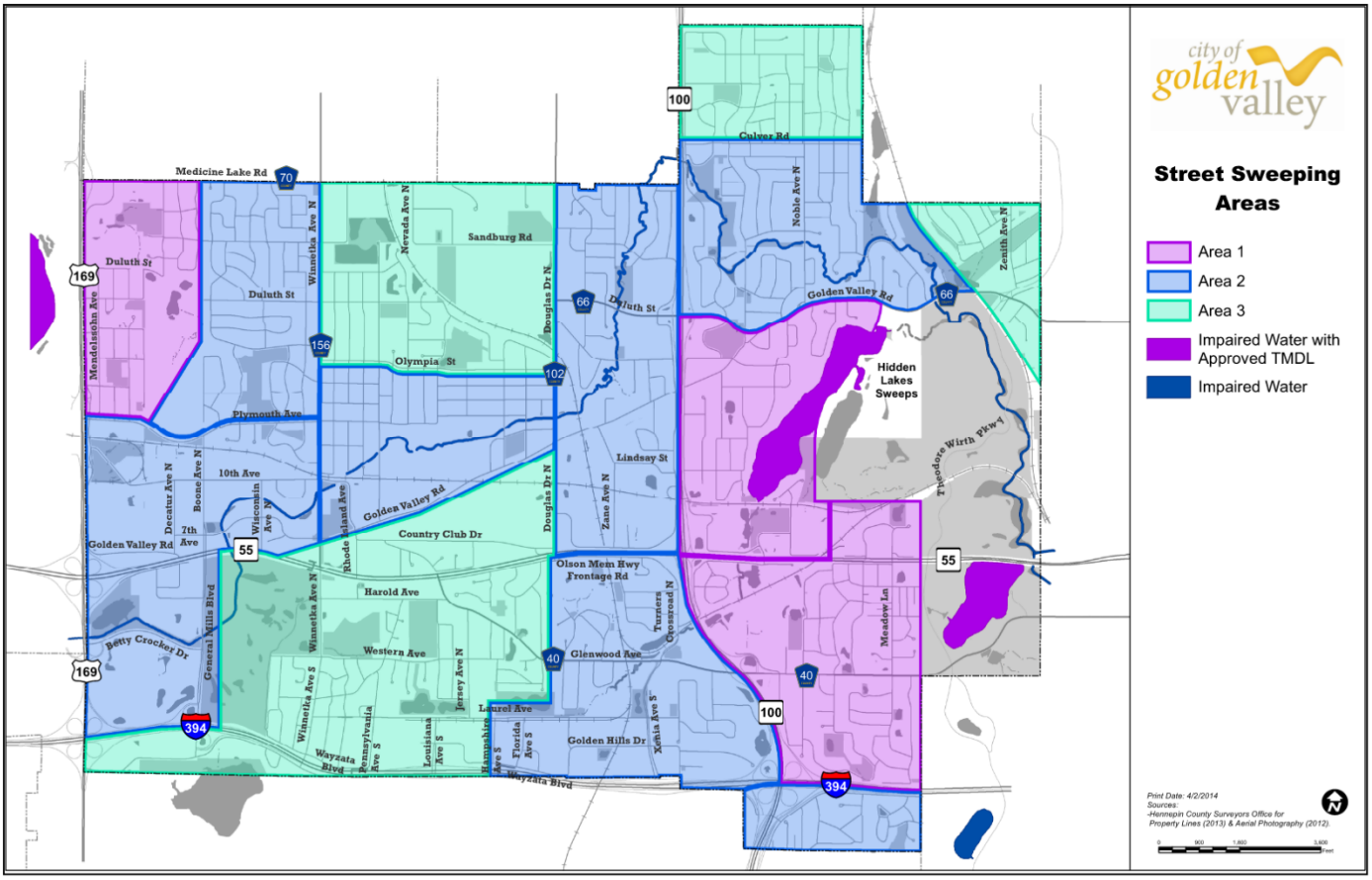


Figure 1: Street Sweeping Areas for Golden Valley

Samples were delivered for analytical testing for each area on November 24, 2025 and April 23, 2026 to estimate the pollutant load reduction due to street sweeping. The lab results are summarized and shown in Table 1.

Compound/Parameter - Inorganics (mg/kg)			Chloride	Sodium	Phosphorous
CAS No.			16887-00-6	7440-23-5	7723-14-0
Sample Location & Date Collected	Area 1	11/24/2025	115	258	--
	Area 2	11/24/2025	177	396	--
	Area 3	11/24/2025	27.1	198	--
	Total	11/24/2026	319	852	--
	Area 1	4/23/2026	162	--	289
	Area 2	4/23/2026	5,120	--	218
	Area 3	4/23/2026	297	--	475
	Total	4/23/2026	5,579	--	982

Table 1: Lab Results from Fall 2025 and Spring 2026

Based on the lab results, the total concentration of chloride present in the tested sample in November 2025 was approximately 319 mg/kg. The total concentration of chloride present in the tested sample in April 2026 was approximately 5,579 mg/kg, and the total phosphorous concentration was 982 mg/kg. The spring chloride value for Area 2 might be a potential outlier due to the high value along with having a dilution factor of 3. Based off the estimated reduction values provided in the study prepared for BCWMC in 2025, approximately 39 pounds of phosphorus would be removed in Golden Valley every year. See Figure 2 for a summary that is provided in the study. A lab analysis was not completed for total phosphorus in November 2025 due to miscommunication. In the future, the samples provided for a lab analysis will satisfy the requirements outlined in the agreement.

Table C3 Street Sweeping TP Recovery and Reduction Results for Existing Conditions vs. Baseline Scenario by Municipality

Municipality	Area (ac)	TP Loading (lb/yr)	Existing Conditions				Baseline Scenario (1-1-2)			
			Recovery (lb/yr)	Recovery (%)	Reduction (lb/yr)	Reduction (%)	Recovery (lb/yr)	Recovery (%)	Reduction (lb/yr)	Reduction (%)
Plymouth	11,625	7,787	158	2.0%	98	1.3%	295	3.8%	181	2.3%
Golden Valley	6,664	4,680	164	3.5%	124	2.7%	216	4.6%	163	3.6%
Minneapolis	1,838	1,429	148	10.4%	135	9.5%	125	8.8%	114	8.0%
Crystal	1,272	910	48	5.2%	39	4.3%	49	5.3%	40	4.4%
New Hope	1,233	900	35	3.9%	30	3.3%	39	4.3%	31	3.4%
Minnetonka	1,217	878	11	1.3%	4	0.4%	46	5.3%	15	1.7%
St. Louis Park	791	566	22	3.9%	13	2.4%	25	4.4%	15	2.7%
Robbinsdale	348	255	29	11.5%	10	4.1%	21	8.4%	8	3.0%
Medicine Lake	237	43	2	5.7%	2	4.8%	4	9.5%	3	7.8%

Figure 2: Table C3 from BCWMC Street Sweeping Prioritization Study

2025 Fall Sweeping	
2025 Date	Amount (yd^3)
9/25	12
9/26	18
10/3	12
10/7	10
10/8	40
10/9	24
10/10	30
10/13	24
10/15	28
10/16	30
10/17	30
10/20	36
10/21	30
10/22	10
10/27	60
10/28	80
10/30	150
11/3	130
11/4	120
11/6	100
11/14	20
11/17	32
11/19	64
11/21	50
11/25	20
11/26	16
Total: 1176 yd^3	

2026 Spring High Efficiency Sweeping Quantity	
2026 Date	Amount (yd^3)
3/5	16
3/6	12
3/10	16
3/12	20
3/24	8
3/25	8
3/26	20
3/27	20
3/31	16
4/1	24
4/2	12
4/7	20
4/8	20
4/9	16
4/10	20
5/27	16
5/28	32
5/29	24
6/2	40
6/3	24
6/4	34
6/5	16
6/9	24
6/10	32
6/11	8
6/12	16
6/19	40
6/22	48
6/26	16
HE Total: 618 yd^3	

Figure 3: Dates and Quantity of Street Sweeping Material in Fall 2025 and Spring 2026

Note: The highlighted, green boxes in the 2025 Fall Sweeping table indicate days where the high efficiency sweeper was used as one of the vehicles. The material data was not separated by sweeper type until 2026.