

VLAWMO TECHNICAL COMMISSION MEETING

8:00 AM April 10, 2024

Vadnais Heights City Hall, Council Chambers, 800 County Road E East, Vadnais Heights, MN 55127

Action items: 🗣️

- I. **Call to Order – 8:00am – Chair Tessier**
- II. **Approval of Agenda** 🗣️
- III. **Approval of Minutes (March 13, 2024)** 🗣️
- IV. **Administration & Operations**
 - A. April Financial Report and Consider Authorization for Payment – Phil 🗣️ p. 6
 - B. April TEC report to the Board of Directors – Phil 🗣️ p. 14
 - C. Discussion on TEC alternates /backup- Phil
- V. **Programs**
 - A. Consider recommendation on draft 2023 Annual report /monitoring report and summaries –Nick, Brian 🗣️ p. 20
 - B. CB-2024-01 Vadnais Heights Elementary Raingarden Renovation - Nick 🗣️ p. 32
 - C. SHG 2024-01 Scherer Pollinator Garden – Lauren 🗣️ p. 40
 - D. LL2 2024-02 Elmwood Park Raingarden – Lauren 🗣️ p. 53
- VI. **Projects**
 - A. Consider recommendation on Barr Feasibility Study for Water Reuse at Polar Lakes Park- Brian 🗣️ p. 17
 - B. Update on East Vadnais Lake Subwatershed Resiliency Study - Lauren p. 72
 - C. Spent Lime update – Phil p. 18
 - D. Tamarack Alum RFQ prep update – Phil p. 18
 - E. Birch Lake AIS Removal Preparation Update – Phil p. 19
 - F. Update on Watershed Management Plan progress and invite – Phil p. 73
 - G. Wilkinson Deepwater Wetland Restoration Minor update – Phil p. 19
 - H. Pleasant Lake Carp Removal update – Phil p. 19
- VII. **Commissioner Reports**
- VIII. **NOHOA**
- IX. **Ramsey Soil & Water Conservation Division**
- X. **St. Paul Regional Water Services**
- XI. **Public Comment**
- XII. **Next meetings:** TEC: May 8, 2024, Board meeting: April 24, 2024
- XIII. **Adjourn** 🗣️

Upcoming Events: Visit vlawmo.org/events

Resilient Shorelines [Blue Thumb] Webinar	April 9
Watershed Action Volunteers (WAV) Kick-off meeting	April 11
Initial Planning Meeting: Watershed Management Plan	April 24

**Vadnais Lake Area Water Management Organization
Technical Commission (TEC) Minutes
March 13, 2024
Vadnais Heights City Hall, Council Chambers
800 County Road E East, Vadnais Heights, MN 55127**

Commission Members Present:

Gloria Tessier	Gem Lake (GL)
Nick Ousky	Vadnais Heights (VH)
Susan Miller	City of North Oaks (NO)

Absent: Andy Nelson (LL), Jami Philip (WBT), Terry Huntrods (WBL).

Others in attendance: Phil Belfiori, Brian Corcoran, Lauren Sampedro, Dawn Tanner (VLAWMO staff), Jeremy Erickson (SPRWS), Julia Hupperts (NOHOA), Erin Spry (City of Vadnais Heights).

I. Call to Order

Chair Tessier called the meeting to order at 8:10 am.

II. Approval of Agenda

It was recommended by Chair Tessier and seconded by Commissioner Miller to approve the March 13, 2024 TEC agenda.

III. Approval of Minutes (February 14, 2024)

It was recommended by Commissioner Miller and seconded by Commissioner Ousky to approve the February 14th meeting minutes as presented.

IV. Administration & Operations

A. Financial Report for March and Authorization for Payment

Administrator Belfiori outlined the March financial report as included in the packet. Highlights included expenses related to the financial audit, watershed management plan, engineering costs for the East Vadnais Lake Subwatershed Resiliency Study and Polar Lakes Park, and a Landscape Level 1 grant project payment.

It was recommended by Commissioner Ousky and seconded by Commissioner Miller to approve the February Financial Report for payment.

V. Programs

A. Update on Pleasant Lake Signs – Authorize submission to NOHOA for review

Tanner introduced the topic through the powerpoint included in the packet. She described an effort to learn more and communicate about aquatic vegetation, invasive species, and lake survey results. One example was a strategy to conduct a survey for Curly-leaf pondweed at its optimal time of the year. A 2023 aquatic plant survey included early season focus on Curly-leaf pondweed and a later season focus on native plants that also included invasive Eurasian watermilfoil. The MN DNR discovered rare macroalgae as a result of a 2022 biological survey. A 3-part article series was submitted to the North Oaks News in 2023 to communicate about aquatic plants and their role in water quality. Two draft education signs have been completed for TEC review to be submitted to partners at NOHOA.

Administrator Belfiori expressed thanks to NOHOA and SPRWS for their partnership on this effort. He summarized the intent and focus of the signs including descriptions of native vs invasive aquatic vegetation and conveying the partnerships that are being implemented on Pleasant Lake.

Commissioner Miller commented that the naming of an “Underwater Forest” is a good approach, and expressed appreciation for the inclusion of duckweed on the draft sign. She also commented an appreciation for the inclusion of removal of invasive Yellow iris on the partnership signs.

It was recommended by Commissioner Miller and seconded by Commissioner Ousky to submit Pleasant Lake Signs to NOHOA for review.

VI. Projects

A. Consider Houston Engineering task order for monitoring analysis for the Wilkinson project

Tanner described the Wilkinson Deep-Water Wetland project including Minnesota Pollution Control Agency (MPCA) reporting and the next steps for a scope of service with Houston Engineering for monitoring, and to allow VLAWMO to report actual pollutant load reductions to MPCA.

It was recommended by Commissioner Miller and seconded by Commissioner Ousky to approve monitoring analysis for the Wilkinson project.

B. Update on Watershed Management Plan progress

The TEC/CAC/Partner survey closed on February 26, 2024. HEI is analyzing results and will be incorporating this feedback along with the public survey into the upcoming Board survey. There was 100% participation from the TEC on the survey. Staff thanked the TEC for taking the time to fill out the survey.

C. Spent lime demonstration project update and amendment to extend temporary easements

The Board authorized the contract extension to allow the spent lime demonstration project to resume in 2024. A total of 10 landowners living around Oak Knoll Pond/Wood Lake granted temporary easements for the project in 2024. All landowners living around the pond/lake were mailed a postcard with a project update in early March. A follow-up letter and request for signature on an amendment to extend the temporary easement to allow project completion during 2024 was mailed on March 5, 2024. The project resumption date is dependent upon receiving temporary easement extensions from participating landowners.

D. Tamarack Lake alum project update

Tanner explained that Barr Engineering recommended a full dose treatment in 2024 for alum in Tamarack Lake and reported that the Board authorized requesting a Request for Quotes for the project at the April meeting.

E. Birch Lake AIS removal preparation

Tanner described the permit to remove Eurasian watermilfoil and Curly-leaf pondweed. This will be brought back to the April TEC meeting.

F. Wilkinson Deep-Water Wetland Restoration

Commissioner Miller inquired about the level of assurance we have for the system's performance when an influx of water appears on the site. Tanner described that seeding has been completed and larger plantings will be made in 2024 to provide site enhancement and stabilization. There is also a contract for ongoing maintenance and inspection to address remaining punch-list items.

G. Pleasant Lake carp removal

Tanner explained that a new carp barrier has been installed between Pleasant and Deep Lakes. The early spring mobilized this project early, and it is now ready for spring removal. Telemetry monitoring for carp movement is ongoing.

Commissioner Miller inquired about low water levels impacting carp movement. Tanner acknowledged the low water levels and explained the shallow water will still allow for carp movement. Commissioner Miller also inquired about whether carp might shift their spawning from Deep Lake to Charley Lake. Specialists at Carp Solutions have noted that carp are not likely to change their spawning behaviors to a different lake such as Charley. Telemetry checks include Charley Lake. Tagged carp have not been detected in Charley Lake.

H. VH City Hall wooded wetland buckthorn removal

Tanner described recent service crew days for buckthorn removal and that the early spring weather has coincidentally worked out well for the effort.

VII. Commissioner Reports

None.

VIII. NOHOA

None.

IX. Ramsey Soil & Water Conservation Division

None.

X. St. Paul Regional Water Services

None.

XI. Public Comment

None.

XII. Next Meetings:

Next TEC meeting April 10, 2024. Next BOD meeting April 24, 2024.

XIII. Adjourn

It was moved by Commissioner Miller and seconded by Commissioner Ousky to adjourn the meeting at 8:41 am. Vote: all aye. Motion passed.

VLAWMO Finance Summary: April 2024

Apr-24		Actual 4/1/24	Actual to Date	2024 Budget (June 2023 Board Approved)	Carry over from 2023 to 2024	Remaining in Budget	2024 Available (Dec. 2023 Board approved)	Act vs. Budget
BUDGET #	INCOME							
5.11	Storm Water Utility		\$46,282	\$1,145,431	\$0	\$1,099,149	\$1,145,431	4%
5.12	Service Fees			\$1,000	\$0	\$1,000	\$1,000	0%
5.13	Interest + mitigation acct	\$4,398	\$13,722	\$30,000	\$0	\$16,278	\$30,000	46%
5.14	Misc. income - WCA admin & other	\$802	\$856	\$3,000	\$0	\$2,144	\$3,000	29%
5.15	Other Income Grants/loan	\$5,589	\$5,589	\$365,000	\$0	\$359,411	\$365,000	2%
5.16	Transfer from reserves			\$791,380	\$193,062	\$984,442	\$984,442	0%
	TOTAL	\$10,789	\$66,449	\$2,335,811	\$193,062	\$2,462,424	\$2,528,873	3%
EXPENSES								
3.1	Operations & Administration							
3.110	Office - rent, copies, post tel supplies	\$2,199	\$7,119	\$32,239	\$0	\$25,120	\$32,239	22%
3.120	Information Systems	\$1,571	\$4,713	\$33,850	\$0	\$29,137	\$33,850	14%
3.130	Insurance			\$10,050	\$0	\$10,050	\$10,050	0%
3.141	Consulting - Audit	\$1,680	\$14,175	\$12,000	\$7,000	\$4,825	\$19,000	75%
3.142	Consulting - Bookkeeping	\$59	\$152	\$1,500	\$0	\$1,348	\$1,500	10%
3.143	Consulting - Legal			\$7,000	\$0	\$7,000	\$7,000	0%
3.144	Consulting - Eng. & Tech.	\$609	\$2,114	\$30,000	\$20,000	\$47,886	\$50,000	4%
3.150	Storm Sewer Utility	\$713	\$928	\$22,500	\$0	\$21,572	\$22,500	4%
3.160	Training (staff/board)		\$250	\$14,250	\$0	\$14,000	\$14,250	2%
3.170	Misc. & mileage	\$152	\$416	\$6,930	\$0	\$6,514	\$6,930	6%
3.191	Administration - staff	\$48,631	\$112,964	\$435,554	\$0	\$322,590	\$435,554	26%
3.192	Employer Liability	\$12,344	\$32,043	\$129,869	\$0	\$97,826	\$129,869	25%
3.2	Monitoring and Studies							
3.210	Lake and Creek lab analysis		\$177	\$18,000	\$0	\$17,823	\$18,000	1%
3.220	Equipment	\$57	\$111	\$3,000	\$0	\$2,889	\$3,000	4%
3.230	Wetland assessment & management			\$15,000	\$0	\$15,000	\$15,000	0%
3.240	Watershed planning /special study	\$11,269	\$18,325	\$100,000	\$15,000	\$96,675	\$115,000	16%
3.3	Education and Outreach							
3.310	Public Education		\$2,000	\$6,000	\$0	\$4,000	\$6,000	33%
3.320	Comm., Outreach & Marketing	\$764	\$1,702	\$20,000	\$2,000	\$20,298	\$22,000	8%
3.330	Community Blue Ed Grant			\$8,000	\$0	\$8,000	\$8,000	0%
<i>Total Core functions: Ops, Monitoring, Education</i>		<i>\$80,048</i>	<i>\$197,189</i>	<i>\$905,742</i>	<i>\$44,000</i>	<i>\$752,553</i>	<i>\$949,742</i>	<i>21%</i>
Capital Improvement Projects and Programs								
3.4	Subwatershed Activity							
3.410	Gem Lake			\$25,000	\$10,000	\$35,000	\$35,000	
3.420	Lambert Creek	\$2,258	\$2,258	\$90,000	\$0	\$87,742	\$90,000	3%
3.421	Lambert Lake Loan			\$38,569	\$0	\$38,569	\$38,569	0%

3.425	Goose Lake	\$448	\$25,356	\$85,000	\$0	\$59,644	\$85,000	30%
3.430	Birch Lake		\$1,150	\$48,000	\$0	\$46,850	\$48,000	2%
3.440	Gilf Black Tam Wilk Amelia	\$8,986	\$37,415	\$345,000	\$60,000	\$367,585	\$405,000	9%
3.450	Pleasant Charley Deep	\$12,657	\$32,220	\$145,000	\$0	\$112,780	\$145,000	22%
3.460	Sucker Vadnais	\$5,011	\$21,203	\$90,000	\$33,000	\$101,797	\$123,000	17%
3.48	Programs							
3.480	Soil Health Grant	\$48	\$186	\$10,500	\$4,500	\$14,814	\$15,000	1%
3.481	Landscape 1		\$5,000	\$40,000	\$16,263	\$51,263	\$56,263	9%
3.482	Landscape 2/BWSR WBF		\$1,278	\$60,000	\$25,299	\$84,021	\$85,299	1%
3.483	Project Research & feasibility			\$5,000	\$0	\$5,000	\$5,000	0%
3.485	Facilities Maintenanc/ Pub. Ditch Main.	\$2,044	\$5,600	\$78,000	\$0	\$72,400	\$78,000	7%
3.5	Regulatory							
3.510	Engineer Plan review			\$5,000	\$0	\$5,000	\$5,000	0%
	<i>Total CIP & Program</i>	\$31,452	\$131,666	\$1,065,069	\$149,062	\$1,082,465	\$1,214,131	11%
	Total of Core Operations & CIP	\$111,500	\$328,855	\$1,970,811	\$193,062	\$1,835,018	\$2,163,873	15%

Fund Balance	3/1/2024	4/1/2024
4M Account	\$796,909	\$660,858
4M Plus Savings	\$242,275	\$243,365
Total	\$1,039,184	\$904,223

Restricted funds	4/1/2024
Mitigation Savings	\$21,023
Term Series	\$300,000

Vadnais Lake Area Water Management Orga
Profit & Loss
March 14 through April 10, 2024

12:15 PM

04/02/2024

Cash Basis

Mar 14 - Apr 10, 24

Ordinary Income/Expense	
Income	
Misc.	802.00
5.1 · Income	
5.13 · Interest	4,398.51
Total 5.1 · Income	4,398.51
6.6.6 · Grants	5,589.25
Total Income	10,789.76
Gross Profit	10,789.76
Expense	
3.1 · Administrative/Operations	
3.110 · Office	
Copies	88.68
Phone/Internet/Machine Overhead	315.00
Postage	31.21
Rent	1,765.00
Total 3.110 · Office	2,199.89
3.120 · Information Systems	
IT Support	1,571.00
Total 3.120 · Information Systems	1,571.00
3.141 · Audit	1,680.00
3.142 · Bookkeeping help	59.09
3.144 · Eng. & Tech.	609.37
3.150 · Storm Sewer Utility	712.50
3.170 · Misc. & mileage	151.84
3.191 · Employee Payroll	
payroll	48,631.81
Total 3.191 · Employee Payroll	48,631.81
3.192 · Employer Liabilities	
Admin payroll processing	244.33
Administration FICA	3,546.63
Administration PERA	3,647.37
Insurance Benefit	4,906.08
Total 3.192 · Employer Liabilities	12,344.41
Total 3.1 · Administrative/Operations	67,959.91
3.2 · Monitoring and Studies	
3.220 · Equipment	56.62
3.240 · Watershed Plan Amendment	11,268.67
Total 3.2 · Monitoring and Studies	11,325.29
3.3 · Education and Outreach	
3.320 · Marketing	764.28
Total 3.3 · Education and Outreach	764.28

3.4 · Capital Imp. Projects/Programs	
3.420 · Lambert Creek Restoration	
Whitaker Wetlands	2,258.00
Total 3.420 · Lambert Creek Restoration	<u>2,258.00</u>
3.425 · Goose Lake	
Oak Knoll	447.50
Total 3.425 · Goose Lake	<u>447.50</u>
3.440 · Gilfillan Black Tamarack Wilkin	8,985.78
3.450 · Pleasant Charley Deep	12,657.64
3.460 · Sucker Vadnais	5,010.75
Total 3.4 · Capital Imp. Projects/Programs	<u>29,359.67</u>
3.48 · Programs	
3.480 · Soil Health Grant	48.66
3.485 · Facilities & Maintenance	2,044.40
Total 3.48 · Programs	<u>2,093.06</u>
Total Expense	<u>111,502.21</u>
Net Ordinary Income	<u>-100,712.45</u>
Net Income	<u><u>-100,712.45</u></u>

Vadnais Lake Area Water Management Organization

12:18 PM

Check Detail

04/02/2024

March 14 through April 10, 2024

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Check	eft	03/14/2024	further		Checking - 1987		-6.00
				Insurance Benefit		-6.00	6.00
TOTAL						-6.00	6.00
Check	eft	03/14/2024	US Bank		Checking - 1987		-44.14
				3.142 · Bookkeeping help		-44.14	44.14
TOTAL						-44.14	44.14
Check	5752	04/10/2024	Dawn Tanner		Checking - 1987		-117.25
				3.170 · Misc. & mileage		-117.25	117.25
TOTAL						-117.25	117.25
Check	5753	04/10/2024	Nicholas Voss		Checking - 1987		-136.02
				3.170 · Misc. & mileage		-11.14	11.14
				3.320 · Marketing		-5.54	5.54
				3.320 · Marketing		-8.98	8.98
				3.320 · Marketing		-110.36	110.36
TOTAL						-136.02	136.02
Check	5754	04/10/2024	Brian Corcoran		Checking - 1987		-80.07
				3.170 · Misc. & mileage		-23.45	23.45
				3.220 · Equipment		-56.62	56.62
TOTAL						-80.07	80.07
Check	5755	04/10/2024	CliftonLarsonAllen		Checking - 1987		-1,680.00
				3.141 · Audit		-1,680.00	1,680.00
TOTAL						-1,680.00	1,680.00
Check	5756	04/10/2024	Metro - Inet		Checking - 1987		-1,571.00
				IT Support		-1,571.00	1,571.00
TOTAL						-1,571.00	1,571.00
Check	5757	04/10/2024	FastSigns		Checking - 1987		-191.00
				3.320 · Marketing		-191.00	191.00
TOTAL						-191.00	191.00

	Check	5758	04/10/2024 Gallagher	Checking - 1987		-3,416.67
				3.240 · Watershed Plan Amendment	-3,416.67	3,416.67
TOTAL					<u>-3,416.67</u>	<u>3,416.67</u>
	Check	5759	04/10/2024 SRF Consulting Group	Checking - 1987		-5,010.75
				3.460 · Sucker Vadnais	-5,010.75	5,010.75
TOTAL					<u>-5,010.75</u>	<u>5,010.75</u>
	Check	5760	04/10/2024 SEH	Checking - 1987		-4,265.85
				3.440 · Gilfillan Black Tamarack Wilkin	-3,656.48	3,656.48
				3.144 · Eng. & Tech.	-609.37	609.37
TOTAL					<u>-4,265.85</u>	<u>4,265.85</u>
	Check	5761	04/10/2024 Houston Engineering, Inc	Checking - 1987		-11,597.50
				3.485 · Facilities & Maintenance	-1,487.50	1,487.50
				Whitaker Wetlands	-2,258.00	2,258.00
				3.240 · Watershed Plan Amendment	-7,852.00	7,852.00
TOTAL					<u>-11,597.50</u>	<u>11,597.50</u>
	Check	5762	04/10/2024 Barr Engineering Co	Checking - 1987		-5,776.80
				3.440 · Gilfillan Black Tamarack Wilkin	-4,459.30	4,459.30
				Oak Knoll	-447.50	447.50
				3.440 · Gilfillan Black Tamarack Wilkin	-870.00	870.00
TOTAL					<u>-5,776.80</u>	<u>5,776.80</u>
	Check	5763	04/10/2024 Press Publications	Checking - 1987		-448.40
				3.320 · Marketing	-448.40	448.40
TOTAL					<u>-448.40</u>	<u>448.40</u>
	Check	5764	04/10/2024 Ehlers & Associates, Inc.	Checking - 1987		-712.50
				3.150 · Storm Sewer Utility	-712.50	712.50
TOTAL					<u>-712.50</u>	<u>712.50</u>
	Check	5765	04/10/2024 carp solutions	Checking - 1987		-12,657.64
				3.450 · Pleasant Charley Deep	-12,657.64	12,657.64
TOTAL					<u>-12,657.64</u>	<u>12,657.64</u>
	Check	5766	04/10/2024 Jonna Klatt	Checking - 1987		-48.66
				3.480 · Soil Health Grant	-48.66	48.66
TOTAL					<u>-48.66</u>	<u>48.66</u>

Check	5767	04/10/2024 City of Vadnais Heights	Checking - 1987	-2,199.89
			Rent	-1,765.00 1,765.00
			Phone/Internet/Machine Overhead	-315.00 315.00
			Postage	-31.21 31.21
			Copies	-88.68 88.68
TOTAL				<u>-2,199.89 2,199.89</u>

Check	5768	04/10/2024 City of White Bear Lake	Checking - 1987	-60,970.22
			payroll	-48,631.81 48,631.81
			Administration FICA	-3,546.63 3,546.63
			Administration PERA	-3,647.37 3,647.37
			Insurance Benefit	-4,900.08 4,900.08
			Admin payroll processing	-244.33 244.33
TOTAL				<u>-60,970.22 60,970.22</u>

Vadnais Lake Area Water Management Organization
Custom Transaction Detail Report
 February 1 through April 1, 2024

12:13 PM
 04/02/2024
 Accrual Basis

Type	Date	Num	Name	Memo	Account	Clr	Split	Amount	Balance
Feb 1 - Apr 1, 24									
Credit Card Charge	02/02/2024		Google*SVCAPPS_VLAWM		US Bank CC	√	WEB	42.00	42.00
Credit Card Charge	02/08/2024		adobe *photography plan		US Bank CC	√	Software	9.99	51.99
Credit Card Charge	02/12/2024		Name Bank USA	mailing list	US Bank CC	√	3.320 · Marketing	147.50	199.49
Credit Card Charge	02/12/2024		xylem	ysi unit	US Bank CC	√	Wilkinson 319 grant 320705.50	3,938.75	4,138.24
Credit Card Charge	02/14/2024		Aatrix	1095-B efile	US Bank CC	√	3.142 · Bookkeeping help	24.95	4,163.19
Transfer	02/20/2024			Funds Transfer	US Bank CC	√	Checking - 1987	-639.25	3,523.94
Credit Card Charge	02/21/2024		Ace Hardware	remote camera batteries	US Bank CC	√	3.485 · Facilities & Maintenance	21.99	3,545.93
Credit Card Charge	02/26/2024		Adobe "Creative Cloud		US Bank CC	√	Software	32.50	3,578.43
Credit Card Charge	02/28/2024		hologram	account refill	US Bank CC	√	3.210 · Lake & Creek lab analysis	30.00	3,608.43
Credit Card Charge	03/01/2024		Starbucks	coffee for S to S	US Bank CC	√	3.485 · Facilities & Maintenance	48.20	3,656.63
Credit Card Charge	03/01/2024		Fresh Thyme	ICWC crew snacks	US Bank CC	√	3.485 · Facilities & Maintenance	22.19	3,678.82
Credit Card Charge	03/01/2024		subway	lunch Corrections crew	US Bank CC	√	3.485 · Facilities & Maintenance	140.07	3,818.89
Credit Card Charge	03/04/2024		Google*SVCAPPS_VLAWM		US Bank CC	√	WEB	42.00	3,860.89
Credit Card Charge	03/05/2024		print for change	costshare Brochures	US Bank CC		3.482 · Landscape 2	377.50	4,238.39
Credit Card Charge	03/08/2024		Fresh Thyme	ICWC crew snacks	US Bank CC		3.485 · Facilities & Maintenance	12.97	4,251.36
Credit Card Charge	03/08/2024		subway	lunch Corrections crew	US Bank CC		3.485 · Facilities & Maintenance	133.46	4,384.82
Credit Card Charge	03/08/2024		Starbucks	coffee for S to S	US Bank CC		3.485 · Facilities & Maintenance	37.19	4,422.01
Credit Card Charge	03/13/2024		Aatrix	1095-B efile	US Bank CC		3.142 · Bookkeeping help	14.95	4,436.96
Credit Card Charge	03/19/2024		Aatrix	1095-B efile	US Bank CC		3.142 · Bookkeeping help	14.95	4,451.91
Credit Card Charge	03/19/2024		NAISMA	buckthorn supplies	US Bank CC		3.485 · Facilities & Maintenance	104.30	4,556.21
Credit Card Charge	03/19/2024		Ace Hardware	gloves & bags	US Bank CC		3.485 · Facilities & Maintenance	78.94	4,635.15
Credit Card Charge	03/20/2024		Prairie Restorations	plants	US Bank CC		3.485 · Facilities & Maintenance	373.66	5,008.81
								5,008.81	5,008.81
Feb 1 - Apr 1, 24									

**TEC Report to the Board
April 2024**

Programs & Projects	Effort Level	Completion Date	Comments																								
	LOW																										
	MED																										
				HIGH																							
Projects				Administration & Operation																							
E. Vadnais Lake Subwatershed Resiliency Study		Mid 2024	VLAWMO and partners provided comments to SRF on a first draft of the E. Vadnais Lake Subwatershed Resiliency Study. Final draft for review and approval may be available in April or May.	Audit		2023	Staff has begun the process of working with CLA on the 2023 Audit. Anticipated consideration of the Audit at the 4/24 Board meeting.																				
Oak Knoll Pond/Wood Lake		2024	Extended temporary easements received, coordination with partners ongoing, and project resuming spring/summer 2024.	Budget		for 2025 budget	5 year project partnership table and early draft 2025 budget are anticipated to be discussed at the 4/24 VLAWMO Board meeting.																				
Public Ditch Maintenance		ongoing	2024 Ditch inspection report completed.	Personnel /HR		ongoing	Training and professional development continues for staff																				
MPCA 319 /Wilkinson Lake BMP		2024	Eagle monitoring ongoing; pay request expected spring/summer. Planning underway for next round grant project.	SSU		ongoing	The approved 2024 SSU certifications have been submitted to Anoka and Ramsey County.																				
Pleasant Lake Carp Management		ongoing	New barrier completed, reinforced, technology added and monitoring underway for spring removal.	Strategic /watershed planning		2023-2025	Noticing complete, and Initial planning meeting prep underway for April 24.																				
Tamarack Alum Project		2024	RFQ being drafted by Barr for presentation to the Board at the April meeting; alum project implementation anticipated for fall.																								
Programs																											
City/Township MS4		Feb-March	Illicit discharge training video complete for MS4 partners. Street sweeping resource packet dispersed to all municipal partners. Water conservation smart irrigation controller promotion with City of Vadnais Heights.	<table border="1"> <thead> <tr> <th colspan="3">FINANCIAL SUMMARY as of 4/1/2024</th> </tr> <tr> <th>4M Account (1.10)</th> <th>4M Plus (1.23)</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>\$660,858</td> <td>\$243,365</td> <td>\$904,223</td> </tr> </tbody> </table>				FINANCIAL SUMMARY as of 4/1/2024			4M Account (1.10)	4M Plus (1.23)	Total	\$660,858	\$243,365	\$904,223											
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Education/Outreach		April-May	Watershed Management Plan engagement efforts, spring grant and raingarden workshops, Bluethumb shorelines webinar. 2024 Annual Report and summary documents. Spring newsletters.																								
Website		Feb-Sept	Website renovation in progress. Launch expected 9/24.																								
WAV		April	2024 volunteer kick-off meetings scheduled for 4-11 and 4-18. Aquatic Invasive Species training held with Ramsey County SWCD March 11, 1 new volunteer.																								
Cost Share & BWSR WBIF		ongoing	Site visits starting back up for spring as snowmelt continues. Strong initial interest in site visits, especially for restoration projects focused on pollinators and reducing groundwater use. Discussion with HOAs on smart irrigation controllers. Continuing to work on potential projects for the BWSR WBIF grant program with partners, including moving forward a Landscape Level 2 grant application for a raingarden at Elmwood Park.	<table border="1"> <thead> <tr> <th>Budget Summary</th> <th>Actual Expense YTD</th> <th>2024 Budget "working"</th> <th>Remaining in Budget</th> <th>% YTD</th> </tr> </thead> <tbody> <tr> <td>Operations</td> <td>\$197,189</td> <td>\$949,742</td> <td>\$752,553</td> <td>21%</td> </tr> <tr> <td>CIP</td> <td>\$131,666</td> <td>\$1,214,131</td> <td>\$1,082,465</td> <td>11%</td> </tr> <tr> <td>Total</td> <td>\$328,855</td> <td>\$2,163,873</td> <td>\$1,835,018</td> <td>15%</td> </tr> </tbody> </table>				Budget Summary	Actual Expense YTD	2024 Budget "working"	Remaining in Budget	% YTD	Operations	\$197,189	\$949,742	\$752,553	21%	CIP	\$131,666	\$1,214,131	\$1,082,465	11%	Total	\$328,855	\$2,163,873	\$1,835,018	15%
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GIS		ongoing	Updating the online GIS viewer as needed.																								
Monitoring		ongoing	2024 season began																								
WCA		ongoing	Administering WCA as needed.																								

TEC Staff Memo – April 10, 2024

IV. Administration & Operations

A. April Financial Report and Consider Authorization for Payment

Please find the April financial report and authorization to pay bills in the ePacket for consideration and approval.

B. April TEC Report to the Board

Please find the April TEC report to the Board attached in the ePacket for review and approval.

C. Discussion on TEC Alternates /backups

V. Programs

A. Consider Recommendation on Draft 2023 Annual Report/Monitoring Report and Summary

The 2023 Annual Report and 2023 Water Monitoring Report are complete and ready for TEC review and recommendation to the Board. With Board approval the Annual Report will be submitted to the Board of Water and Soil Resources per State statute requirement. Staff will provide a brief preview of both reports during the April TEC meeting. An excerpt is also included in the April TEC packet, and the links to the complete documents are listed below.

2023 Annual Report:

https://www.vlawmo.org/index.php/download_file/4829/

2023 Annual Report Summary:

https://www.vlawmo.org/index.php/download_file/4831/

2023 Water Monitoring Report:

https://www.vlawmo.org/index.php/download_file/4830/

2023 Water Monitoring Report Summary:

https://www.vlawmo.org/index.php/download_file/4837/

Request TEC approve a recommendation to the Board for approval of the 2023 annual report, report summary and water monitoring report with non material changes.

B. CB 2024-01 Vadnais Heights Elementary Raingarden Renovation

Local resident Jordan Erwin has submitted a Community Blue Grant application (CB-2024-01) for TEC review. The project is a service project that completes the fulfillment of Jordan's Eagle Scout badge. CB-2024-01 outlines a raingarden renovation effort at the Vadnais Heights Elementary Raingarden.

Jordan will be removing invasive Siberian Elm from the raingarden (inner and border), while also re-establishing turf around the raingarden border for a return to easy, convenient mowing access. Jordan will also be tidying-up the raingarden inlet, introducing new native plants, and laying fresh mulch.

The City of Vadnais Heights Public works will be repairing the raingarden's outlet pipes and extending them several feet to the edge of the turf into a naturally vegetated area that eventually drains into Lambert Creek. The City will also assist with watering new grass seed.

Partners who have been consulted with in this effort include the City of Vadnais Heights Public Works, VH Elementary principal Sara Svir, and WBL School District grounds manager Ryan Fulton. Project work provided by Jordan and Scout Troop 416. See application packet for the project proposal and photos.

C. SHG 2024-01 Scherer Pollinator Garden

Landowner Leslie Scherer submitted a Soil Health grant application for native pollinator garden plantings totaling about 500 sq ft in the City of Vadnais Heights, which expands on a previous grant project from 2022 that involved a 750 sq ft pollinator garden. The landowner is located within a VLAWMO priority zone for volume reduction and in the direct subwatershed of Lambert Creek. The native plantings will be added to two pollinator gardens next to the street on each side of the driveway, two side borders of the property and the front of the house, and the woodlands behind the house. The project will also expand the planting area of the 2022 pollinator garden. The addition of native plantings would not only create additional pollinator habitat, but would also capture more stormwater runoff and prevent buckthorn from re-establishing. The landowner has completed the buckthorn removal work and prepared the planting areas with mulch. She will also be completing the planting work herself. The total estimated project cost is \$1,448.50. Staff recommends approval of SHG 2024-01 in the amount of \$1,086.38.

D. LL2 2024-02 Elmwood Park Raingarden

The City of Vadnais Heights submitted a Landscape Level 2 grant application for constructing a 1,200 sq ft raingarden with rock swale next to a new trail and parking lot at Elmwood Park over an area of about 4,500 sq ft in the City of Vadnais Heights. The raingarden would capture stormwater runoff from Elmwood Street, the park's trail and parking lot, and several residential roofs, driveways,

and turf grass near the park. The project area drains to Lambert Creek, which is impaired for E.coli, and is located in VLAWMO's priority zone for volume reduction. Ramsey County Soil and Water Conservation Division (RCSWCD) staff provided a design for the project, which would reduce volume by about 48,502 cu ft/yr (73%), total suspended solids by about 942 lbs/yr (74%), and total phosphorus by about 3.6 lbs/yr (73%). The applicant received four bids for the project and maintenance for the next three years from Minnesota Native Landscapes, Shoreline Landscaping, Sandstrom Land Management, and Davey Resource Group. The total estimated cost is \$33,404.50, which excludes the maintenance costs.

Staff are proposing to utilize grant funding from the BWSR Watershed Based Implementation Funding (WBIF) Program for this project. The raingarden is located in a priority subwatershed identified in the WBIF approved workplan for the VLAWMO watershed partnership and is estimated to have significant water quality benefits. There is \$75,000 available to spend through the program until 2025. Staff are working on additional possible projects to spend the remaining funds before the end of next year.

Staff recommends approval of Landscape Level 2 Grant 2024-02 in the amount of 90% of eligible project expenses, not to exceed \$30,064.05 in accordance with program guidelines and the BWSR WBIF program.

VI. Projects

A. Consider Recommendation on Barr Feasibility Study for Water Reuse at Polar Lakes Park

Polar Lakes Park is an approximately 50-acre public park located east of I-35E off Hammond Road in White Bear Township. The park includes numerous athletic fields that are currently irrigated from the Township potable water system (which relies on groundwater as the water supply source). There are two irrigation systems at the park. The lower system irrigates four (4) ball fields and uses between 0.6 and 3.0 million gallons per year. The upper system irrigates four (4) soccer fields and uses between 1.0 and 3.0 million gallons per year. Additionally, the park is located in the North and East Metro Groundwater Management Area and within 5 miles of White Bear Lake and can be subject to Minnesota Department of Natural Resources (MnDNR) appropriations use restrictions.

The proposed reuse system would utilize water from the constructed (mitigation) wetland located on the southwest corner of the site which conveys stormwater runoff and discharges from Birch Lake watershed area. Should water levels in the wetland be too low to use for irrigation, the existing potable water system would be utilized for irrigation back-up supply. The Barr Engineering study has

determined the feasibility of the stormwater reuse for irrigation within Polar Lakes Park.

Please find attached the 3/17/2024 Barr Engineering Polar Park Stormwater Reuse Feasibility Study.

Recommendation

Staff recommends approval to the Board of the 3/17/2024 Barr Engineering Polar Park Stormwater Reuse Feasibility Study.

See full study at link here: https://www.vlawmo.org/index.php/download_file/4836/

B. Update on East Vadnais Lake Subwatershed Resiliency Study

Staff have been working with SRF Consulting Group (“SRF”) and study partners on moving the East Vadnais Lake Subwatershed Resiliency Study forward. Completion of the study is well underway and is anticipated to be completed this month or in May. Since SRF started working on the study, hydrologic and hydraulic modeling of the subwatershed has been completed. This involved significant data collection, such as collecting storm sewer pipe location and sizing information and storm, impervious surface data, outlet control structure elevations, and known localized flooding areas. This data was used to create flood inundation maps with potential BMP locations that would provide some flood reduction and improve water quality downstream. SRF completed an initial draft of the study that included these maps and additional maps projecting the potential BMPs’ impact with future storm events, which was reviewed at a stakeholder meeting two weeks ago. VLAWMO and partners provided comments and look forward to receiving the next draft for review.

C. Spent Lime Demonstration Project Update

Temporary easement extensions have been received. VLAWMO received 8/10 of the original easements. Barr has communicated the parcels with permission to Erosion Works. Project communication and coordination is ongoing. The water department will be doing regular maintenance during the week of April 22. VLAWMO is waiting for the contractor to provide their earliest available date for an initial spring application.

D. Tamarack Lake Alum RFQ Prep Update

Barr Engineering is preparing RFQ documents for authorization at the April Board meeting. The temporary access agreement with Ramsey County Parks/RCSWCD has been completed, signed by Ramsey County, and received by VLAWMO. The proposed access agreement is linked here:

https://www.vlawmo.org/index.php/download_file/4835/ and is anticipated to be considered by the Board at the April 24, 2024 meeting.

E. Birch Lake AIS Removal Preparation Update

VLAWMO staff are working with partners including MN DNR (permitting), BLID (payment of Dive Guys), Dive Guys (handpulling/reporting), and RCSWCD (pre/post surveys) on the ongoing AIS removal effort in Birch Lake. All partners have been contacted to make sure the project is ready to resume in the spring. The project may need to start early depending upon spring conditions.

Request: Staff request confirmation from TEC/BLID representative that BLID has approved being the contact with Dive Guys and receiving/paying invoice as has been done the previous 2 years, with VLAWMO providing logistics, facilitation, and pre/post surveys.

F. Update on Watershed Management Plan Progress and Invite

Noticing has been completed, and preparation is ongoing for the April 24 special Initial meeting. TEC members are invited to attend (please RSVP).

The packet of 60-day letters received will be presented to the Board at the April special meeting. The 60-day letters are included in this packet for reference for the TEC are linked below.

There was 100% participation from the TEC on the TEC/CAC/Partner survey. Thank you! The summary of feedback received from that survey is included in the packet; this summary was prepared by HEI.

See link for the 8 60-day letters received from agencies and partners:

https://www.vlawmo.org/index.php/download_file/4838/

G. Wilkinson Deepwater Wetland Restoration Minor Update

Eagle monitoring is ongoing. A pay final pay request is expected this spring/summer from the contractor. Staff continue investigating options for the next round grant project.

H. Pleasant Lake Carp Removal Update

The barrier is fully constructed and in operation. The project is ready for removal when the carp migrate.

SOIL HEALTH SUMMARY

VLAWMO awarded 6 grants for 2 bee lawn/no mow lawns, 2 native plant restorations, and 2 downspout raingardens totaling \$7,000.



A 2023 downspout rain garden in White Bear Lake.

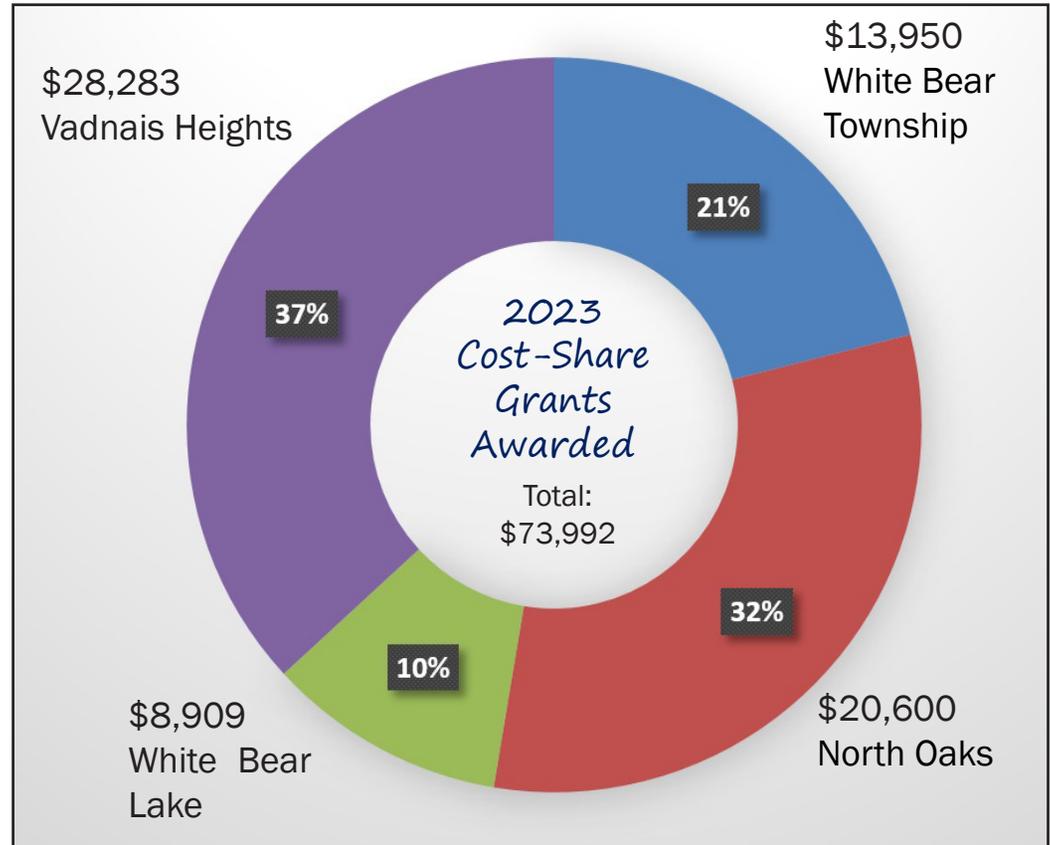
LANDSCAPE LEVEL 1 SUMMARY

VLAWMO awarded 6 grants for 1 rain garden, 3 shoreline restorations, 3 vegetated swales, and 1 permeable pavement driveway totaling \$30,000.



LANDSCAPE LEVEL 2 SUMMARY

VLAWMO awarded 4 grants for 1 native plant restoration, 2 smart irrigation controllers, and 1 bioswale totaling \$36,755.



RAIN BARREL GRANT PROGRAM

The Rain Barrel Grant Program reimburses residents 50% of the cost for the purchase of up to 2 rain barrels. Applicants are limited to \$100 for each rain barrel, no more than \$200 total.

RAIN BARREL SUMMARY

VLAWMO awarded 3 grants for 4 rain barrels, totaling \$237.

Water Monitoring

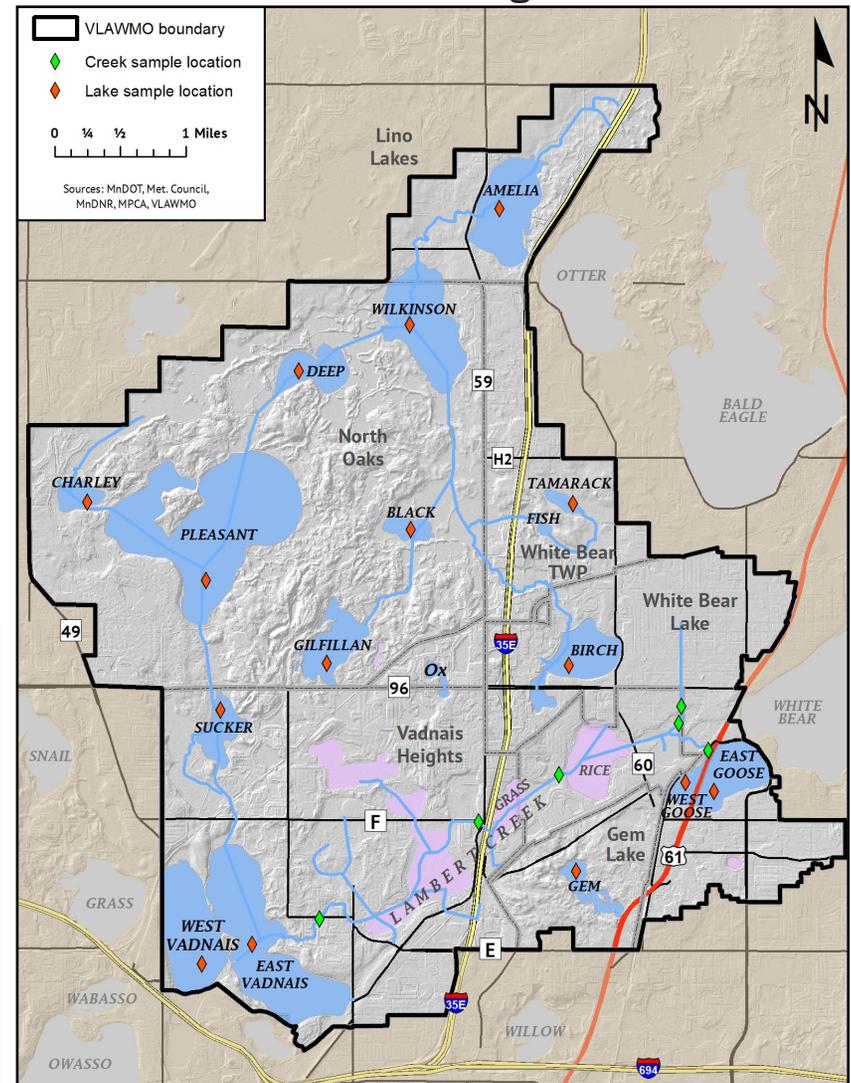
INTRODUCTION

VLAWMO's regular water quality monitoring program includes nutrient sampling on 6 Lambert Creek sites, and nutrient sampling on 15 of the Vadnais Lake Area Watershed lakes. Nutrients and pollutants sampled for data include: total phosphorus, chlorophyll-A, soluble-reactive phosphorus, iron, total nitrogen, nitrate, total suspended solids, and chloride. VLAWMO's specialty monitoring programs, such as project BMP's and storm sampling, will continue. See the map of current monitoring locations to the right.

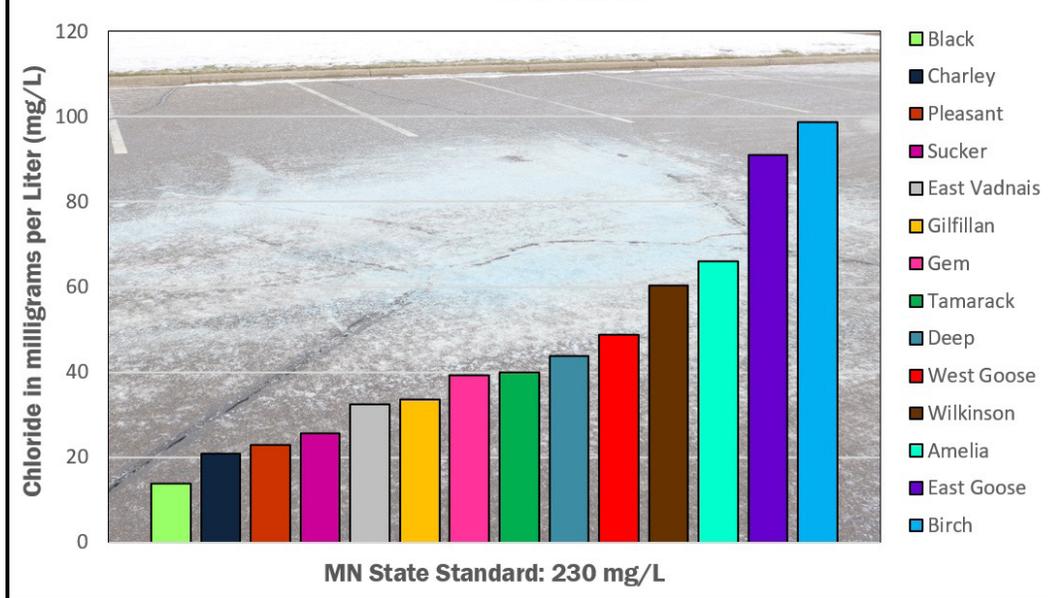
Part of VLAWMO's water monitoring includes rainfall measurements because rainfall and the timing of rainfall are factors that influence water quality. Typically, more precipitation implies more water runoff, which carries more contaminants from the land surface into water bodies.

Lakes are summarized with a grading system called the Carlson Trophic State Index (TSI). This system was developed in the 1970's to calculate average phosphorus, chlorophyll-A, and Secchi disk readings, and generate a summarizing number.

VLAWMO Monitoring Locations



Average Chloride Levels of VLAWMO Lakes: 2010-2023



Monitoring results are used to guide local water policies and management, and to help prioritize and locate future water quality projects such as raingardens, underground retention basins, and shoreline restorations.

WATER MONITORING HIGHLIGHTS

Pleasant Lake: Roughly 384 carp were removed from Pleasant Lake in 2023. Monitoring in 2024 will show whether or not this had an effect on water quality.

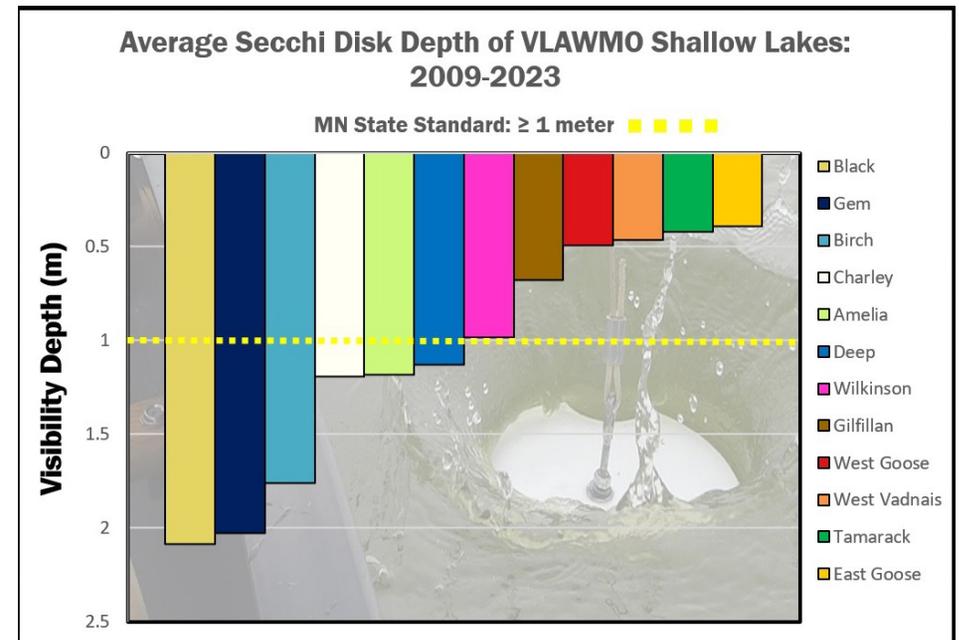
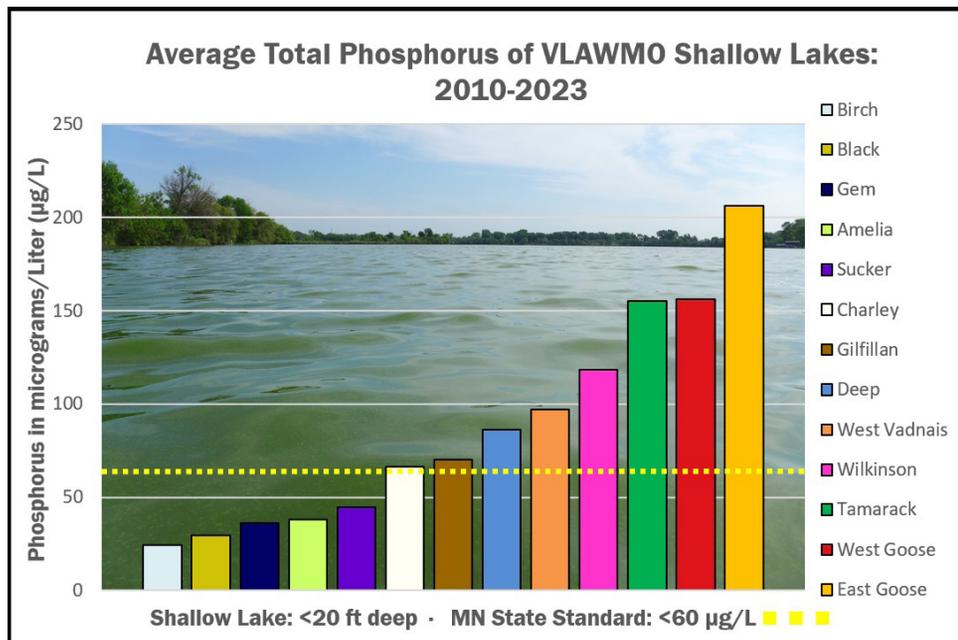
Remote Monitoring Devices: 2023 was the fourth full year of automated creek flow monitoring. Live information can be found here for the 4 sites monitored on Lambert Creek. www.monitormywatershed.org (search VLAWMO under “browse sites”).

Lambert Creek: Creek flow was extremely low in 2023. Rainfall was 7.10 inches below average for the season. Multiple monitoring sites were dry for portions of the monitoring season.

Oak Knoll Pond/Wood Lake Spent Lime Demonstration Study: A spent lime study was done on Oak Knoll pond in White Bear Lake to investigate the feasibility of spent lime as a potential tool for reducing Total Phosphorus levels. Seven applications were applied in 2023. Monitoring was done throughout the season. More applications will be applied in 2024 along with continued monitoring to track the effectiveness of the spent lime treatment.

Chloride: VLAWMO has been sampling lake chloride for 14 years and while rises are documented, there have been no major changes. Black Lake has the lowest chloride levels while Birch Lake and East Goose are the highest, which coincides with their proximity to major roads and storm drainage. All of the lakes are below the current State standard of 230 mg/L.

Use of Monitoring Data: The VLAWMO monitoring data was used for multiple subwatershed studies and grant applications in 2023. These aided in possible water quality projects moving forward with local partners in 2024.



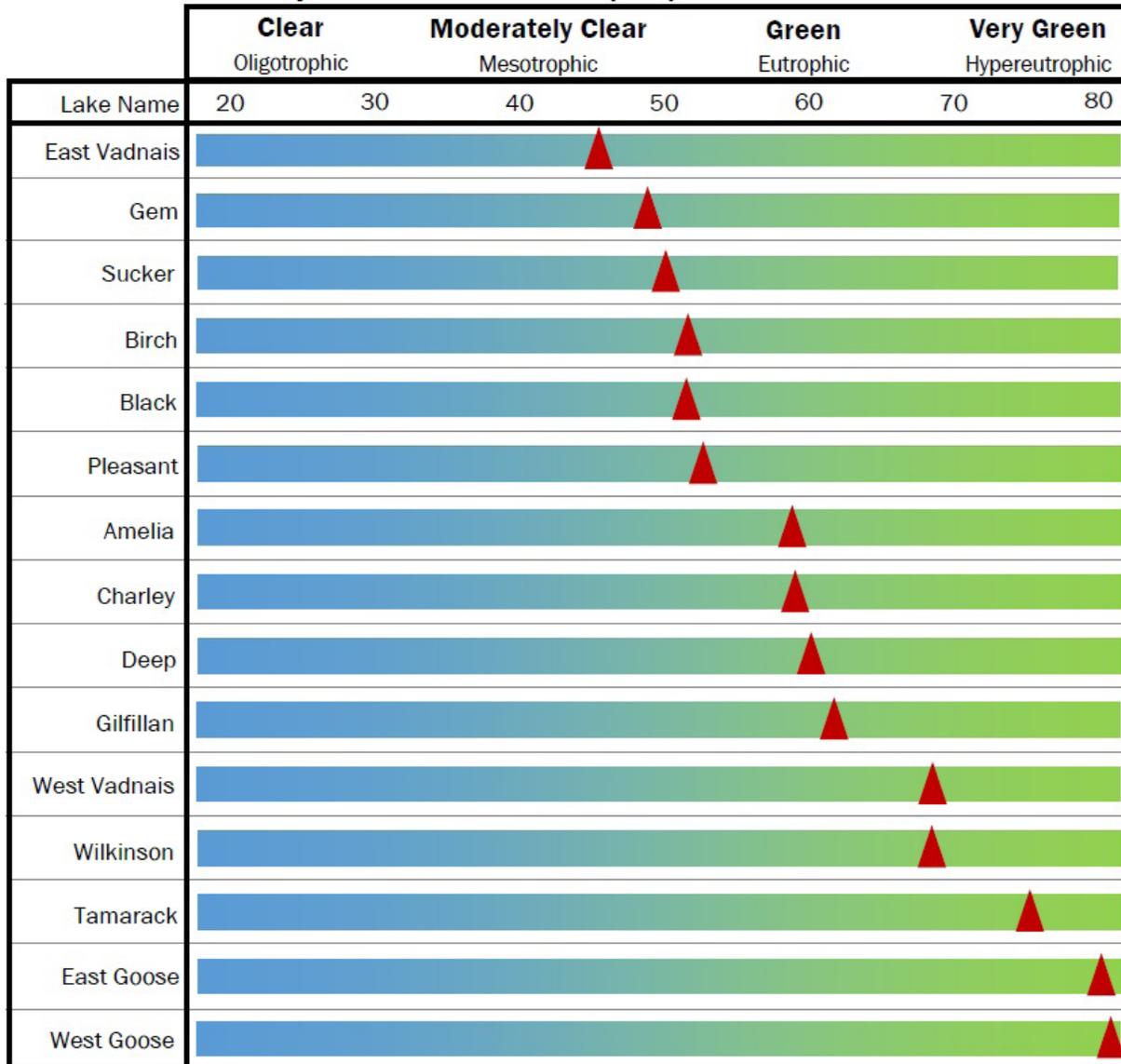
Find this year's complete Monitoring Report and a summary at VLAWMO.org/resources/reports

MONITORING SUMMARY: CONTINUED

STATE OF THE LAKES

VLAWMO uses the Carlson Trophic Status Indicator (TSI) to summarize lake health. TSI is calculated from annual monitoring data by combining total phosphorus, chlorophyll-a, and transparency (Secchi) readings.

Trophic State Indexes (TSI) of VLAWMO Lakes: 2023



A water sample on the shore of East Goose Lake.



VLAWMO staff taking a monitoring sample at Birch Lake

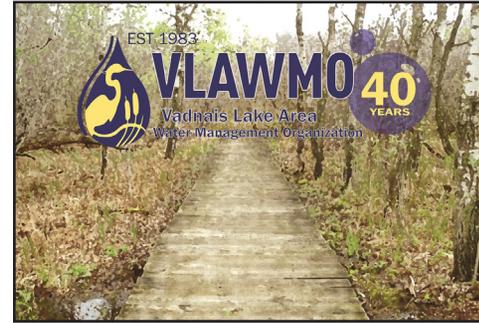
Project Highlights

VLAWMO'S 40TH ANNIVERSARY CELEBRATION

VLAWMO was pleased to celebrate its 40th Anniversary through a series of events and media that spanned the summer of 2023. Activities included neighborhood raingarden and native plant tours, public booths, a special web page summarizing VLAWMO's history, a video with interviews from VLAWMO leadership, and a celebration event at the Vadnais-Sucker Regional Park.

The event was a double-header of local conservation. The Ramsey County Soil and Water Conservation Division (RCSWCD) was celebrating their 50th anniversary, and partnered with VLAWMO on event planning. Dozens of stakeholders, affiliates, members of the public, past and present board and commission members, and staff shared a picnic and stories from many years and all celebrated the service of recently retired VLAWMO administrator Stephanie McNamara.

VLAWMO has grown much since its humble beginnings in 1983, and the field of water resource management has evolved and expanded with the development of research, technology, and innovative Best Management Practices (BMPs). Through it all VLAWMO has also remained grounded in its small watershed style of collaboration and partnerships.



Above: Ramsey County SWCD staff and guests at the live macroinvertebrates activity. Left: VLAWMO is presented with a plaque from the MN Board of Soil and Water Resources.



SMART IRRIGATION PILOT PROGRAMS

Sprinkler systems can seem as mysterious as a magic wand. Where does the water come from, how did it get there? If something goes awry, can we blame it on goblins? For those without a ticket to Hogwarts, groundwater is a limited resource and needs careful attention to maintain it for years to come.

In 2023 VLAWMO teamed up with the City of Vadnais Heights and White Bear Township to install smart irrigation controllers at 5 public properties. The new systems monitor weather patterns or soil moisture, and adapt the watering schedule accordingly. On an average precipitation year, the systems are expected to save as much as 271 football fields filled with 1 inch of water. While 2023 was a continuation of the drought cycle that began in 2021, these tools will help adapt and conserve when heavy precipitation returns. Visit our website at vlawmo.org/residents for more on water conservation in and around the home.

Right: Staff at White Bear Township installing smart irrigation at Columbia Park.
Below: Staff at City of Vadnais Heights





CAPITAL PROJECTS & PROGRAMS

Review of 2023 Work Plan

Project Name	Description	Goal: Going into 2023	2023 Result
Wilkinson Deep-Water Wetland BMP	A deep water wetland restoration is planned to help improve Wilkinson Lake, an impaired waterbody. Partners in this project include the North Oaks Company, Minnesota Land Trust, and Houston Engineering Inc. Funded by EPA 319 administered by MPCA with shared match between VLAWMO and the North Oaks Company.	Continue with design and planning for construction of BMP with project partners.	Construction completed. Vegetation establishment coming in 2024.
Vadnais/Sucker Regional Park Habitat Restoration	28 acres of restoration in Vadnais-Sucker Lakes Regional Park. Removal and treatment of invasive buckthorn and reseeding/planting with natives with ongoing maintenance. Partners in this project include Great River Greening, Ramsey County Parks, and St. Paul Regional Water Services. Funds provided by the Outdoor Heritage grant program administered by the MN DNR.	Minimum 28 acres restoration completed. On-site public outreach event.	Invasive removal complete in woodland areas. Interpretive signs created, overlap with VLAWMO 40th Anniversary event Aug 2023.
Oak Knoll Pond Spent Lime Study	Financial and social feasibility study with Barr Engineering to determine potential for scaling up small pond treatments to a large pond.	Report development and consideration, pond access pursued with property owners around pond.	7 spent lime applications made in 2023. Report development continuing into 2024. Pond access with property owners granted.
Groundwater Conservation Pilot Project	Pilot program in partnership with member communities to install smart irrigation controllers on public properties with high groundwater usage. Evaluate effectiveness for providing groundwater conservation benefits.	Complete 1 pilot project.	Two projects completed.

Review of 2023 Work Plan

GRANT PROGRAMS

Project Name	Description	Goal: Going into 2023	2023 results
Rain barrel Grant	Reimburse 50% of a rain barrel purchase (up to \$200) with proof of purchase.	Fund 3 rain barrel reimbursements.	Complete.
Landscape Level 1	Establish relationships and provide grants to property owners within the watershed to install water quality enhancement projects.	Fund at least 1 LL1 infiltration project.	Complete. Three infiltration projects awarded funding.
Landscape Level 2	Assist landowners with implementing larger BMP projects focused on stormwater capture and treatment within the watershed.	Fund 2 LL2 projects.	Complete. Three LL2 projects awarded funding.
Soil Health Grant	A grant program that reimburses landowners for installing small-scale practices that improve water quality and soil health with a focus on native plant restorations.	Fund 5 SHG projects.	Complete. Six SHG projects awarded funding.
Community Blue Grant	A communication and outreach grant program for projects that relate to water quality. Available to MN Water Stewards, volunteers, and community partners.	1 public education initiative. 1 raingarden renovation or service project.	One education initiative complete. One service project initiated, continues in '24.



EDUCATION AND OUTREACH

Review of 2023 Work Plan

Project Name	Description	Goal: Going into 2023	2023 Result
Watershed Action Volunteers (WAV)	The WAV consists of Minnesota Water Stewards (Freshwater), Citizen Advisory Commission (CAC), and volunteers with individual job descriptions.	Complete 1 Minnesota Water Steward Capstone Project Hold spring and fall WAV/CAC meetings Facilitate public booths (3+). 2 Macroinvertebrates monitoring activities	Complete. Complete. Complete. Complete.
Community Engaged Learners (CEL)	The Community Engaged Learning (CEL) Partnership with the U of M includes habitat improvement projects such as buckthorn removal, prairie and native woodland establishment, wooded wetland restoration, and various forms of wildlife monitoring.	Complete 8 or more field work days in habitat management and site maintenance.	Complete.
Workshops	Educate residents on watershed processes, raingarden and native plant function, smart salting, and VLAWMO grant programs.	4 residential workshops (raingardens, etc.). 1 municipal staff workshop (smart salting, etc.).	Complete. Complete.
Community Events	Staff a VLAWMO booth, develop watershed information, brochures, and resources for community events.	5 community events. 1 watershed/BMP tour.	Complete. 3 watershed tours complete.
Communications	Create and update material and publications for social media, website, seasonal E-news, and local publications. Create and maintain communications on VLAWMO projects and to promote responsible use of water resources.	10+ E-newsletters. Website renovation. 3 communications items provided to member Cities/Township.	Complete. Website renovation initiated, continue in 2024. Complete.
K-12	Provide watershed activities and resources for schools. Assist schools in establishing and maintaining stormwater best management practices (BMP's).	1 school collaboration/yr. 2 school raingarden maintenance activities.	Complete. 1 school raingarden maintenance.

 MONITORING PROGRAM

Review of 2023 Work Plan

Project Name	Description	Goals: Going into 2023	2023 Result
Lambert Creek monitoring program	Monitor basic phosphorus, nitrogen, Chlorophyll-A, chloride, and sediment levels at 6 sites along with pH, conductivity and DO at the 3 flumes. Maintain automated flow meter and precipitation gauge at Whitaker. Four remote sensors installed along creek, live updated volume and water levels displayed on line.	Document and evaluate creek water quality.	Complete.
Lake Level program	Gilfillan, Birch, Gem & Goose Lake gauges are calibrated in the spring and read up to 11 times during the summer.	Monitor lake levels on 4 targeted lakes in the watershed to track short & long term trends.	Complete.
Chloride measurements	Sample lakes and Lambert Creek during spring snow melt and ice out.	Check Spring measurements	Complete.
Lake monitoring program	Monitor chemistry of 15 of VLAWMO's lakes for nutrients, turbidity, pH, conductivity, and dissolved oxygen (DO).	Keep water quality record of watershed's lakes. Utilize water quality data for future projects and CIPs.	Complete.

Review of 2023 Work Plan



ADMINISTRATION & REGULATION

Project Name	Description	Goals: Going into 2023	2023 Results
Budget & Stormwater Utility	Storm sewer utility rates are based on the adopted budget and certified to the counties for collection.	Continued county participation and budgeting for future years.	Complete.
Wetland Conservation Act (WCA)	Complete boundary and type & other determinations in consultation with the TEP. Respond to WCA questions.	Continued administration of WCA.	Complete.



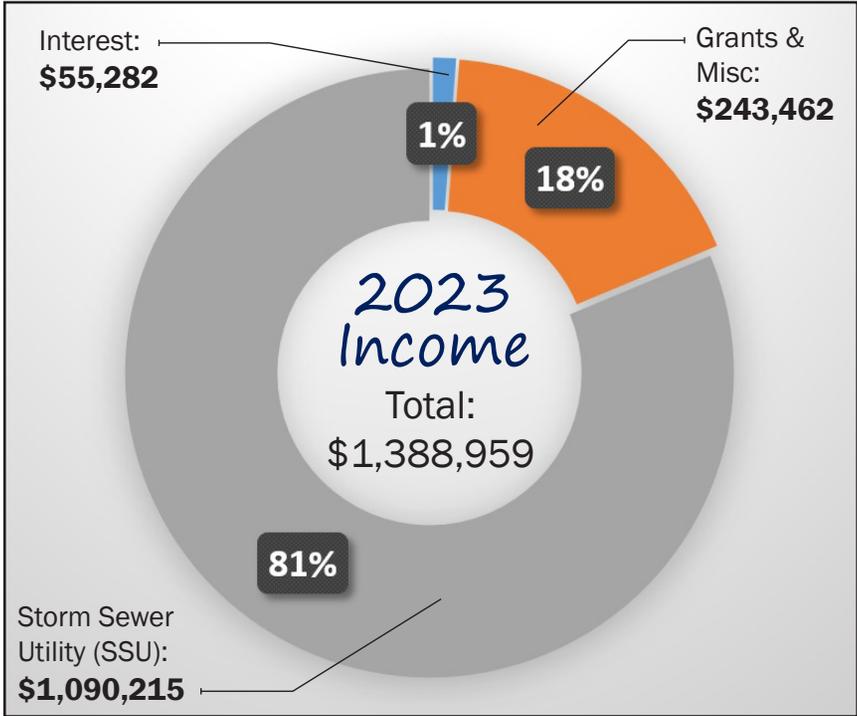
SUSTAINABLE LAKE MANAGEMENT REPORTS (SLMRs) AND STUDIES

Project Name	Description	Goals: Going into 2023	2023 Results
Tamarack Lake SLMR update	Update previous SLMPs with new survey, monitoring, and other relevant information. Post on the VLAWMO website.	Complete update and display on VLAWMO website.	Complete.
Gem Lake SLMR update	Update previous SLMPs with new survey, monitoring, and other relevant information. Post on the VLAWMO website.	Bathymetry survey. Aquatic macrophyte survey. Display on VLAWMO website.	Complete.
SLMP/SLMR reports for watershed lakes.	SLMP/SLMR reports will be maintained to retain ongoing usefulness and will be posted on the website.	Establish an SLMP/SLMR for each lake in the VLAWMO Watershed.	Complete.

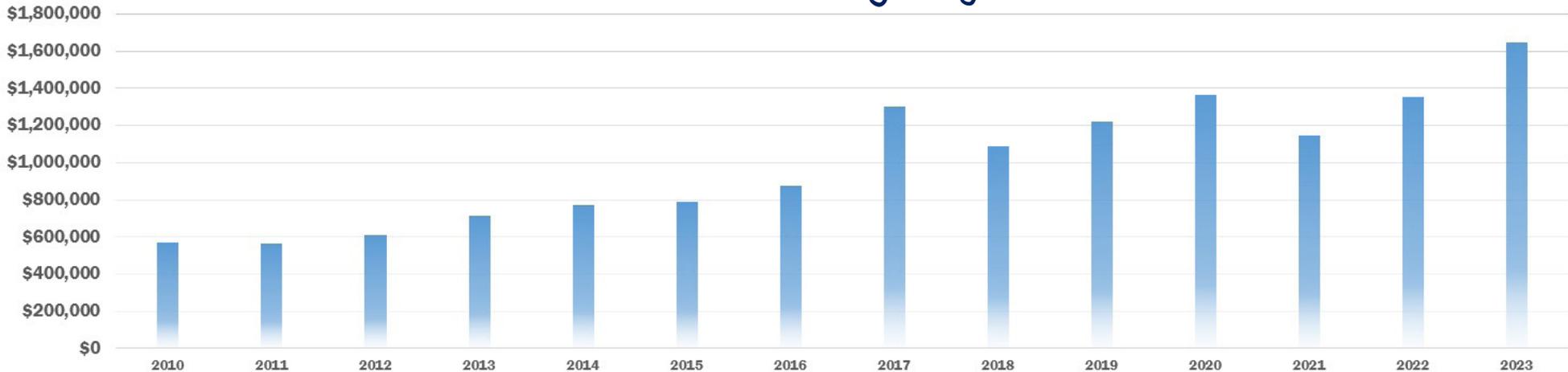
Finance and Budget

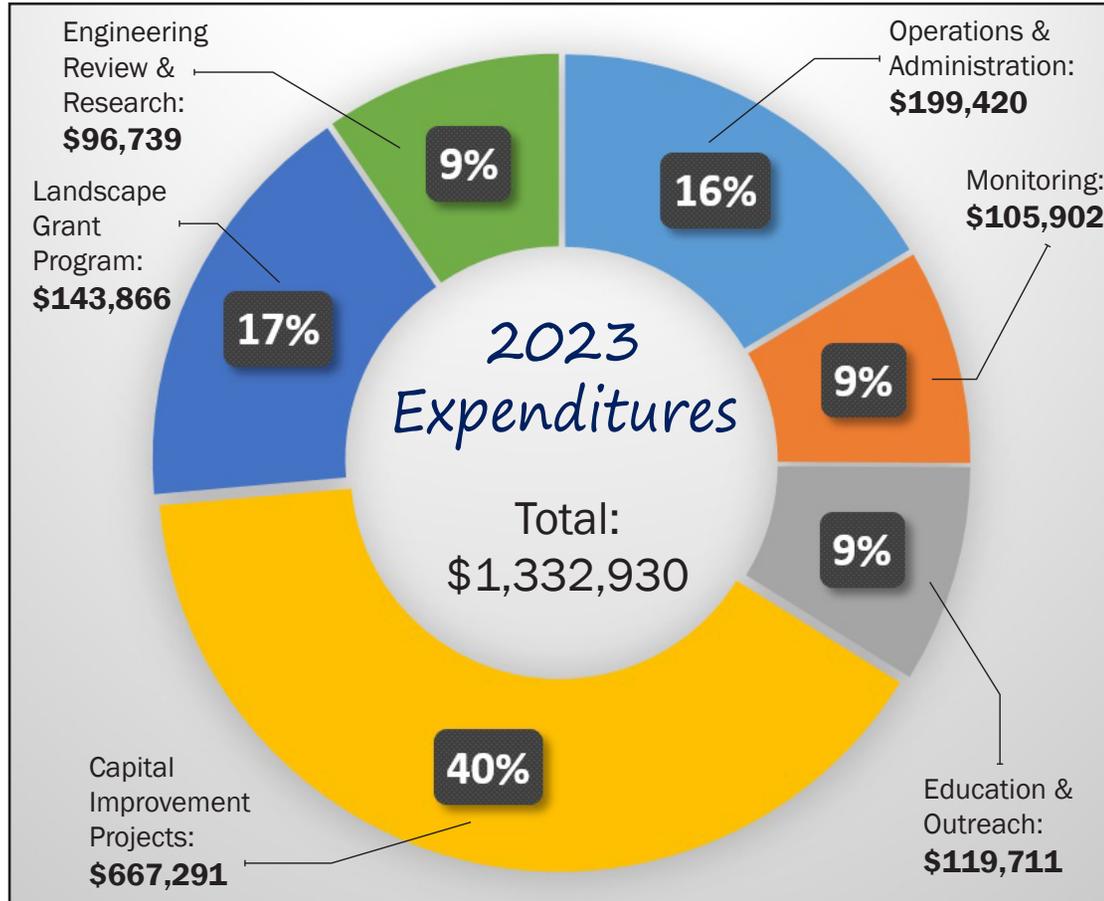
The 2023 budget was established by the Board of Directors in June 2022 with designated project and program funds carried over in December, 2022. The Finance and Policy Subcommittee with a representative from the Technical Commission and the Board reviewed and made recommendations on the 2023 budget to the Board in June, 2022. The Board-approved budget included funds to address a capital improvement project associated with the construction of the Wilkinson Lake Deep-Water Wetland Restoration Project and the carp harvest project at Pleasant and Deep Lakes. These projects focused on addressing water quality protection for high priority waterbodies in the watershed. The other programmatic focus in 2022 was the VLAWMO cost-share grant program and development of several policies and technical studies. These included a public drainage policy and completion of a feasibility study to guide the design of a proposed deep water wetland restoration practice upstream of Wilkinson Lake.

Approved budget for 2023:
\$1,621,450
Actual income from 2023:
\$1,388,959
Money spent in 2023:
\$1,332,930



Annual Budget by Year





INCOME

The mainstay of support for VLAWMO work comes from its Storm Sewer Utility (SSU) fees. These fees are based on an estimate of impervious surface for each parcel of land with reference to land use classification. \$1,090,215 in SSU was collected in Ramsey and Anoka Counties in 2022 for 11, 546 parcels. The average single-family homeowner paid \$61.80 per year, about \$5.15 per month to support projects and programs conducted by the watershed. The 7% increase in storm sewer utility fees supported sustainable coverage of key priority programs and projects outlined in the VLAWMO Watershed Management Plan. Some grant/loan income was utilized to cover project implementation costs.



Volunteers help with rain garden brush-up at Vadnais Heights Elementary

EXPENSES

The total cash expenses for 2023 was \$1,332,930. Engineering and planning efforts initiated in 2022 in the Lambert Creek and Wilkinson/Gilfillan/ Black/Tamarack subwatersheds will be carried over into 2024 for project implementation.

GRANTS AND PARTNERSHIPS

Grant funds and related miscellaneous and partnership income received in 2023 totaled \$243,462 including the MPCA 319 grant and BWSR watershed based funding grant.



Vadnais Lake Area Water Management Organization

800 East County Rd E
Vadnais Heights, MN 55127
vlawmo.org
(651) 204-6070

COMMUNITY BLUE GRANT APPLICATION

Please submit form and required materials to: Nick Voss
Nick.Voss@vlawmo.org

BASIC INFORMATION

PROJECT NAME	Vadnais Heights Elementary Rain Garden Renovation
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CONTACT PERSON	Jordan Erwin
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ADDRESS	1549 Sherwood Rd	CITY ZIP	Shoreview, 55126
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ORGANIZATION	BSA	PHONE	612-368-2093	EMAIL ADDRESS	jordanerwin018@gmail.com
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WHAT GEOGRAPHIC AND/OR DEMOGRAPHIC AREA DO YOU SERVE?	Vadnais Heights/ Vadnais Heights Elementary
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HOW MUCH ARE YOU REQUESTING? (BETWEEN \$200 AND \$5,000)	\$1,500
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HOW MUCH ARE YOU PREPARED TO MATCH OR PROVIDE IN-KIND?	We will provide 200 hours of labor, as well as tools, safety equipment, snacks, and water.
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PROJECT BACKGROUND

INTRODUCTION & GOAL

1. A: DESCRIBE THE MISSION AND GOALS OF YOUR ORGANIZATION/PROFESSION AND WAYS IT RELATES TO WATER RESOURCES.
B: IN 2-3 SENTENCES: WHAT DOES THE PROJECT DO (LIST HARD DETAILS OF #, PLACE, EVENT, ETC). AND WHAT'S THE GOAL?

The mission of scouting is to teach young people skills and lessons to help them build a better future. Our code of outdoor ethics is "leave no trace", so we should preserve water for future generations. My project is to restore the rain garden at Vadnais Heights Elementary. The goal is restoring it to make it effective at capturing runoff and aesthetically pleasing. This will include reestablishing the turf and meeting with public works and the school to arrange a watering schedule until the plants are established.

2. DESCRIBE HOW YOUR PROJECT WILL PROTECT OR IMPROVE WATER QUALITY. FOR EDUCATIONAL COMPONENTS, DESCRIBE BEHAVIORS AND ACTIONS THAT WILL BE ENCOURAGED THROUGH THE PROJECT AS THEY RELATE TO WATER.

When it rains the water picks up pollutants such as motor oil, fertilizers, and pesticides. The water then carries them to storm drains which will go into lakes and rivers. But when you have a rain garden, the plants and soil filter out the pollutants and clean the water improving water quality. Through this project, participants will learn what makes a good rain garden and what it does. The participants will get the VLAWMO rain garden maintenance guide before they go.

3. DESCRIBE ANY PROJECT PARTNERS, THEIR ROLE IN THE PROJECT, THEIR QUALIFICATIONS, AND THEIR ROLE IN YOUR PROJECT. FOR PROJECTS WITH INVOLVED PARTNERSHIPS, A SEPARATE CONFIRMATION LETTER MAY BE REQUESTED. *Please provide specifics (names, titles, email or phone #)*

Troop 416 will be assisting with manual labor. Nick Voss from Vadnais Lake Area Water Management Organization will be advising.

The City of Vadnais heights will be providing the following:

- Delivering up to 5 cubic yards of topsoil to the site
- Grass seed watering during establishment phase. Passive watering of new native plants. Watering will continue until turf is established.
- Fixing and unclogging the rain garden outflow pipes. Adding an extension if needed.

The WBL school district will provide plant debris disposal with the placement of an on-site trailer. The school will provide access to water from the loading dock for new plant watering.

PROJECT OBJECTIVES

4. IN THE SPACE BELOW, PLEASE BREAK DOWN YOUR PROJECT INTO OBJECTIVES (UP TO 5). THESE SHOULD TELL THE STORY OF YOUR PROJECT FROM PREPARATION TO ACTION TO FOLLOW-UP MEASURES. INCLUDE AN ESTIMATED COMPLETION DATE (left box) AND COST (right box) TO EXPIDITE PROJECT BUDGETING AND FUND DISPERSAL.

1	OBJECTIVE	Remove unwanted plants	COMPLETION DATE (M/Y) COST (right box)	6/2024	NA
	DESCRIPTION	Remove all the vegetation that surrounds the rain garden perimeter and rock entrance of rain garden. Put colored tape on the Siberian elm inside the rain garden to mark what to remove. Then the volunteers will come in and dig out the unwanted plants and shrubs. Trap rock clearing and reorganize within the rain garden. Dispose of plants debris in school district trailer.			
	POSSIBLE BARRIERS				
2	OBJECTIVE	Put down topsoil	COMPLETION DATE (D/M/Y) COST (right box)	6/7/2024	\$0
	DESCRIPTION	Utilize city-provided topsoil and wheelbarrow it from the dump site (nearby pavement) to where it is needed at the rain garden sides and the outflow. Have the volunteers fill in the holes and grade the area of Siberian elm removal.			
	POSSIBLE BARRIERS	The holes require more topsoil than expected.			
3	OBJECTIVE	Erosion control blanket and grass seed	COMPLETION DATE (D/M/Y) COST (right box)	6/7/2024	\$250
	DESCRIPTION	Install a coconut husk blanket to control erosion and plant grass seed underneath it and around the perimeter of the rain garden, wherever topsoil is laid. Put neon flags down to mark the newly planted area. Visit raingarden for watering on weekends (1 visit) and weekdays (1-2 visits) for 3-4 weeks depending on new grass growth needs and soil moisture.			
	POSSIBLE BARRIERS	Rescheduling due to bad weather. Poor seed germination or displaced blanket due			
4	OBJECTIVE	Plant and Mulch the inner rain garden and give volunteers a brochure	COMPLETION DATE (D/M/Y) COST (right box)	6/8/2024	\$750
	DESCRIPTION	Supplement current plants with more plants to fill in empty space. Get mulch delivered to the rain garden. Have the volunteers spread the mulch around the new plants. The participants will get the VLAWMO rain garden maintenance guide before they go. Visit raingarden for watering on weekends (1 visit) and weekdays (1-2 visits) for 3-4 weeks depending on new grass growth needs and soil moisture.			
	POSSIBLE BARRIERS	Delay in native plant delivery or availability			
5	OBJECTIVE	Post-planting /seeding watering	COMPLETION DATE (D/M/Y): COSTS: (right box)	7/20/2024	NA
	DESCRIPTION	The city will water the inner rain garden plants everyday or every other day throughout the week days. I will water the rain garden once on the weekends and visit it one time throughout the week to make sure it is watered.			
	POSSIBLE BARRIERS	The city is busy and can't water the plants.			

MEASUREMENT AND EVALUATION

5. DESCRIBE HOW YOU WILL MEASURE THE SUCCESS OF YOUR PROJECT.
Measurements should be phrased as a final result. What tangibles will prove that the objective was met?
Example: Number of participants, number of installations, gallons of storm water infiltrated, etc. Effective measurables relate back to the goal and purpose of the project – VLAWMO will make recommendations as needed. If an objective doesn't need a measurable please indicate another objective that has a measurable that serves to measure both.

OBJECTIVE 1: The unwanted plants and shrubs have been removed from the rain garden. Rock within the rain garden is re-arranged to the rain garden entrance inlet, rain garden inlet is cleared of plant debris. A minimum of 8 volunteers assist with the objective.

OBJECTIVE 2: There is topsoil evenly graded around the rain garden perimeter and over the outflow pipe extension. A minimum of 8 volunteers will assist with the objective.

OBJECTIVE 3: A coconut husk blanket is installed and the grass seed is planted. Up to 250 square feet as needed. A minimum of 8 volunteers will assist with the objective. There will be neon marking flags marking the newly planted area.

OBJECTIVE 4: up to 3 dozen Plants are in the ground and mulch is spread throughout the rain garden and around new plants. A minimum of 8 volunteers will assist with the objective.

OBJECTIVE 5: Watering. Watering and inspection for 6 weeks after planting. One visit each weekend, one visit during the week.

PROJECT PLAN

BUDGET DESCRIPTION

6. DESCRIBE THE BUDGET: List 1) materials and services that the requested funds will go towards and 2) provide a description of Match funds that go with that objective/expense.

OBJECTIVE 1/EXPENSE 1: NA

OBJECTIVE 2: Topsoil provided by the City as match fund, up to 5 cubic yards, assessed based on objective one results

OBJECTIVE 3: The coconut husk erosion control blanket and grass seed will cost \$250.

OBJECTIVE 4: Plants will be \$400. Mulch will be \$350. Mulch will cut down on weeds, retain water, and make the garden look better.

OBJECTIVE 5: Watering and all project equipment. Equipment includes Wheelbarrows, shovels, and saws.

BUDGET

7. COMPLETE THE FOLLOWING TABLE FOR PROJECT COSTS. IF ADDITIONAL COSTS EXIST INDEPENDENT OF GRANT FUNDING LIST THEM AS FUNDING FROM OTHER SOURCE. PLEASE SPECIFY AN AMMOUNT PER EXPENSE AND A TOTAL. THE GREEN BOX IN PART 7 MUST EQUAL THE GREEN BOX IN PART 8. USE WORK PLAN SPREADSHEET FOR MORE DETAIL. TIP: ALIGN EXPENSES ACCORDING TO OBJECTIVES IN PART 4.

EXPENSES Reflect objective #	PERSONNEL COSTS "N/A" if blank	MATERIALS / SUPPLIES "N/A" if blank	FUNDING FROM OTHER SOURCE "N/A" if blank	TOTAL
EXPENSE 1:	NA	NA	NA	NA
EXPENSE 2: Topsoil	NA	\$0	\$100	\$100
EXPENSE 3: Grass seed and coconut husk	NA	\$250	NA	\$250
EXPENSE 4: Plants and Mulch	NA	\$750	NA	\$750
EXPENSE 5: Equipment	NA	NA	\$200	\$200
TOTALS	\$0	\$1,000	\$300	\$1,300

Description of other source funding:

Donations from friends, family, the troop, and the city.

TOTAL EXCLUDING MATCH FUNDS:

\$1,000

GRANT FUNDING & MATCH FUNDS

8. PLEASE FILL IN THE TABLE BELOW WITH HOW YOU PLAN TO ALLOCATE YOUR FUNDING. Match funds are required assets for the project that strive to support community investment and exposure. Match funds may be cash from other sources, mileage, pre-existing materials involved in the project, or provided in-kind (i.e. volunteer services). In-kind match hours may be volunteer service hours, voluntary presentations, etc. Consult with VLAWMO staff for discussion on what applies as match funds. THE BLUE BOX SHOULD BE AN ADDITIONAL 25-100% OF THE GREEN BOX. PROJECT APPLICATIONS ARE WEIGHED WITH A PREFERENCE FOR PROJECTS WITH HIGHER MATCH FUNDS, AND ARE VOTED ON THROUGH THE VLAWMO TECHNICAL COMMISION AND BOARD OF DIRECTORS.

VOLUNTEER HOURS ARE VALUED AT
\$25/HR
MILEAGE IS VALUED AT
\$0.525/MI

EXPENSES	REQUESTED VLAWMO FUNDING	MATCH FUNDS		TOTAL
		Cash	In-kind	
EXPENSE 1: Equipment			\$200	\$200
EXPENSE 2: Topsoil	\$0		\$100	\$100
EXPENSE 3: Grass seed and coconut husk blanket	\$250			\$250
EXPENSE 4: Plants and Mulch	\$750			\$750
EXPENSE 5: Labor- 225 hours			\$5,000	\$5,000
TOTALS	\$1,000	\$5,300		\$6,300

BUDGET CONTINUED

9) DESCRIPTION OF MATCH FUNDS: CASH AND/OR IN-KIND HOURS. Briefly describe the nature, activity, or function of the match funds for each expense line. I.e. "volunteer hours", "honorarium", etc.

EXPENSE 1:

Equipment \$200 from friends, family, and the troop in money for equipment or equipment like shovels and saws for the project

EXPENSE 2: \$100 worth of topsoil from the city.

EXPENSE 3:

EXPENSE 4:

EXPENSE 5: Volunteer Labor. 200 hours \$5,000

FUTURE POTENTIAL

10.) WILL YOU OR THE PROJECT PARTNERS BE ABLE TO REPEAT THIS PROJECT? EXPLAIN HOW THE PROJECT WILL BE CARRIED ON IF 1) THE PROJECT IS A SUCCESS AND 2) ADDITIONAL FUNDS WERE AVAILABLE

Yes. Scouts do an eagle project for the community to rank up so this kind of project is definitely repeatable. Everything you do while doing an Eagle Scout project is recorded so it would be easy for future scouts to use my project as a guide to do their own.

11.) HOW DID YOU HEAR ABOUT OUR GRANT PROGRAM?

An Eagle Scout who applied for the VLAWMO grant had Mr. Voss as a beneficiary. So, I got in contact with Mr. Voss and he told me about it.



Raingarden border outlined in yellow. Siberian elm outside of border is slated for removal, this is where turf re-establishment will occur.



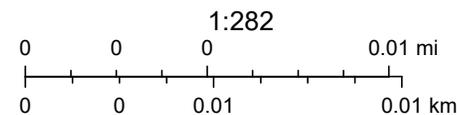
Raingarden inlet pictured with encroaching plant debris.

VH Elementary Raingarden



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-  VLAWMO Boundary 2020
-  Red: Band_1
-  Green: Band_2
-  Blue: Band_3



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ArcGIS Web AppBuilder
County of Ramsey, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA

Soil Health Grant Application



Submit completed application to:
 Lauren Sampedro
 lauren.sampedro@vlawmo.org

Applicant Information:

Name:	Leslie Scherer
Address:	3870 Stockdale Drive
City/Township, State, Zip:	Vadnais Heights, MN, 55127
Phone:	608-797-3978
Email:	leslie.scherer14@gmail.com



Project Summary:

ESTIMATED TOTAL PROJECT COST (\$)	1448.50
AMOUNT REQUESTED (\$1,000 MAX or \$1,250 in Priority Area)	1086.38
EXPECTED PROJECT COMPLETION (Month, Year)	July, 2024

PROJECT TYPE:

- Downspout/Small Raingarden
- Native Restoration/Pollinator Garden
- Turfgrass Replacement
- Other

If other, please describe the proposed project: _____

Project Background:

Describe your property. What is the purpose of your project? Does your property connect to a lake, stream, ditch, or wetland in VLAWMO?	Property connects to Lambert Lake/Wetlands Purpose of the project is add pollinator and bird/insect habitat to our property as well as to replace large amounts of buckthorn that were removed over the past two years. In addition, this project is meant to expand existing gardens created with a previous VLAWMO grant.
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Project Background: Continued

<p>Describe how your project will support the goals of the Soil Health Grant Program. (See grant policy)</p>	<p>This project is directly related to the goals of the Soil Health Grant Program because it will include a wide variety of plants that are intended to support a large variety of critical pollinators. All buckthorn replacements are native forbs/grasses/shrubs/trees.</p>
<p>Briefly describe the planned installation and maintenance activities for your project.</p>	<p>Planned order includes 4 inch pots for native plants and larger pots #1-#5 for trees/bushes. Trees will be protected by wire fencing surrounds until they are large enough to withstand wildlife browsing. Pollinator gardens will be watered by both rain barrel and hose/sprinkler. Wood mulch is already in place where plantings will be added. All work will be completed by residents. We have experience and success installing similar projects over the past several years on this property.</p>

Project Specifications:

<p>TOTAL PROPERTY AREA (Acres)</p>	<p>2.7 acres</p>
<p>Total PROJECT SIZE (SQ FT)</p>	<p>~500 sq ft pollinator gardens</p>
<p>IF APPLICABLE: DEPTH OF RAINGARDEN BASIN (Inches)</p>	



Required Attachments:

- ⇒ Detailed drawing or plan of the proposed project.
- ⇒ Detailed project budget estimate with itemized costs and materials that equal your total estimated cost.

VLAWMO Soil Health Grant Agreement



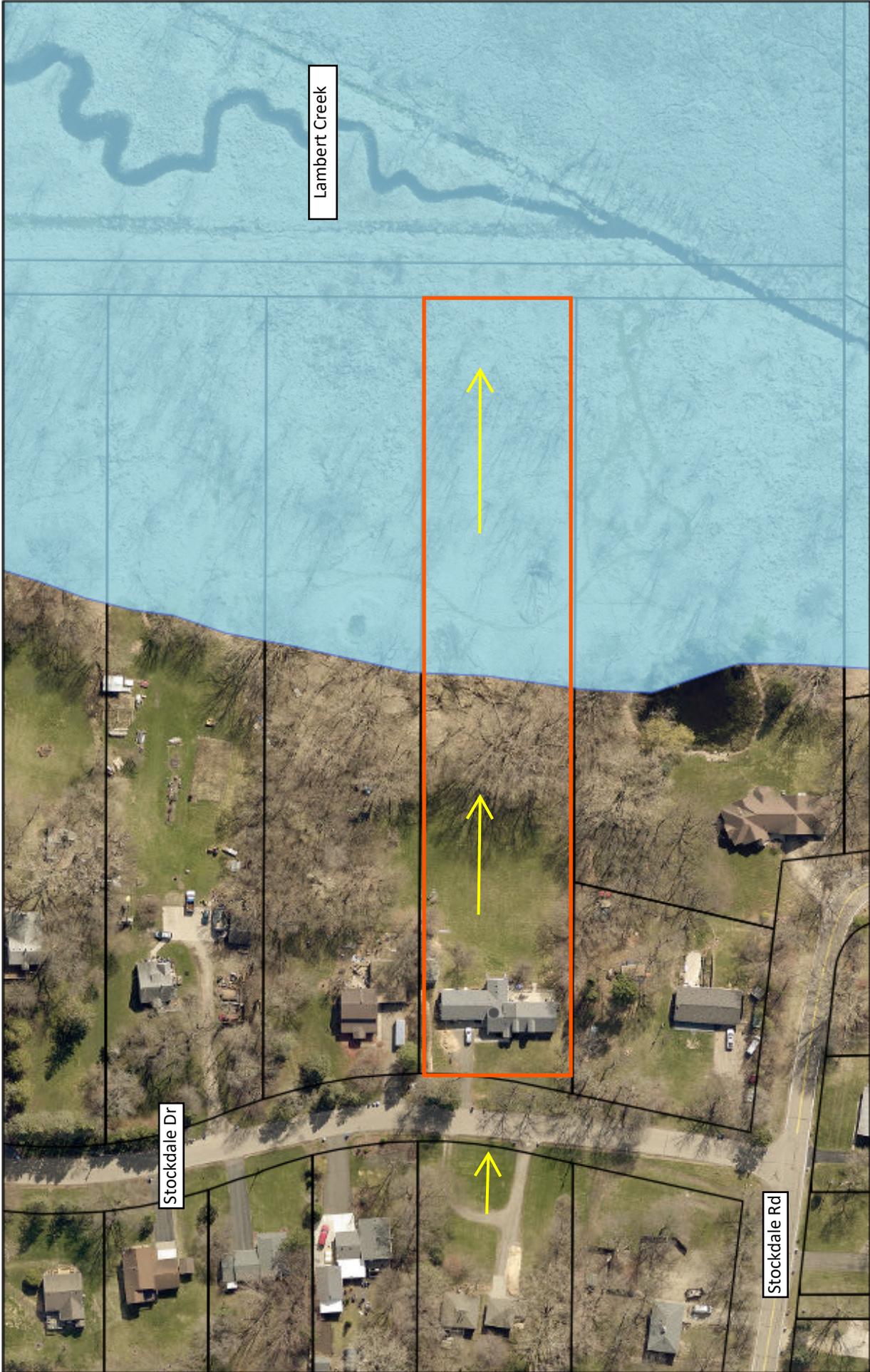
It is understood that:

1. The grantee is responsible for maintaining the project for at least 5 years after its installation. VLAWMO is not responsible for completing maintenance activities.
2. The grantee will participate in VLAWMO's outreach and project sharing efforts.
3. A project may be visited and inspected by a VLAWMO representative during the 5-year maintenance period.
4. Grant awards will expire within 1 year of grant approval unless the project is extended with VLAWMO approval.

The applicant's signature indicates their agreement to the above terms and certifies the grant application information is true and accurate. A VLAWMO staff signature will constitute an approved and executed grant agreement between the grantee and the VLAWMO.

Applicant/Grantee	
Signature 	Date <u>3/20/24</u>
Print <u>Leslie Scherer</u>	
VLAWMO Staff	
Signature _____	Date _____
Print _____	

SHG 2024-01 Scherer Pollinator Garden Application



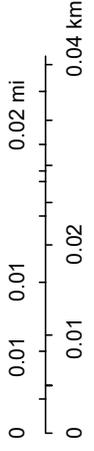
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 Ramsey County Parcels



Flow Arrows

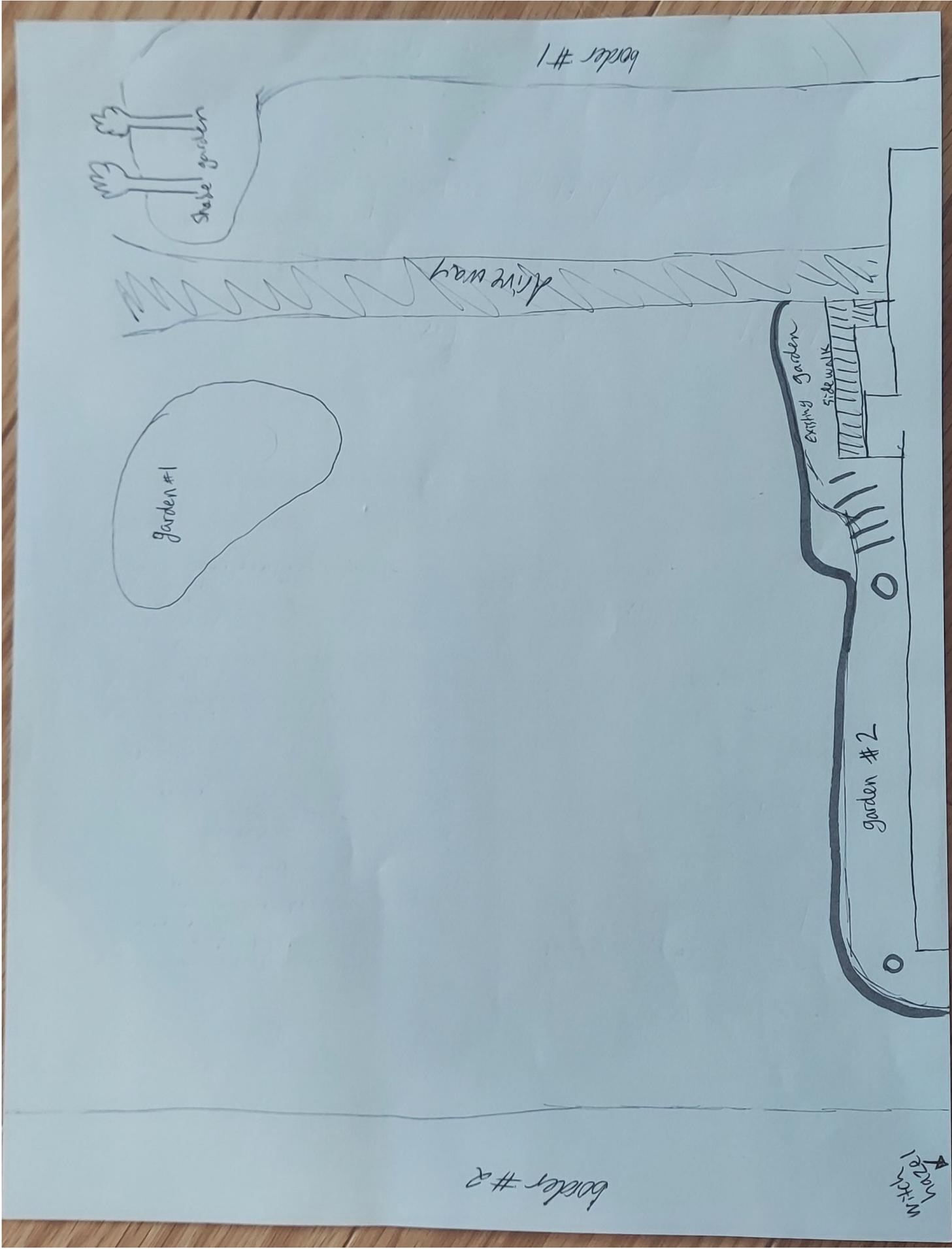
 Project Location



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, County of Ramsey, Esri, HERE, Garmin, GeoTechnologies, Inc., County of Ramsey, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA | ArcGIS Web AppBuilder

Budget

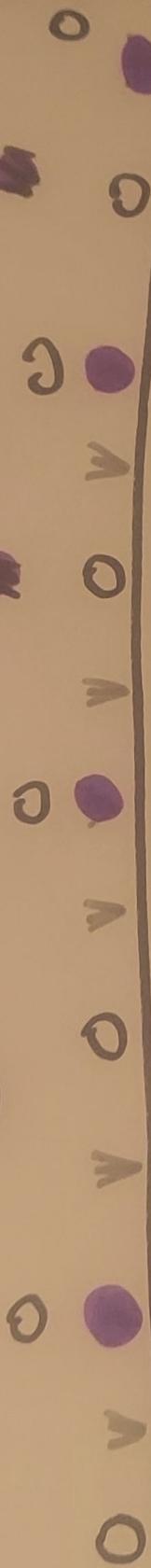
Species	Quantity	Total Price	Location	Sun	Height	
Trees/Shrubs						
American Bladdernut	4	\$60	Border 1	sun/part/shade	10-15'	
Witch Hazel	1	\$44	Border 1	sun/part	10-20'	
Algheny Serviceberry	1	\$52	Border 2	sun/part	20-40'	
Pagoda Dogwood	1	\$16.45	Border 1 (back)	sun/part/shade	15-25'	
Gray Dogwood	3	\$75	Border 1	sun/part/shade	5-15'	
New Jersey Tea	2	\$30	Back Garden	sun/part	2-3'	
		\$277				
Grass/Sedge						
Pennsylvania Sedge	18	\$39.95	Woodland	part/shade	6"-1'	
Northern Dropseed	18	\$34.95	Garden 1, Back Garden	sun	2-4'	
Bottlebrush Grass	18	\$34.95	Garden 2, Garden 3	part/shade	2-5'	
Side Oats Grama	18	\$34.95	Garden 1, Back Garden	sun	2-3'	
MNL Buckthorn Replacement Seed Mix		\$165	5000 sq feet	Border 1, Border 2, woodland	part/shade	2/3/4'
Forbs						
Carolina Rose	2	\$27.50	Back Garden	sun	2-5'	
Wild Geranium	18	\$34.95	Garden 2, Garden 3	sun/part/shade	8"	
Zig Zag Goldenrod	18	\$34.95	Garden 2, Garden 3	part/shade	3'	
Wild Ginger	18	\$34.95	Garden 3	part/shade	1'	
Prarie Onion	18	\$34.95	Garden 1, Back Garden	sun/part	1-2'	
Blanket Flower	18	\$34.95	Garden 1, Back Garden	sun	1-3'	
Smooth Blue Aster	3	\$5.80	Garden 1	sun/part	4'	
Sand Coreopsis	3	\$5.80	Garden 1	sun	2'	
Pale Purple Coneflower	3	\$5.80	Garden 1	sun/part	3'	
Meadow Blazing Star	3	\$5.80	Garden 1	sun/part	5'	
Prarie Blazing Star	3	\$5.80	Back Garden	sun/part	4'	
Orange coneflower	3	\$5.80	Garden 1	sun/part	3'	
Harebell	18	\$34.95	Garden 1, Back Garden	sun/part	1'	
Columbine	18	\$34.95	Garden 3, Woodland	sun/part/shade	2'	
Jacobs Ladder	18	\$34.95	Garden 3, Garden 2	sun/part/shade	1'	
Jack in the Pulpit	18	\$34.95	Woodland	part/shade	2'	
Virginia Bluebells	18	\$34.95	Garden 3	part/shade	2'	
Sweet Joe Pye	18	\$34.95	Garden 1, Woodland	part/shade	7'	
Poke Milkweed	18	\$34.95	Woodland	part/shade	5'	
Great Blue Lobelia	18	\$34.95	Garden 1, Back Garden	sun/part	3'	
Lead Plant	18	\$34.95	Border 2, Garden 1, Back Gard	sun/part	3'	
Heart Leaved Aster	18	\$34.95	Garden 2, Border 2	part/shade	3'	
Elm Leaved Goldenrod	18	\$34.95	Woodland		2-4'	
Wild Blue Phlox	18	\$34.95	Border 1, Woodland	part/shade	1-2'	
Big Leaved Aster	18	\$34.95	Garden 3, Woodland	part/shade	6"-1'	
Prarie Alumroot	18	\$34.95	Garden 2, Garden 1, Border 2	full/part	2'	
Rattlesnake Master	18	\$34.95	Garden 1, Back Garden	full	4'	
Virgins Bower	18	\$34.95	Back Garden			
Delivery		\$65.00				
		\$1,171.05				
Total		\$1,448.50				



Borders
(front of house)

(AS)

(2)



B- American bladdernut
 G- gray dogwood

Sweet Joe Fly
 Bottlebrush grass
 Northern drop seed
 Lead plant
 Penn sedge

AS- Albany serviceberry
 O- existing shrubs

Calico aster

(1)

(8)

(6)

(9)

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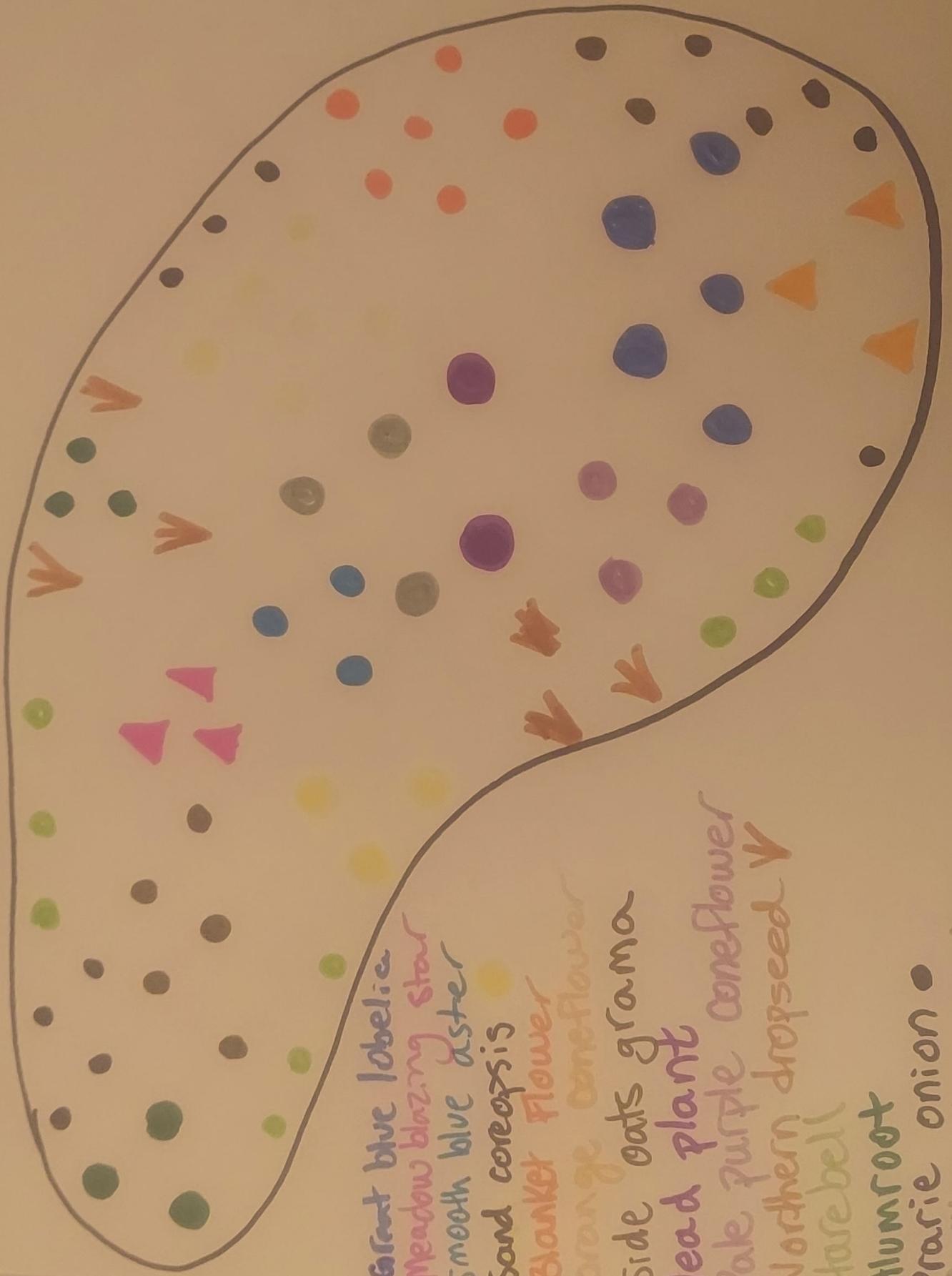
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Garden #1 Sun/Parkt



Great blue lobelia

Meadow blazing star

Smooth blue aster

Sand coreopsis

Blanket Flower

Orange Coneflower

Side oats grama

Lead plant

Pale purple Coneflower

Northern dropseed

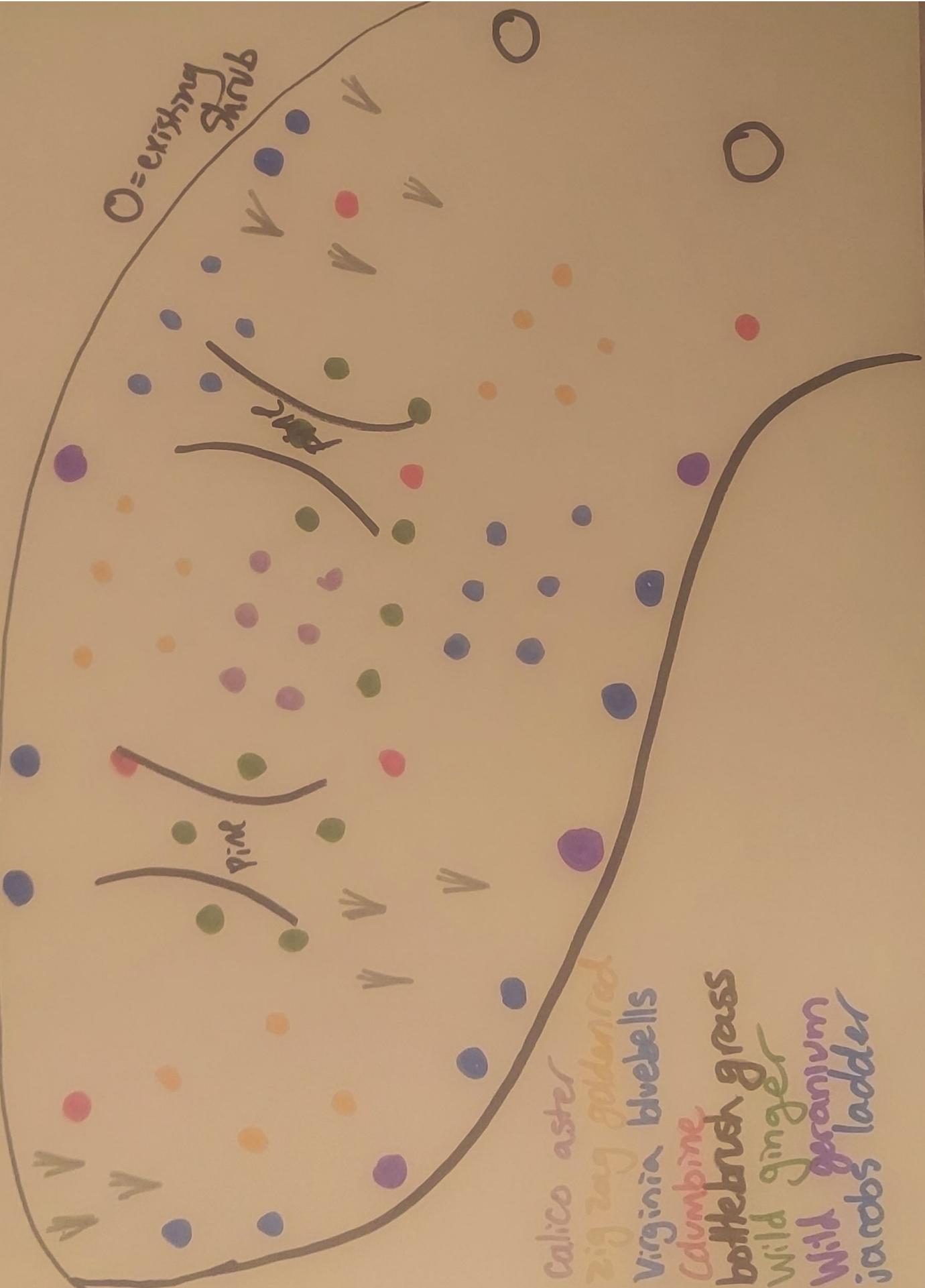
Harebell

Alumroot

Prairie onion

Rattlesnake master

Garden #3 Shade/Partshade (under pines)



O = existing shrub

pine

pine

- Calico aster
- Zigzag goldenrod
- Virginia bluebells
- Columbine
- bottlebrush grass
- Wild ginger
- Wild geranium
- Jacob's ladder

V. C. Scherer Pollinator Garden

SHG 2024-01 Grant Application

Lauren Sampedro
TEC Meeting
4/10/2024



Soil Health-Scherer



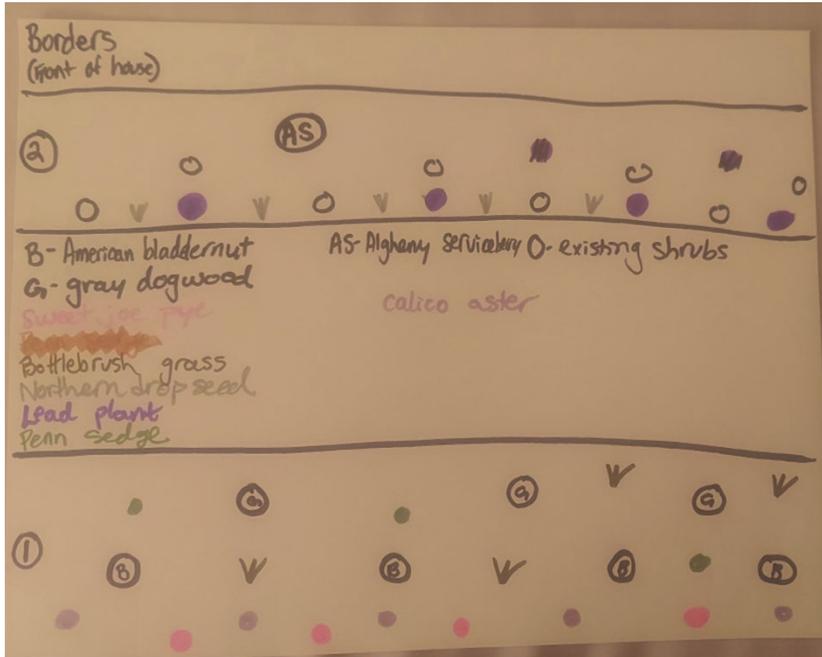


Vadnais Lake Area Water Management Organization

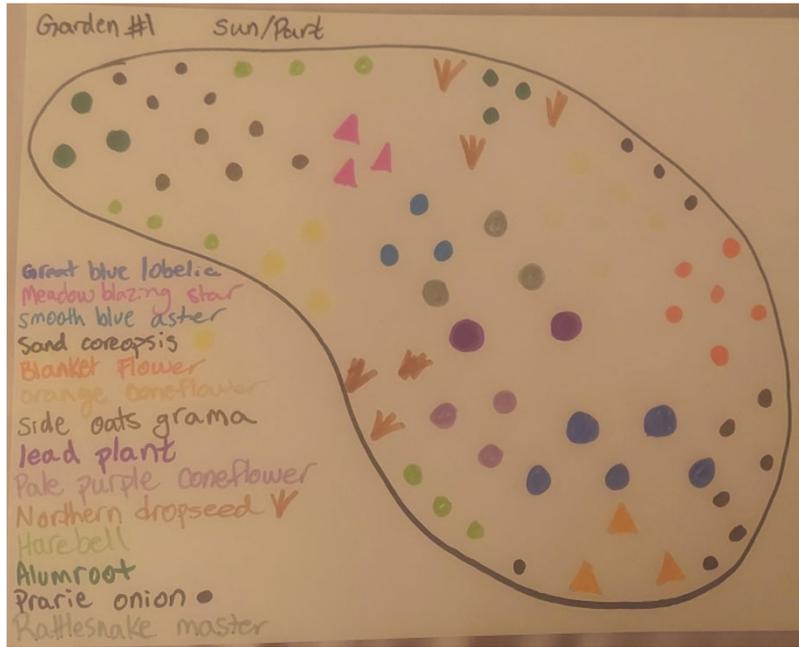


Vadnais Lake Area Water Management Organization

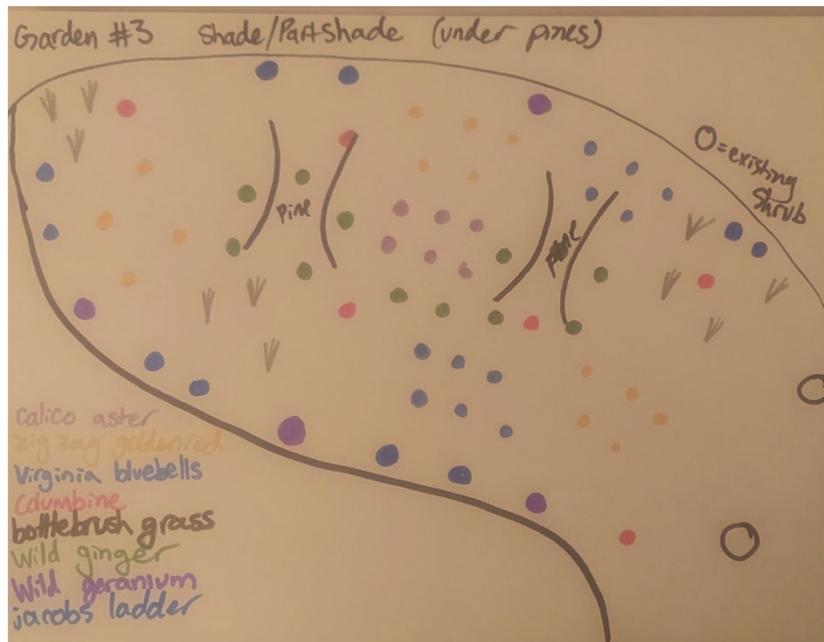
Side borders of property



Front garden adjacent to Stockdale Dr



Second garden adjacent to Stockdale Dr



LL2 Grant Application



Submit completed application to:

Lauren Sampedro

lauren.sampedro@vlawmo.org

Applicant Information:

Organization Name:	City of Vadnais Heights
Project Contact:	Jim Hauth, Public Works Director
Address:	800 East County Road E
City/Township, State, Zip:	Vadnais Heights, Minnesota, 55127
Phone:	651 204 6050
Email:	jim.hauth@cityvadnaisheights.com

Project Summary:

ESTIMATED TOTAL PROJECT COST (\$)	37,404.50 \$33,404.50
AMOUNT REQUESTED	33,664.05 \$30,064.05
EXPECTED PROJECT COMPLETION (Month, Year)	October, 2024

PROJECT TYPE:

- Water Quality Treatment
- Stormwater Rate and Volume Control
- Groundwater Conservation
- Other

If other, please describe the proposed project: _____

Project Background:

Describe the project location and water resources that will benefit from the project.	A 1,200 sq ft raingarden and rock swale will be installed on the southwestern corner of Elmwood Park in Vadnais Heights, Minnesota.
What issues will be addressed with this project?	A concrete flume and turret will be installed on the south side of the Elmwood parking lot. The raingarden will also receive stormwater from a culvert under Elmwood Street to the west side of the park. The raingarden and swale will divert stormwater from neighboring private properties and reduce TSS and TP contributions to nearby water bodies.

Project Background: Continued

<p>Provide estimated water quality results, stormwater rate/volume reduction, or groundwater conservation benefits associated with the project.</p>	<p>The raingarden and swale will result in a 73% reduction in stormwater runoff volume (48,502 cu ft/ yr) and will remove 941.5 pounds of TSS (74%) and 3.6 pounds of TP (73%) per year from the drainage area.</p>
<p>Describe the public education and outreach efforts or signage planned for the project.</p>	<p>The raingarden will feature signage highlighting the purpose of the rain garden including rate reduction and water quality benefits.</p> <p>The rain garden will be featured in the Newsletter and on Social Media.</p> <p>An educational program on the benefits of pollinators may take place at the site soon after construction.</p>
<p>List or describe any partnerships or other forms of support for the project, including external funding sources.</p>	<p>N/A</p>

Project Specifications:

<p>TOTAL PROPERTY AREA (Acres)</p>	<p>0.81</p>	<p>Total PROJECT SIZE (Sq Ft)</p>	<p>4500</p>
<p>IMPERVIOUS AREA DRAINING TO PROJECT (Sq Ft):</p>	<p>16,524</p>	<p>PERVIOUS AREA DRAINING TO PROJECT (Sq Ft):</p>	<p>25,561</p>

Required Attachments:

- ⇒ Detailed final plan set of the proposed project that includes the estimated, quantitative outcomes of the project.
- ⇒ At least 2 bids for construction of proposed project.
- ⇒ Detailed project budget estimate with itemized materials and costs that equal the total project cost.

Site Plan and Outcomes

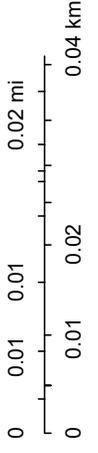
LL2 2024-02 Elmwood Park Raingarden Application



Elmwood St

4/2/24, 10:22:41 AM

-  VLAWMO Boundary 2020
-  Project Location
-  Flow Arrows



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, County of Ramsey, Esri, HERE, Garmin, GeoTechnologies, Inc., County of Ramsey, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA | ArcGIS Web AppBuilder



RAMSEY COUNTY SWCD
 1425 PAUL KIRKWOOD DR
 ARDEN HILLS, MN 55112
 651-266-7280
 www.ramseycounty.us

PROJECT: ELMWOOD PARK
 LOCATION:
 3892 ELMWOOD ST
 VADNAIS HEIGHTS, MN
 WATERSHED DISTRICT:



DESIGNER: BRIAN T. OLSEN
 DATE: 1/25/2024
 REVISION: 1/17/2024
 REVISION:
 REVISION:
 CHECKED BY: JL
 TAA:

NOTES:
 -ELEVATIONS ARE APPROXIMATE
 -UTILITY LOCATIONS ARE APPROXIMATE,
 CONFIRM LOCATIONS PRIOR TO WORK
 -CONTRACTOR ACQUIRE NECESSARY
 PERMITS PRIOR TO START
 -EXCAVATE WITH TRACKED EQUIPMENT
 ONLY
 -RIP UNDERLYING SOILS 6-12"
 TO REMOVE COMPACTION
 -SIZE AND SHAPE MAY VARY
 -MAINTAIN SQUARE FEET
 -ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1"=30'-0"

SITE PLAN

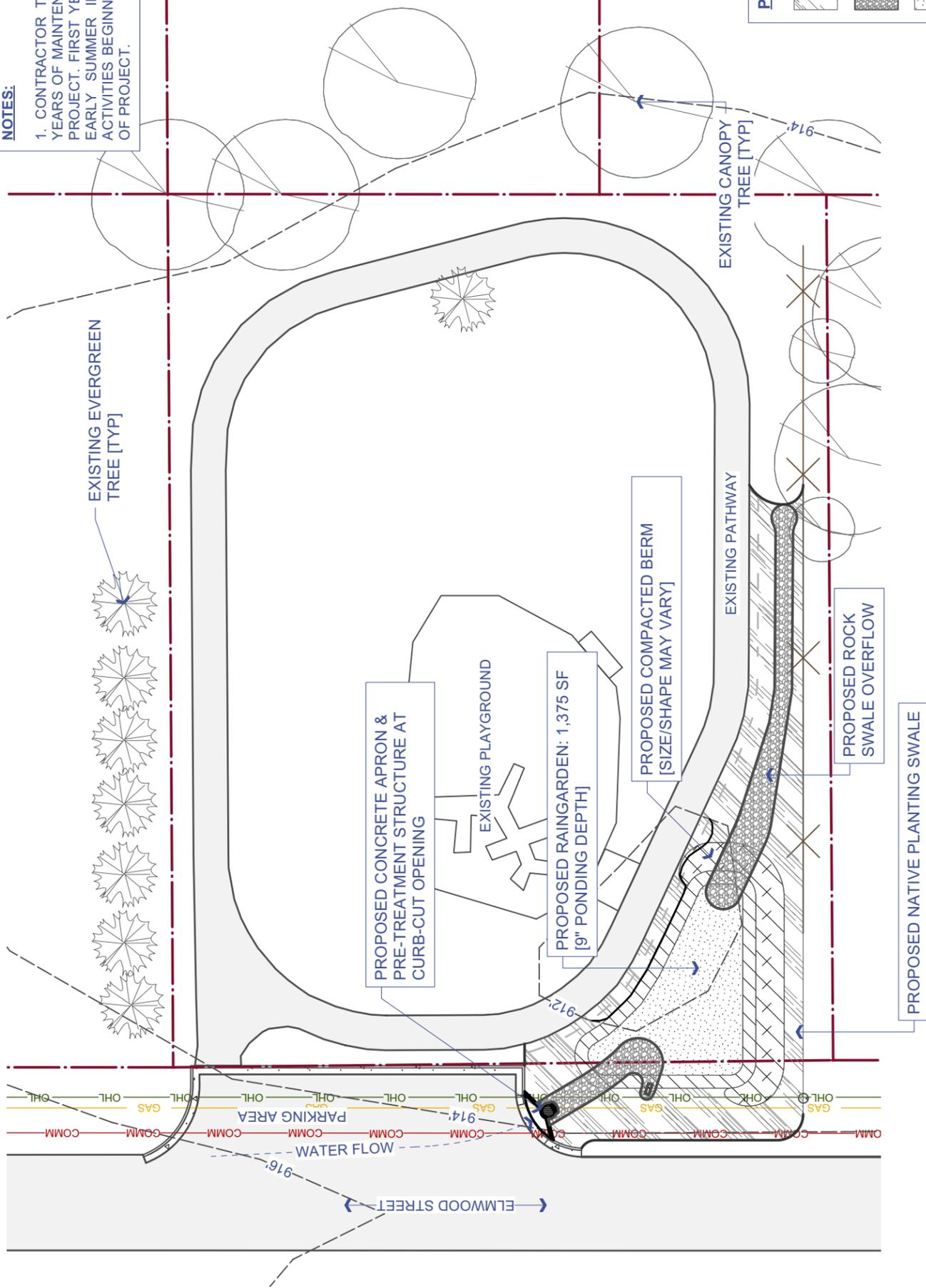
L100

PROJECT INFORMATION: ELMWOOD PARK RAINGARDEN

INSTALL APRON & PRE-TREATMENT STRUCTURE, RAINGARDEN, & ROCK/PLANTED OVERFLOW SWALE. CURB-CUT OPENING PREVIOUSLY INSTALLED BY THE CITY.

NOTES:

1. CONTRACTOR TO INCLUDE WITH BID QUOTES FOR THREE YEARS OF MAINTENANCE ON INSTALLED RAINGARDEN & SWALE PROJECT. FIRST YEAR OF MAINTENANCE ASSUMES SPRING OR EARLY SUMMER INSTALLATION IN 2024 WITH MAINTENANCE ACTIVITIES BEGINNING IMMEDIATELY FOLLOWING INSTALLATION OF PROJECT.

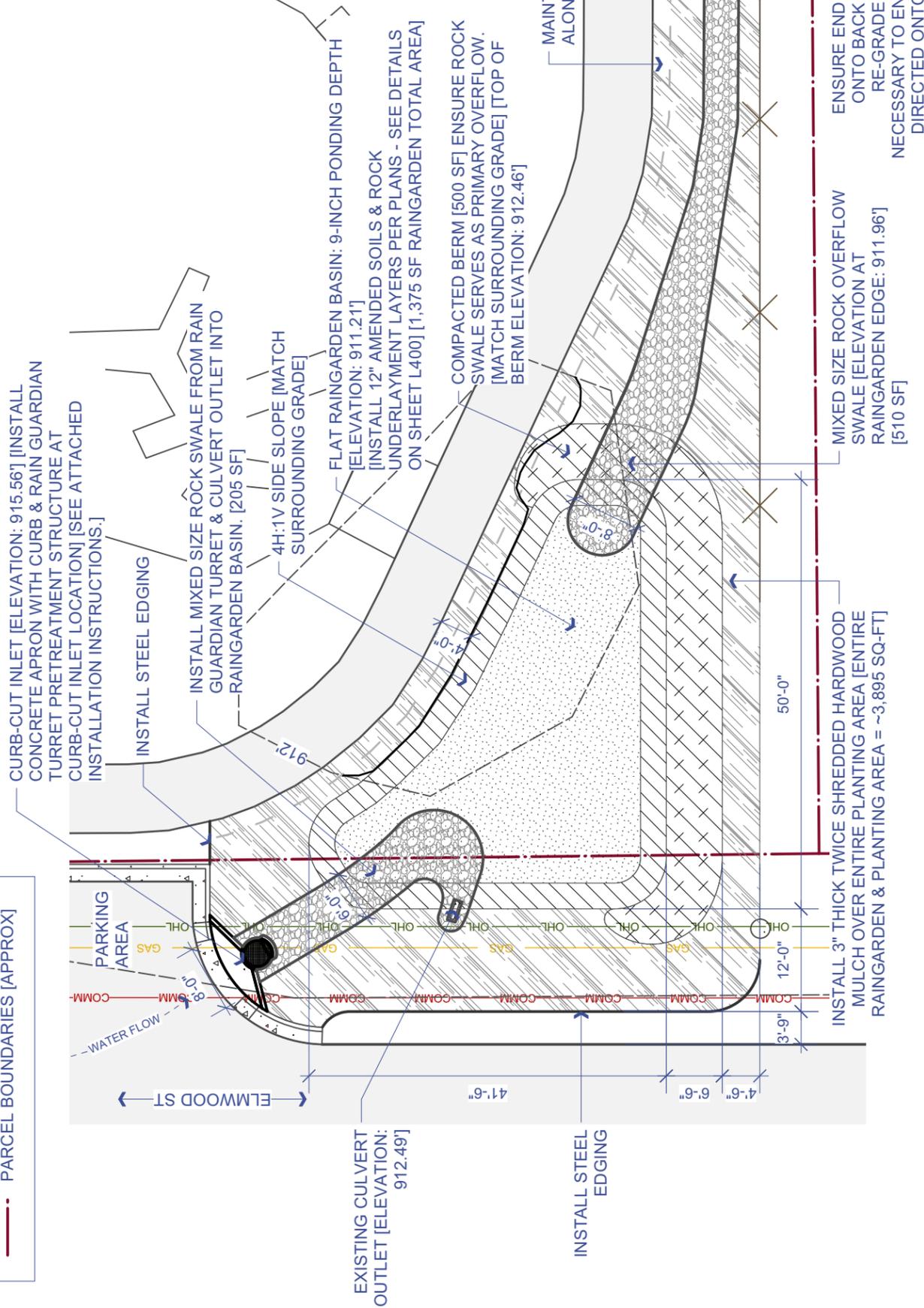


PLAN LEGEND:

- NATIVE PLANTING
- INLET SWALE & RAINGARDEN OVERFLOW ROCK
- FLAT RAINGARDEN BASIN
- RAINGARDEN 4H:1V SIDE SLOPES
- RAINGARDEN COMPACTED BERM
- PARCEL BOUNDARIES [APPROX]

PLAN LEGEND:

-  NATIVE PLANTING
-  INLET SWALE & RAIN GARDEN OVERFLOW ROCK
-  FLAT RAIN GARDEN BASIN
-  RAIN GARDEN 4H:1V SIDE SLOPES
-  RAIN GARDEN COMPACTED BERM
-  PARCEL BOUNDARIES [APPROX]



NOTES:

1. FINAL LAYOUT AND SIZING OF PROJECT MAY VARY. CONTRACTOR TO MEET WITH RCSWCD STAFF ONSITE PRIOR TO INSTALLATION TO VERIFY PROJECT EXTENT.
2. REMOVE EXISTING VEGETATION WITHIN PROJECT AREA. TURF GRASS TO BE STRIPPED OR KILLED WITH HERBICIDE APPLICATION [1-2 APPLICATIONS MINIMUM].
3. PLANTING AREAS TO BE PREPPED FOR PLANTING BY LOOSENING SITE SOILS TO PROMOTE INFILTRATION.
4. INSTALL RAIN GARDEN PER PLANS WITH FLAT BASIN, 4H:1V SIDE SLOPES, COMPACTED BERM, & OVERFLOW. SEE PLAN FOR ELEVATIONS. USE TRACKED EQUIPMENT ONLY TO LIMIT COMPACTION.
5. INSTALL RAIN GUARDIAN TURRET PRE-TREATMENT STRUCTURE. INSTALL CONCRETE APRON WITH CURBING TO CONNECT EXISTING WIDE CURB-CUT TO STRUCTURE. [~20 SF CONCRETE APRON & ~10 LF CURB]
6. INSTALL MIXED SIZE ROCK (4-12" WASHED RIVER ROCK/FIELDSTONE BOULDERS OR APPROVED EQUIVALENT ROCK MIX) DRY CREEK SWALE FROM PRE-TREATMENT STRUCTURE & EXISTING CULVERT OUTLET TO RAIN GARDEN BASIN & ALONG CENTERLINE OF OVERFLOW SWALE. INSTALL NON-WOVEN GEOTEXTILE FABRIC BETWEEN ROCK AND SOIL.
7. INSTALL COMPACTED BERM SURROUNDING PERIMETER OF RAIN GARDEN AS NECESSARY TO ENSURE OVERFLOW THROUGH ROCK SWALE. [500 SF] EXACT SHAPE & SIZE OF REQUIRED BERM MAY VARY. SITE VERIFY WITH RCSWCD STAFF.
8. INSTALL 3"-THICK TWICE SHREDDED HARDWOOD MULCH OVER ALL PLANTING AREAS INCLUDING RAIN GARDEN AND BERM.
9. INSTALL NATURAL NETTING EROSION CONTROL BLANKET OVER COMPACTED BERM AREA BENEATH MULCH. INSTALL PER MANUFACTURERS SPECIFICATION WITH BIODEGRADABLE STAKES.
10. INSTALL STEEL EDGING OR APPROVED EQUIVALENT BETWEEN PLANTED/MULCHED AREAS AND PARK PROPERTY TURF GRASS AREAS. [75 LF TOTAL]
11. PLANT AREA WITH NATIVE SPECIES PER PLANTING PLAN ON SHEET L300 & L301. INSTALL IN GROUPS OF LIKE SPECIES FOR EASY IDENTIFICATION AND MAINTENANCE.
12. ANY AREAS OUTSIDE OF PROJECT AREA DISTURBED DURING INSTALLATION TO BE RESTORED AND SEEDED WITH TURF GRASS. CONTRACTOR TO TAKE CARE TO NOT DISTURB RECENTLY COMPLETED ROAD AND PARKING AREA ASPHALT.
13. CONTRACTOR TO PROVIDE ADEQUATE SAFETY SIGNAGE DURING CONSTRUCTION ALONG WALKING PATH AND IN PARKING LOT OF ELMWOOD PARK.
14. CONTRACTOR TO ENSURE THAT ANY OVERFLOW FROM END OF SWALE IS DIRECTED ONTO THE PARK PARCEL. RE-GRADE AREA SURROUNDING END OF PLANTED AND ROCK SWALE AS NECESSARY TO ENSURE WATER IS NOT DIRECTED ONTO NEIGHBOR PROPERTY.



RAMSEY COUNTY SWCD
 1425 PAUL KIRKWOOD DR
 ARDEN HILLS, MN 55112
 651-266-7280
 www.ramseycounty.us

PROJECT: ELMWOOD PARK
LOCATION:
 3892 ELMWOOD ST
 VADNAIS HEIGHTS, MN
WATERSHED DISTRICT:



DESIGNER: BRIAN T. OLSEN
DATE: 1/25/2024
REVISION: 1/17/2024
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

- NOTES:**
- ELEVATIONS ARE APPROXIMATE
 - UTILITY LOCATIONS ARE APPROXIMATE, CONFIRM LOCATIONS PRIOR TO WORK
 - CONTRACTOR ACQUIRE NECESSARY PERMITS PRIOR TO START
 - EXCAVATE WITH TRACKED EQUIPMENT ONLY
 - RIP UNDERLYING SOILS 6-12" TO REMOVE COMPACTION
 - SIZE AND SHAPE MAY VARY
 - MAINTAIN SQUARE FEET
 - ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1/16"=1'-0"


LAYOUT PLAN

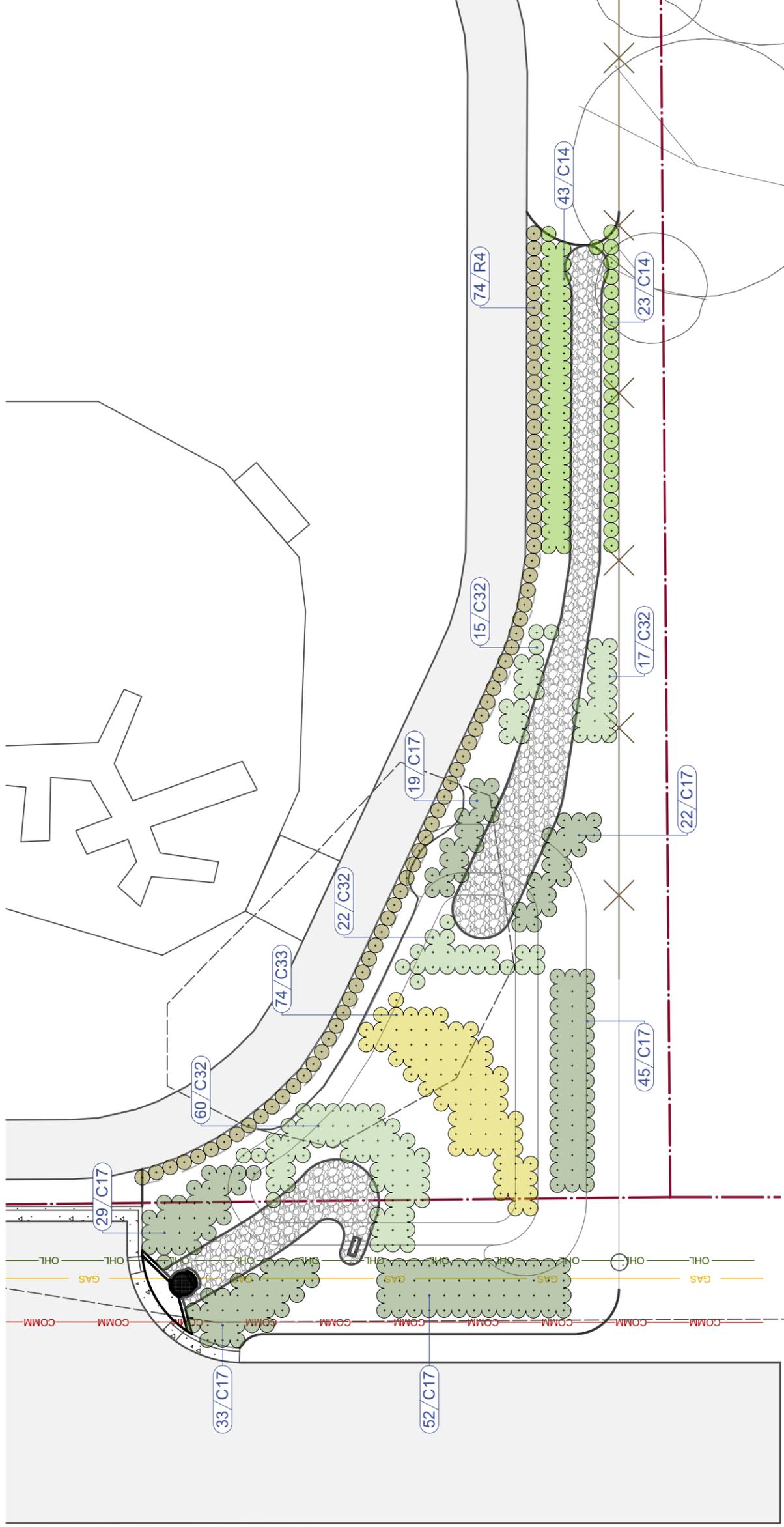
L200

PLANTING NOTES:

1. EXACT PLANT LAYOUT/SIZING/SPECIES MAY VARY WITH RCSWCD STAFF APPROVAL BASED ON PLANT AVAILABILITY AND FINAL SITE CONDITIONS.
2. SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING INFORMATION.
3. VERIFY ANY REQUIRED PLANTING PLAN ALTERATIONS OR SUBSTITUTIONS WITH RCSWCD STAFF PRIOR TO PURCHASE & INSTALLATION.
4. SEE SHEET L300 FOR GROUND COVER SPECIES PLAN & SEE SHEET L301 FOR SEASON INTEREST SPECIES PLAN.

PLANT SCHEDULE - GROUND COVER LAYER

ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
C14	66	Carex sprengelii	Sprengel's Sedge	2" Plug	2
C17	200	Carex brevoir	Plains Oval Sedge	2" Plug	2
C32	114	Carex vulpinoidea	Fox Sedge	2" Plug	2
C33	74	Carex pellita	Woolly Sedge	2" Plug	2
R4	74	Juncus tenuis	Path Rush	2" Plug	2
	528	TOTAL PLANTS			



RAMSEY COUNTY SWCD
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 651-266-7280
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PROJECT: ELMWOOD PARK
LOCATION:
 3892 ELMWOOD ST
 VADNAIS HEIGHTS, MN
WATERSHED DISTRICT:



DESIGNER: BRIAN T. OLSEN
DATE: 1/25/2024
REVISION: 1/17/2024
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

NOTES:
 -CALL GOPHER ONE TO MARK UTILITIES BEFORE DIGGING
 -SEE PLANT SCHEDULE FOR SPACING [PLANT LOCATION MAY VARY]
 -PLANT SUBSTITUTIONS MUST BE APPROVED BY SWCD STAFF
 -ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1/16"=1'-0"

PLANTING PLAN:
GROUND COVER:

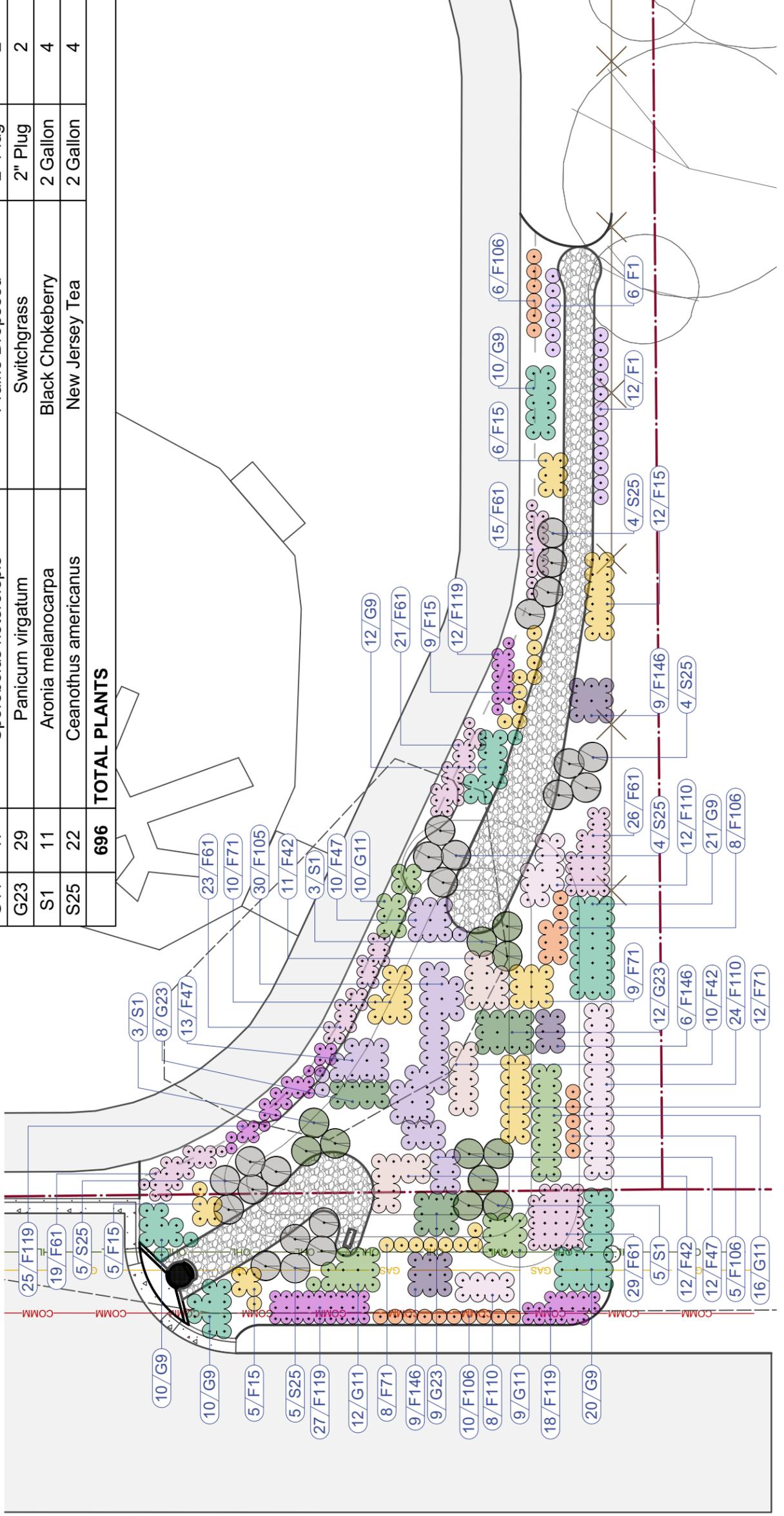
L300

PLANTING NOTES:

1. EXACT PLANT LAYOUT/SIZING/SPECIES MAY VARY WITH R3SWCD STAFF APPROVAL BASED ON PLANT AVAILABILITY AND FINAL SITE CONDITIONS.
2. SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING INFORMATION.
3. VERIFY ANY REQUIRED PLANTING PLAN ALTERATIONS OR SUBSTITUTIONS WITH R3SWCD STAFF PRIOR TO PURCHASE & INSTALLATION.
4. SEE SHEET L300 FOR GROUNDCOVER SPECIES PLAN & SEE SHEET L301 FOR SEASONAL INTEREST SPECIES PLAN.
5. TWO DECIDUOUS TREES TO BE PLANTED ALONG SWALE AREA. VADNAIS HEIGHTS STAFF WILL CONFIRM EXACT SPECIES & PLANTING LOCATION WITH CONTRACTOR DURING INSTALLATION.

PLANT SCHEDULE - SEASONAL INTEREST LAYER

ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
F1	18	Agastache foeniculum	Anise Hyssop	2" Plug	2
F15	37	Rudbeckia subtomentosa	Sweet Black-Eyed Susan	2" Plug	2
F42	33	Eupatorium purpureum	Joe-Pye Weed	2" Plug	2
F47	35	Liatris spicata	Marsh Blazing Star	2" Plug	2
F61	133	Geum triflorum	Prairie Smoke	2" Plug	1.5
F71	39	Ratibida pinnata	Yellow Coneflower	2" Plug	2
F105	30	Symphyotrichum puniceum	Swamp Aster	2" Plug	2
F106	29	Asclepias tuberosa	Butterfly Weed	2" Plug	2
F110	44	Echinacea angustifolia	Narrow-leaved Coneflower	2" Plug	2
F119	82	Phlox pilosa	Prairie Phlox	2" Plug	1.5
F146	24	Verbena stricta	Hoary Vervain	2" Plug	2
G9	83	Schizachyrium scoparium	Little Bluestem	2" Plug	2
G11	47	Sporobolus heterolepis	Prairie Dropseed	2" Plug	2
G23	29	Panicum virgatum	Switchgrass	2" Plug	2
S1	11	Aronia melanocarpa	Black Chokeberry	2 Gallon	4
S25	22	Ceanothus americanus	New Jersey Tea	2 Gallon	4
696		TOTAL PLANTS			



NOTES:
 -CALL GOPHER ONE TO MARK UTILITIES BEFORE DIGGING
 -SEE PLANT SCHEDULE FOR SPACING [PLANT LOCATION MAY VARY]
 -PLANT SUBSTITUTIONS MUST BE APPROVED BY SWCD STAFF
 -ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1/16"=1'-0"

PLANTING PLAN:
 SEASONAL INTEREST

L301



RAMSEY COUNTY SWCD
 1425 PAUL KIRKWOOD DR
 ARDEN HILLS, MN 55112
 651-266-7280
 www.ramseycounty.us

PROJECT: ELMWOOD PARK

LOCATION:

3892 ELMWOOD ST
 VADNAIS HEIGHTS, MN

WATERSHED DISTRICT:



DESIGNER: BRIAN T. OLSEN

DATE: 1/25/2024

REVISION: 1/17/2024

REVISION:

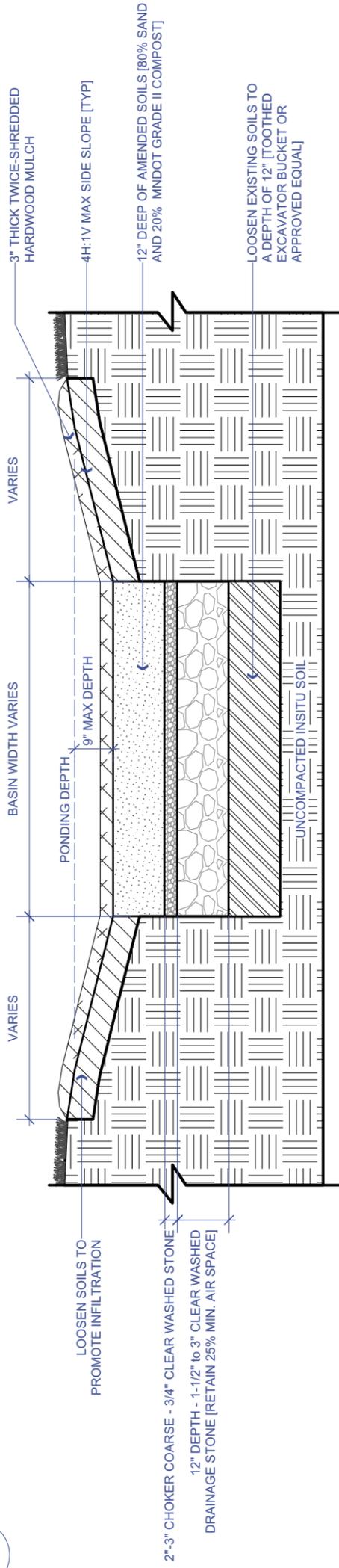
REVISION:

CHECKED BY: JL

TAA:

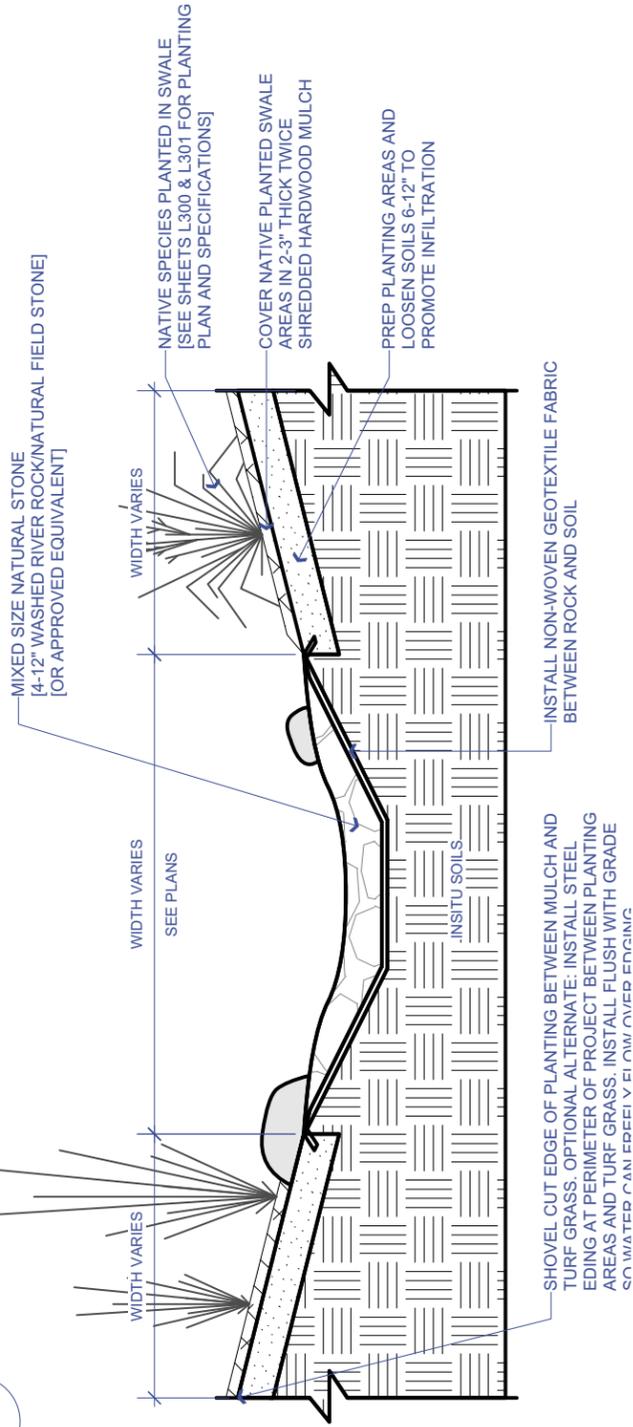
1 RAINGARDEN SECTION [TYP]

Scale: 3/8" = 1'-0"



2 OVERFLOW SWALE & DRY CREEK BED SECTION [TYP]

Scale: 3/8" = 1'-0"



NOTES:

1. PROPOSED ROCK SIZING MIXES FOR DRY CREEK BED ARE APPROXIMATE. CONTRACTOR TO SUBMIT FINAL ROCK MIXES CHOSEN FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION.



RAMSEY COUNTY SWCD
1425 PAUL KIRKWOOD DR
ARDEN HILLS, MN 55112
651-266-7280
www.ramseycounty.us

PROJECT: ELMWOOD PARK
LOCATION: 3892 ELMWOOD ST
VADNAIS HEIGHTS, MN
WATERSHED DISTRICT:



DESIGNER: BRIAN T. OLSEN
DATE: 1/25/2024
REVISION: 1/17/2024
REVISION:
REVISION:
CHECKED BY:
TAA:

NOTES:
-CONTACT GOPHER STATE ONE CALL TO CONFIRM UTILITY LOCATIONS PRIOR TO WORK
-EXCAVATE WITH TRACKED EQUIPMENT ONLY
-MAINTAIN SQUARE FEET AND DEPTH SUBSTITUTIONS TO CONSTRUCTION DESIGN AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION
-ORIGINAL SHEET SIZE: 11"x17"

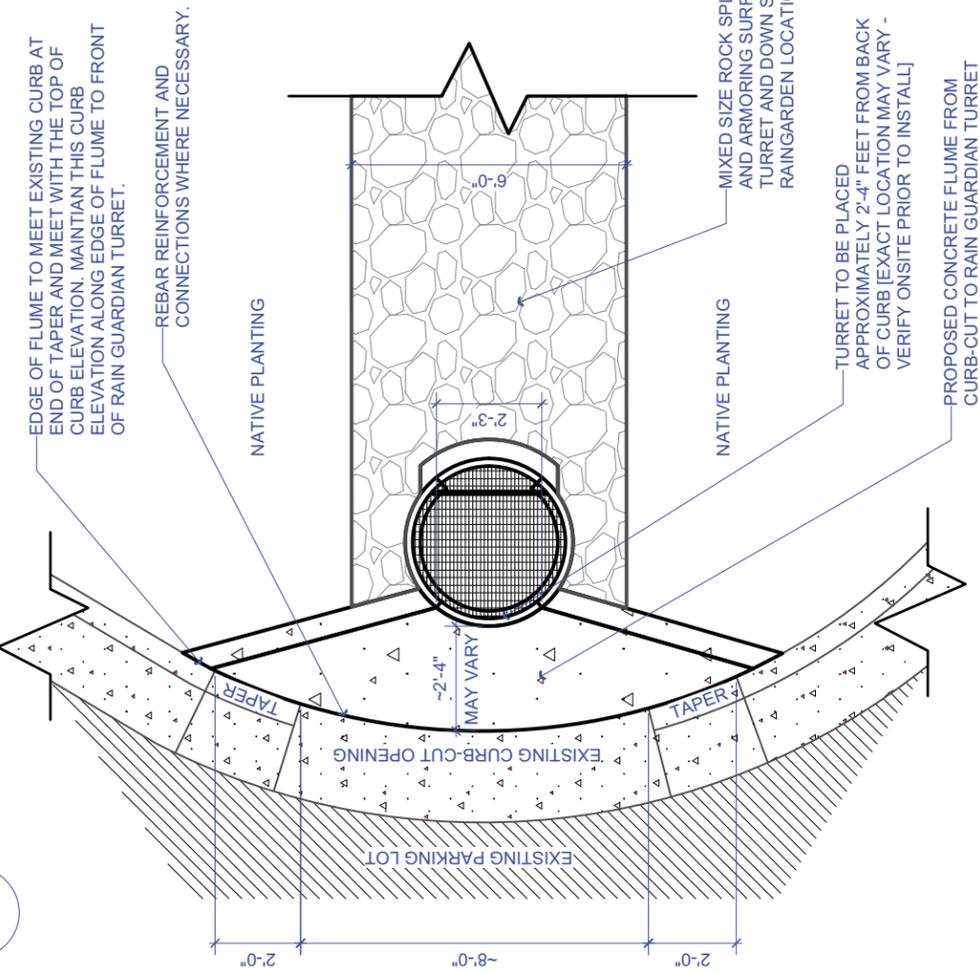
SCALE:

SITE DETAILS

L400

1 CONCRETE FLUME TO RAIN GUARDIAN PLAN VIEW

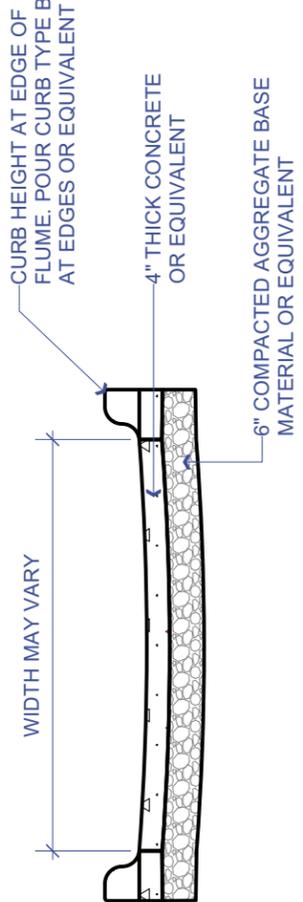
Scale: 1/4" = 1'-0"



2

CONCRETE FLUME TO RAIN GUARDIAN CROSS-SECTION

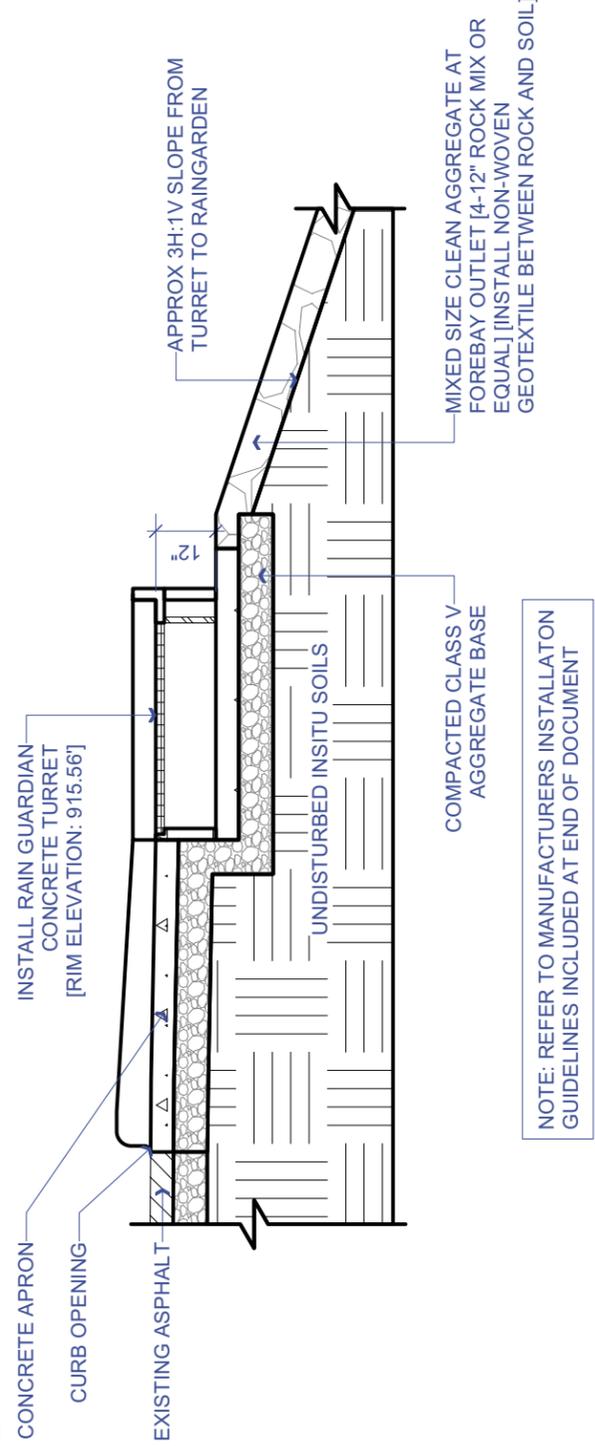
Scale: 3/8" = 1'-0"



- NOTES:**
1. EXACT LOCATION FROM BACK OF CURB FOR RAIN GUARDIAN TURRET MAY VARY.
 2. EXACT SIZE/SHAPE/DESIGN OF CONCRETE FLUME MAY VARY.
 3. CONTRACTOR TO VERIFY FRAMING OF FLUME WITH RAMSEY SWCD STAFF ON SITE PRIOR TO POURING CONCRETE.

3 CONCRETE FLUME TO RAIN GUARDIAN SECTION VIEW

Scale: 3/8" = 1'-0"



RAMSEY COUNTY
 RAMSEY COUNTY SWCD
 1425 PAUL KIRKWOOD DR
 ARDEN HILLS, MN 55112
 651-266-7280
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PROJECT: ELMWOOD PARK
 LOCATION:
 3892 ELMWOOD ST
 VADNAIS HEIGHTS, MN
 WATERSHED DISTRICT:
 VLAWMO
Vadnais Lake Area Water Management Organization

DESIGNER: BRIAN T. OLSEN
 DATE: 1/25/2024
 REVISION: 1/17/2024
 REVISION:
 REVISION:
 CHECKED BY: JL
 TAA:

- NOTES:**
- CONTACT GOPHER STATE ONE CALL TO CONFIRM UTILITY LOCATIONS PRIOR TO WORK
 - EXCAVATE WITH TRACKED EQUIPMENT ONLY
 - MAINTAIN SQUARE FEET AND DEPTH SUBSTITUTIONS TO CONSTRUCTION DESIGN AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION
 - ORIGINAL SHEET SIZE: 11"x17"

SCALE:

SITE DETAILS

L500

Pollutant Reductions: Elmwood Park Raingarden

	Before	After	Reduction	Red. %
Volume (cu-ft/yr)	66,448	17,946	48,502	73%
TSS (lbs/yr)	1,275.00	333.50	941.50	74%
TP (lbs/yr)	4.858	1.295	3.563	73%

Watershed Data		Elmwood Park Raingarden	
Target Rainfall	0.75	in	
Soil Type:	B	HSG:	
Soil IR	0.3	in/hr	
Surface	Sq-ft	Acre	CN
Road	8,640	0.198	98
Parking Lot	1,000	0.023	98
Roof	1,856	0.043	98
Sidewalk	550	0.013	98
Driveway	4,478	0.103	98
Turf Grass/Lawn	25,561	0.587	79
Total	42,085	0.966	
% Imp	39%		

Cost Estimate

ALL ITEMS AS SPECIFIED BELOW ARE FOR REFERENCE USE ONLY

Elmwood Park Raingarden
 3892 Elmwood Street
 Vadnais Heights, MN 55127
 BMP Type: Curb Cut Raingarden w/ Pre-Treatment & Overflow Swale
 Number of BMPs: 1 of 1

County: Ramsey
 Date: 9-Jan-24

INSTALLED MATERIALS & LABOR - RAINGARDEN & OVERFLOW SWALE

<u>Item</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Amount</u>
Mobilization	1.00	LS	\$ 1,750.00	\$ 1,750.00
Deliveries	1.00	LS	\$ 700.00	\$ 700.00
Excavation, Grading, Ripping Soil (Tracked Equipment only in project area)	145.00	CY	\$ 42.00	\$ 6,090.00
General & Soil Disposal (use excavated soils onsite for berms before soil haul-away)	90.00	CY	\$ 40.00	\$ 3,600.00
Concrete Flume / Curbing Install & Base Material (to connect curb opening to turret)	1.00	LS	\$ 2,600.00	\$ 2,600.00
See plans for flume specs: concrete install, compacted Class V base or equal, rebar as needed, etc.				
Rain Guardian Turret Install & Base Material	1.00	LS	\$ 2,300.00	\$ 2,300.00
Rain Guardian Turret, Concrete Work, Class V Aggregate (or equal) base rock, fabric, etc.				
Aggregate: 3/4" Clear Washed Stone (or equal) [2-3" depth choker course]	11.25	TON	\$ 145.00	\$ 1,631.25
Aggregate: 1.5"-3" Clear Washed Drainage Stone (or equal)	45.25	TON	\$ 155.00	\$ 7,013.75
[rock storage layer, retain 25% Air Space]				
Soil Amendment (80% Washed No.2 Sand; 20% MnDOT Grade II Compost)	34.75	CY	\$ 120.00	\$ 4,170.00
Mixed Size Washed Natural Rock [4-12" sizing or equal] (inlet & overflow swales)	25.75	TON	\$ 145.00	\$ 3,733.75
Non-Woven Geotextile Fabric - Geotex 401/Mirfani 140N or equivalent	715.00	SF	\$ 2.25	\$ 1,608.75
Erosion Control Blanket (C125 / S75BN or equal biodegradable blanket) [for berm]	55.50	SY	\$ 6.85	\$ 380.18
Twice-Shredded Hardwood Mulch (3" Thickness)	36.00	CY	\$ 115.00	\$ 4,140.00
Native Perennial: 2" Plug; or equivalent	633.00	EA	\$ 6.00	\$ 3,798.00
Native Perennial: 4" Pot; or equivalent	721.00	EA	\$ 12.00	\$ 8,652.00
Native Shrubl: #2 Container; or equivalent	22.00	EA	\$ 65.00	\$ 1,430.00
Native Shrubl: #5 Container; or equivalent	11.00	EA	\$ 105.00	\$ 1,155.00
Site Restoration/Turf Repair (truf repair as needed for site disturbance outside project area)	1.00	LS	\$ 800.00	\$ 800.00
Subtotal			\$	55,552.68

ADDITIONAL BID ITEMS AS NECESSARY

<u>OPTIONAL ITEM:</u> Steel Edging (1/8"x6"x8')	222.00	LF	\$ 14.00	\$ 3,108.00
Subtotal				\$ 3,108.00

PROJECT TOTAL

Project Estimate	\$ 58,660.68
:-10%	\$ 52,794.61
:+10%	\$ 64,526.74
Estimated WD/WMO Grant Award:	\$0.00
Estimated RCPR Grant Award:	\$0.00
Potential Grant Award Total:	\$0.00
Estimated Landowner Cost:	\$58,660.68

Soil & Water Conservation Division
 2015 Van Dyke Street
 Maplewood, MN 55109
www.ramseycounty.us

Bids

Elmwood Park Raingarden Bids Summary

<u>Contractor</u>	<u>Total Bid</u>	<u>Raingarden Install</u>	<u>1yr Maint</u>	<u>2yr Maint</u>	<u>3yr Maint</u>	<u>Total Maint</u>
MNL	\$ 57,906.00	\$ 48,406.00	\$ 3,500.00	\$ 3,200.00	\$ 2,800.00	\$ 9,500.00
Shoreline Landscaping	\$ 54,776.34	\$ 41,233.34	\$ 4,853.00	\$ 4,560.00	\$ 4,130.00	\$ 13,543.00
Sandstrom Land Management	\$ 37,404.50	\$ 33,404.50	\$ 2,000.00	\$ 1,000.00	\$ 1,000.00	\$ 4,000.00
Davey Resource Group	\$ 88,461.75	\$ 72,711.75	\$ 5,000.00	\$ 5,250.00	\$ 5,500.00	\$ 15,750.00

V. D. Elmwood Park Raingarden

LL2 2024-02 Grant Application

Lauren Sampedro
TEC Meeting
4/10/2024

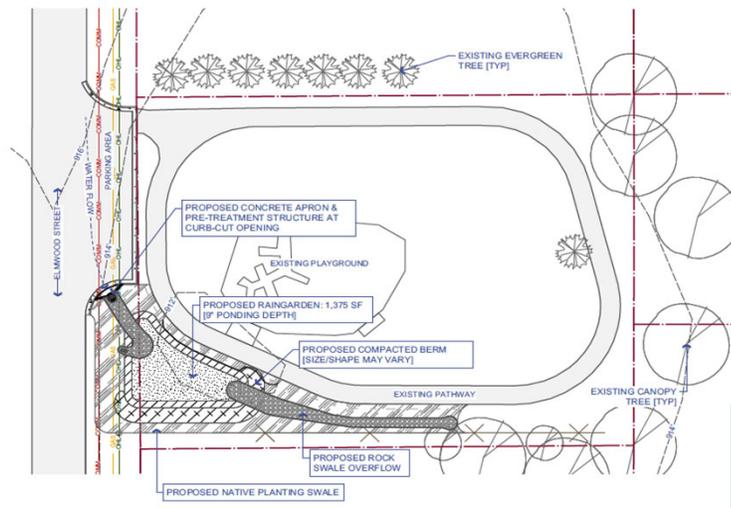


Landscape Level 2-Elmwood





PROJECT INFORMATION: ELMWOOD PARK RAINGARDEN
INSTALL APRON & PRE-TREATMENT STRUCTURE, RAINGARDEN, & ROCK-PLANTED OVERFLOW SWALE. CURB-CUT OPENING PREVIOUSLY INSTALLED BY THE CITY.



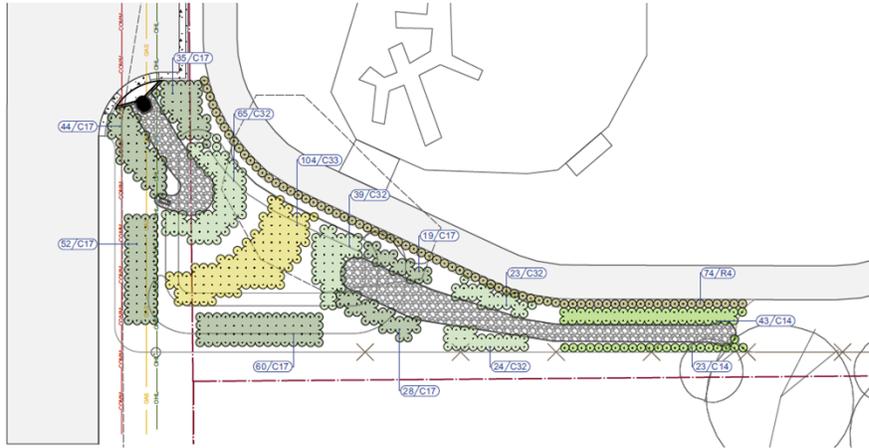
PLAN LEGEND:

	NATIVE PLANTING
	INLET SWALE & RAINGARDEN OVERFLOW ROCK
	FLAT RAINGARDEN BASIN
	RAINGARDEN 4H:1V SIDE SLOPES
	RAINGARDEN COMPACTED BERM
	PARCEL BOUNDARIES [APPROX]



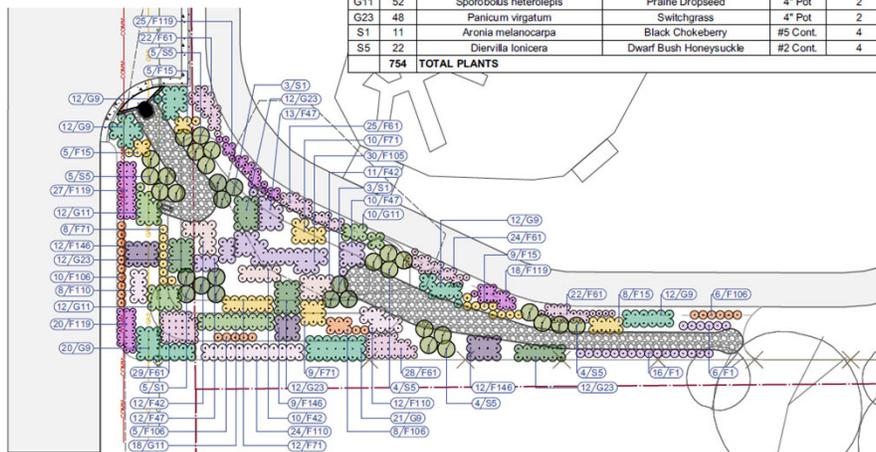
PLANTING NOTES:
 1. EXACT PLANT LAYOUTS/SIZES/SPECIES MAY VARY WITH RSCWCD STAFF APPROVAL BASED ON PLANT AVAILABILITY AND FINAL SITE CONDITIONS.
 2. SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING INFORMATION.
 3. VERIFY ANY REQUIRED PLANTING PLAN ALTERATIONS OR SUBSTITUTIONS WITH RSCWCD STAFF PRIOR TO PURCHASE & INSTALLATION.
 4. SEE SHEET L300 FOR GROUND COVER SPECIES PLAN & SEE SHEET L301 FOR SEASON INTEREST SPECIES PLAN.

PLANT SCHEDULE - GROUND COVER LAYER					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
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C33	104	Carex pellita	Woolly Sedge	2" Plug	2
R4	74	Juncus tenuis	Path Rush	2" Plug	2
633 TOTAL PLANTS					



PLANTING NOTES:
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 4. SEE SHEET L300 FOR GROUND COVER SPECIES PLAN & SEE SHEET L301 FOR SEASON INTEREST SPECIES PLAN.

PLANT SCHEDULE - SEASONAL INTEREST LAYER					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
F1	22	Agastache foeniculum	Anise Hyssop	4" Pot	2
F15	27	Rudbeckia subtomentosa	Sweet Black-Eyed Susan	4" Pot	2
F42	33	Eupatorium purpureum	Joe-Pye Weed	4" Pot	2
F47	35	Liatris spicata	Marsh Blazing Star	4" Pot	2
F61	150	Geum triflorum	Prairie Smoke	4" Pot	1.5
F71	39	Ratibida pinnata	Yellow Coneflower	4" Pot	2
F105	30	Symphyotrichum puncticeum	Swamp Aster	4" Pot	2
F106	29	Asclepias tuberosa	Butterfly Weed	4" Pot	2
F110	44	Echinacea angustifolia	Narrow-leaved Coneflower	4" Pot	2
F119	90	Phlox pilosa	Prairie Phlox	4" Pot	1.5
F146	33	Verbena stricta	Hoary Vervain	4" Pot	2
G9	89	Schizachyium scoparium	Little Bluestem	4" Pot	2
G11	52	Sporobolus heterolepis	Prairie Dropseed	4" Pot	2
G23	48	Panicum virgatum	Switchgrass	4" Pot	2
S1	11	Aronia melanocarpa	Black Chokeberry	#5 Cont.	4
S5	22	Dierilla lonicera	Dwarf Bush Honeysuckle	#2 Cont.	4
754 TOTAL PLANTS					



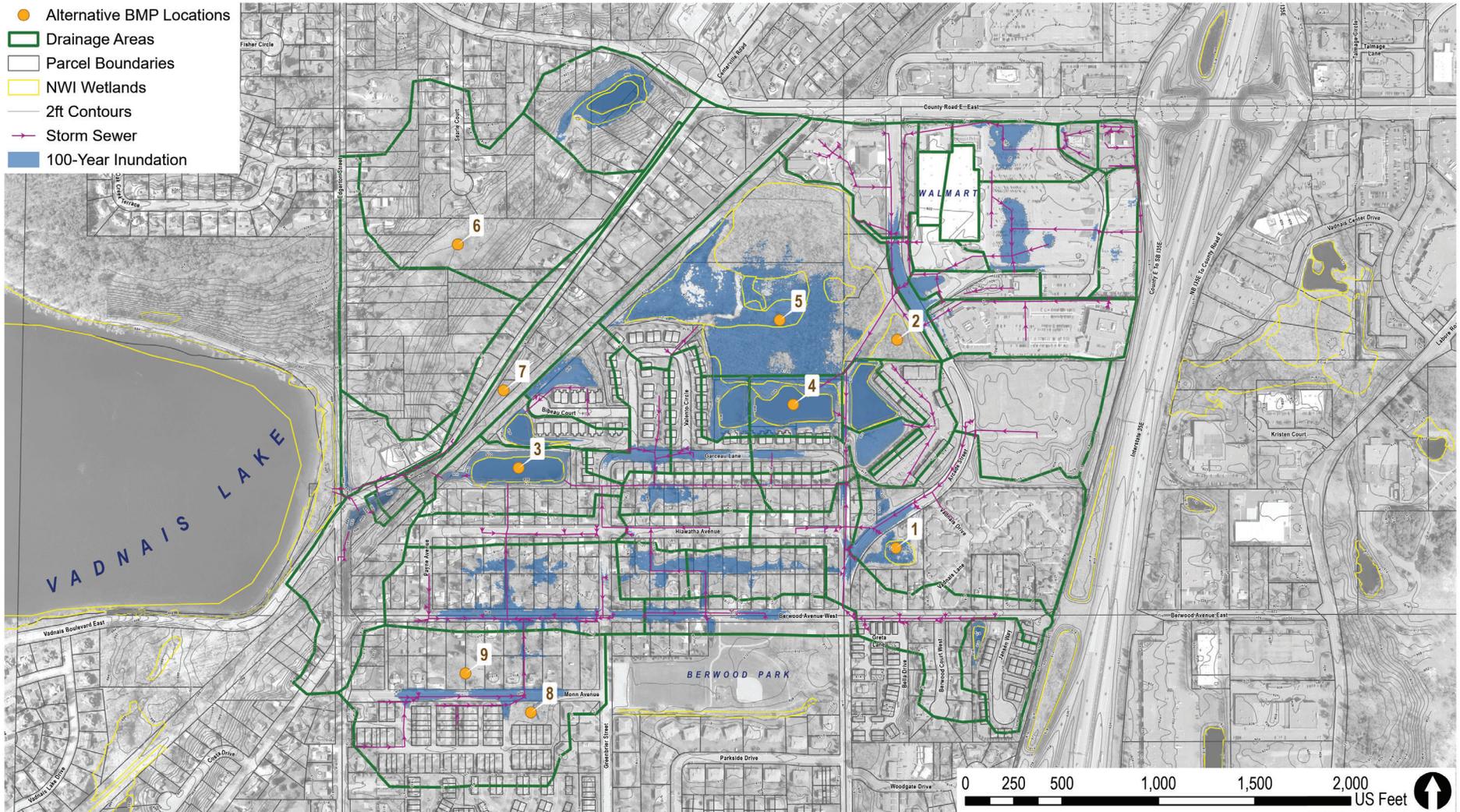
Raingarden Bids Received



- Davey Resource Group: \$72,711.75
- Minnesota Native Landscapes: \$57,906.00
- Shoreline Landscaping: \$54,776.34
- Sandstrom Land Management: \$37,404.50

*Costs for Raingarden Install Only

DRAFT



100-Year Inundation Map - Existing Conditions

East Vadnais Lake Subwatershed Resiliency Study

Vadnais Lake Area Watershed Management Organization

Figure 4.2

VLAWMO Watershed Management Plan: Technical Commission, Citizen Advisory and Partner Organization Survey Results

February 26, 2024

Question 1: What is your name?

10 responses

- Gloria Tessier
- Terry Huntrods
- Susan Miller
- Nick Ousky
- Jami Philip
- Michael Grochala
- Andy Nelson
- Celia Shapland
- Ed Shapland
- Dale Reed

Question 2: What VLAWMO group and/or Partner organization do you represent?

Response Themes

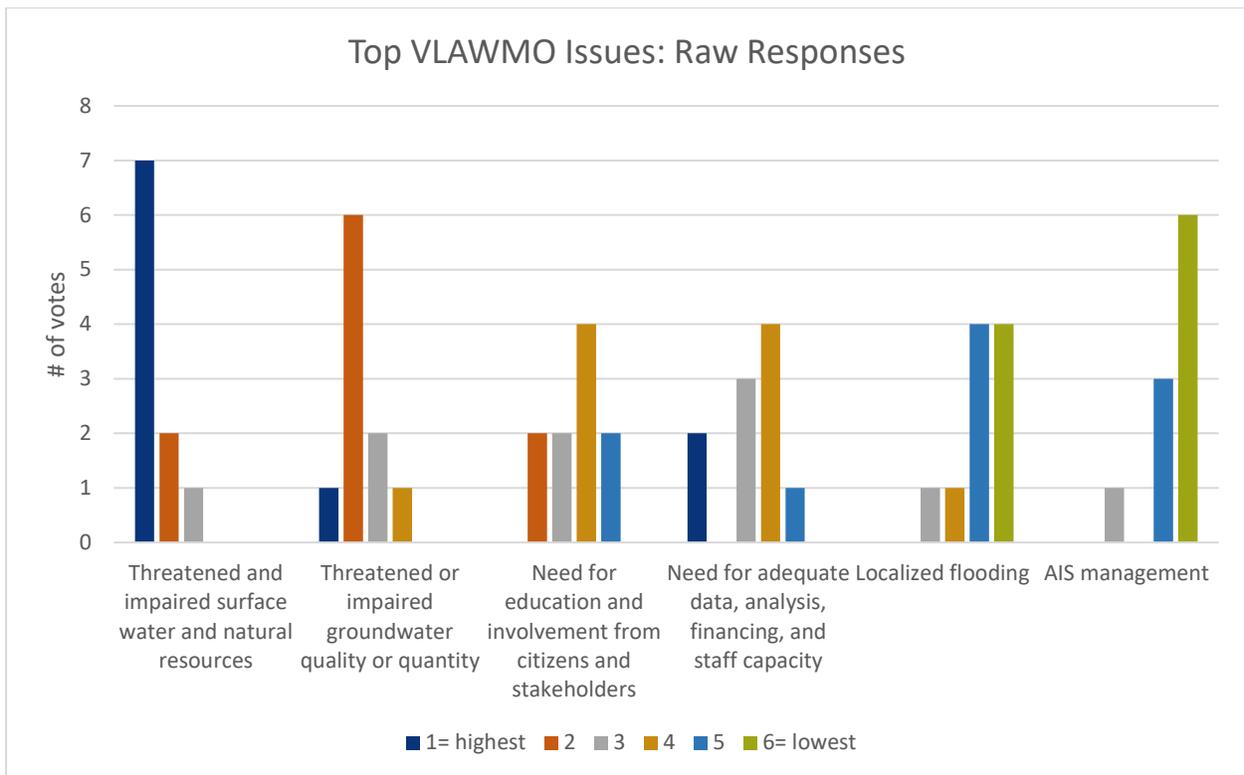
VLAWMO Tech Committee
Water Steward & Citizen Advisory
WAV
White Bear Township
City of Lino Lakes
City of North Oaks
NOHOA NEST

Full responses:

- Chair, Tech committee
- VLAWMO Tec Committee
- City of North Oaks TEC commissioner and NOHOA NEST chairperson
- VLAWMO Tec Panel
- TEC White Bear Township
- Technical Commission

- City of Lino Lakes, VLAMWO TEC
- Water Steward and Citizen Advisory, WAV
- WAV, water steward
- White Bear Township

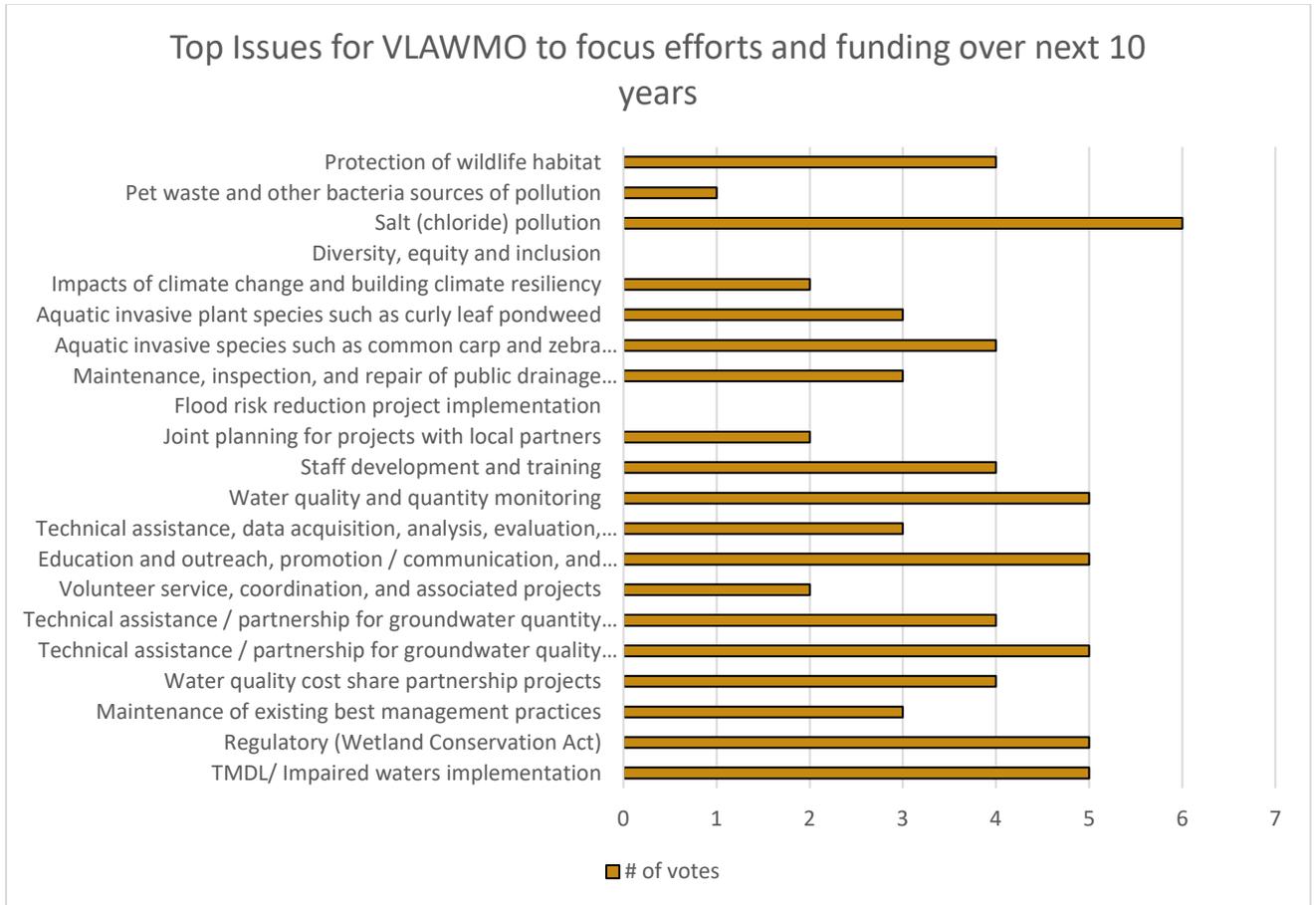
Question 3: Over the past decade, VLAWMO staff and partners have made progress and completed capital improvement projects previously identified. Building off these accomplishments, please use the arrows alongside each issue to sort the issues based on what you think should be the focus of VLAWMO efforts and funding over the next 10 years.



Top VLAWMO Issues: Score (Higher score = higher priority)



Question 4: Please select the top 7 issues that you think should be the focus of VLAWMO efforts and funding over the next 10 years.



Question 5: Are there issues or opportunities you think are important for VLAWMO to prioritize that have not been considered in this survey?

Response Themes

No

Transfer knowledge of what hard data means on the landscape to landowners.

Communicate data to local users.

Share benefits of alternatives.

Cross training.

Team work.

Full responses:

- No
- VLAWMO collects or has access to a lot of hard data on the way local land uses are affecting specific lakes, marshes and water courses. However, I'm not sure that many local residents, property managers or even city officials have a concrete, data driven understanding of how their land use practices affect specific water resources. Where VLAWMO has information on water impairments reasonably related to specific local uses, there should be a way to communicate that information directly to the local users. Most people want to do the right thing, but often don't realize the impact of their land use choices, or appreciate that there are acceptable alternatives.
- NO
- Recommend as much cross training and teamwork (site visits, bmp installs and maintenance, monitoring, etc.) as possible.

Question 6: Which watershed resources (lakes, rivers, streams, parks, trails) are the most important to you as you think about where VLAWMO should focus efforts to protect and/or restore?

Response Themes

Lakes & Streams

Water quality of lakes

Sucker Lake

West Vадnais Lake

East Vадnais Lake

Lambert Wetland

Regional Park

Creeks & Ditches

Smaller tributaries

Wetlands

Full responses:

- Protection of lakes and streams are important.
- Lake water quality
- Sucker, West Vadnais and East Vadnais Lakes, forming the core of a regional park, warrant special focus both because of the high number of local residents that enjoy recreating in this area, but also because of the environmental degradations that accompany high usage.
- Sucker Lake, East Vadnais Lake, and Lambert Wetland
- lakes and streams
- Streams, creeks, ditches, other conveyances. Lakes get a lot of press, the smaller tributaries might reach a different group of people and bring the protections and restorations closer to home.
- Lakes and wetlands
- Lakes and streams
- Lakes

Question 7: Is there anything else you'd like us to know or consider in the planning process?

Response Themes

No

Thanks for your efforts!

Reflect on biggest disappointments as well as accomplishments

Full responses:

- no.
- At the close of a 10 year plan, it's natural to focus on what you're proud of having accomplished. However, it's also instructive to reflect on what your biggest disappointments were; painful, but instructive.
- No.
- No. Thanks for your efforts!

Vadnais Lake Area Water Management Organization (VLAWMO)
Watershed Management Plan (WMP)

“Notify” review entities

60-day comment period (Dec. 14, 2023—Feb. 13, 2024)

Comments received by close on February 13, 2024

Page	Reviewer Category	Name
2	Plan Review Agency	Board of Water and Soil Resources (BWSR)
5	Local Plan Review Authority	City of White Bear Lake
8	Plan Review Agency	Metropolitan Council
12	Plan Review Agency	Minnesota Department of Agriculture (MDA)
14	Plan Review Agency	Minnesota Department of Health (MDH)
24	Plan Review Agency	Minnesota Department of Natural Resources (MN DNR)
32	Plan Review Agency	Minnesota Department of Transportation (MnDOT)
34	Plan Review Agency	Minnesota Pollution Control Agency (MPCA)