

## VLAWMO TECHNICAL COMMISSION MEETING

**8:00 AM February 14, 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 (Jan. 10, 2024) ✈
- IV. Administration & Operations
  - A. February Financial Report and Consider Authorization for Payment – Phil ✈ p. 6
  - B. February TEC Report to the Board – Phil ✈ p. 14
- V. Programs
  - A. LL2 2024-01 The Pines HOA Smart Irrigation Controllers ✈ - Lauren p. 20
  - B. 2024 VLAWMO Education and Outreach Plan – Phil p. 40
- VI. Projects
  - A. Comprehensive Watershed Management Plan (WMP): Public and TEC/CAC/Partner surveys – Dawn p. 45
  - B. Spent lime demonstration project update, recommendation for payment, and Barr recommendation for 2024 – Dawn ✈ p. 50
  - C. Wilkinson deep water wetland restoration minor status update - Dawn
  - D. NOHOA partnership MOU on invasive yellow iris removal – Dawn ✈ p. 60
  - E. Pleasant Lake aquatic plant article #3 - Dawn p. 62
- VII. Commissioner Reports
- VIII. NOHOA
- IX. Ramsey Soil & Water Conservation Division
- X. St. Paul Regional Water Services
- XI. Public Comment
- XII. Next meetings: TEC: March 13, 2024, Board meeting: February 28, 2024
- XIII. Adjourn ✈

### Upcoming events: Visit [vlawmo.org/events](https://www.vlawmo.org/events)

Virtual Coffee Chats: Watershed Management Plan	Feb 13, 20, 27
Blue Thumb Partnership Celebration	Feb 29
VLAWMO Grants 101	March 7
Raingardens 101	March 14
Shoreline Restorations [Blue Thumb] Webinar	April 9
Initial Planning Meeting: Watershed Management Plan	April 24

**Vadnais Lake Area Water Management Organization  
Technical Commission (TEC) Minutes  
January 10, 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)
Jami Philip	White Bear Township (WBT)
Terry Huntrods	White Bear Lake (WBL)
Susan Miller	City of North Oaks (NO)
Andy Nelson	City of Lino Lakes (LL)

**Absent:** None

**Others in attendance:** Phil Belfiori, Brian Corcoran, Lauren Sampedro, Dawn Tanner (VLAWMO staff), Jeremy Erickson (SPRWS), Jim Hauth (City of Vadnais Heights), Erin Spry (City of Vadnais Heights)

**I. Call to Order**

Chair Tessier called the meeting to order at 8:01 am.

**II. Approval of Agenda**

It was moved by Commissioner Miller and seconded by Commissioner Philip to approve the January 10, 2024 TEC agenda. Vote: all aye. Motion passed.

**III. Approval of Minutes (December 13, 2023)**

It was moved by Commissioner Miller and seconded by Commissioner Philip to approve the December 13<sup>th</sup> meeting minutes as presented. Vote: all aye. Motion passed.

**IV. Administration & Operations**

**A. Financial Report for January and Authorization for Payment**

Administrator Belfiori outlined the January financial report as included in the packet.

He highlighted expenses for the upcoming watershed management plan, Wilkinson and Tamarack Lake feasibility studies, and the resiliency study for East Vadnais Lake subwatershed.

Income included the stormwater utility revenue, interest, and grant revenue.

It was moved by Commissioner Huntrods and seconded by Chair Tessier to approve the January Financial Report for payment. Vote: All aye. Motion passed.

#### B. 2024 Technical Commission Officer Appointments

Administrator Belfiori outlined the Technical Commission roles. Commissioners discussed role allocation and responsibilities for 2024.

Chair: Gloria Tessier

Vice Chair: Nick Ousky

Treasurer: Andy Nelson

Liason to Board: Terry Huntrods

It was moved by Commissioner Philip and seconded by Commissioner Miller to confirm the TEC officer slate for 2024. Vote: All aye. Motion passed.

#### C. Confirmation of 2024 TEC Meeting Dates

Administrator Belfiori asked the TEC to confirm if the 2024 meetings should follow the same schedule and location as 2023.

It was moved by Chair Tessier and seconded by Commissioner Miller to confirm the 2024 TEC meeting dates. Vote: All aye. Motion passed.

#### D. 2024 Working Budget Overview

Administrator Belfiori outlined the working budget from the December 2023 Board meeting. The 2024 budget includes predominately 2023 carry-over, grant revenue, and stormwater utility fees. Key 2024 approved projects on the budget include Polar Lakes Park reuse study, Wilkinson and Tamarack Alum feasibility study, and development of the 2027-2036 VLAWMO watershed management plan, among others listed in the Board packet.

Commissioner Miller inquired about whether the budget has any potential shortfalls. Administrator Belfiori confirmed that per Board policy, the one and five year budgets are managed and accounted for according to the project scope in a fund balance. He stated VLAWMO has an adequate fund balance that aligns with the Board's vision.

## **V. Programs**

### **A. MS4 Resources for January 2024**

Voss summarized new MS4 resources for providing assistance to the member communities who are identified as an MS4 by the State. He presented an example of an illicit discharge education resource that can be customized for member communities. He stated illicit discharge detection requires various staff to be educated on how to identify an illicit discharge. Identification is easier when more staff are involved.

Commissioner Miller asked if the TEC members should take these materials to their communities or if VLAWMO will be dispersing the information. Voss stated that VLAWMO staff have already provided this information to City/Township staff. He asked the TEC to become more informed so that if any questions or conversations occur they can better participate. Commissioners Nelson and Philip both thanked Voss for this presentation and for his assistance with MS4 resources.

Voss also presented smart salting tools that are available to City/Township staff that includes fourteen content pieces both new and from 2023.

## **VI. Projects**

### **A. Summary of Rotary Park Wetland Restoration Report for Work Beginning in 2025**

Tanner presented an update on the Rotary Wetland Restoration Report. The effort started with buffer restoration and removal of invasive species. Work on the wetland areas will continue to be supported by this plan. Insights that guide this restoration come from the Deep Lake restoration effort that began with a similar prioritization study that included the completion of a first phase of restoration during 2023 with NOHOA and VLAWMO. Natural Shores Technologies provided the Rotary report with preliminary budget and timeline recommendations. The report has been provided to the City of WBL, which is a partner with VLAWMO on this planning.

### **B. Summary of 2023 Carp Solutions Report**

Tanner summarized the carp project to-date, beginning in 2019, and illustrated how the current report compiles history of the project. Tanner briefly summarized actions underway for 2024. The report indicates that the total biomass removal is below 100 kg/ha, which is the goal to reach for water quality improvements. Removal efforts will continue in 2024. In the next couple of years, Tanner expects that the program will transition to a monitoring phase.

Commissioner Miller inquired about whether five carp tagged with active transmitters is enough and if the carp are still predominately older. Tanner confirmed that the tags last for two years. No young have been documented in removals, consistent with prior recommendations and observations.

**VII. Commissioner Reports**

None.

**VIII. NOHOA**

Commissioner Miller notified all that in 2024 NOHOA will be updating its shoreline policies in the spring of 2024.

**IX. Ramsey Soil & Water Conservation Division**

None.

**X. St. Paul Regional Water Services**

None.

**XI. Public Comment**

None.

**XII. Next Meetings:**

Next TEC meeting February 14<sup>th</sup>. Next BOD meeting February 28<sup>th</sup>.

**XIII. Adjourn**

It was moved by Commissioner Huntrods and seconded by Commissioner Miller to adjourn the meeting at 8:29 am. Vote: all aye. Motion passed.

Minutes compiled by Nick Voss.

# VLAWMO Finance Summary: February 2024

Feb-24		Actual 2/1/24	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
<b>BUDGET #</b>	<b>INCOME</b>							
5.11	Storm Water Utility	\$1,776	\$1,776	\$1,145,431	\$0	\$1,143,655	\$1,145,431	0%
5.12	Service Fees			\$1,000	\$0	\$1,000	\$1,000	0%
5.13	Interest + mitigation acct	\$4,862	\$4,862	\$30,000	\$0	\$25,138	\$30,000	16%
5.14	Misc. income - WCA admin & other	\$54	\$54	\$3,000	\$0	\$2,946	\$3,000	2%
5.15	Other Income Grants/loan			\$365,000	\$0	\$365,000	\$365,000	0%
5.16	Transfer from reserves			\$791,380	\$193,062	\$984,442	\$984,442	0%
	<b>TOTAL</b>	<b>\$6,692</b>	<b>\$6,692</b>	<b>\$2,335,811</b>	<b>\$193,062</b>	<b>\$2,522,181</b>	<b>\$2,528,873</b>	<b>0%</b>
<b>EXPENSES</b>								
<b>3.1</b>	<b>Operations &amp; Administration</b>							
3.110	Office - rent, copies, post tel supplies	\$2,117	\$2,117	\$32,239	\$0	\$30,122	\$32,239	7%
3.120	Information Systems	\$1,571	\$1,571	\$33,850	\$0	\$32,279	\$33,850	5%
3.130	Insurance			\$10,050	\$0	\$10,050	\$10,050	0%
3.141	Consulting - Audit			\$12,000	\$7,000	\$19,000	\$19,000	0%
3.142	Consulting - Bookkeeping	\$47	\$47	\$1,500	\$0	\$1,453	\$1,500	3%
3.143	Consulting - Legal			\$7,000	\$0	\$7,000	\$7,000	0%
3.144	Consulting - Eng. & Tech.	\$1,505	\$1,505	\$30,000	\$20,000	\$48,495	\$50,000	3%
3.150	Storm Sewer Utility			\$22,500	\$0	\$22,500	\$22,500	0%
3.160	Training (staff/board)			\$14,250	\$0	\$14,250	\$14,250	0%
3.170	Misc. & mileage	\$70	\$70	\$6,930	\$0	\$6,860	\$6,930	1%
3.191	Administration - staff	\$31,912	\$31,912	\$435,554	\$0	\$403,642	\$435,554	7%
3.192	Employer Liability	\$9,811	\$9,811	\$129,869	\$0	\$120,058	\$129,869	8%
<b>3.2</b>	<b>Monitoring and Studies</b>							
3.210	Lake and Creek lab analysis	\$147	\$147	\$18,000	\$0	\$17,853	\$18,000	1%
3.220	Equipment			\$3,000	\$0	\$3,000	\$3,000	0%
3.230	Wetland assessment & management			\$15,000	\$0	\$15,000	\$15,000	0%
3.240	Watershed planning /special study	\$3,639	\$3,639	\$100,000	\$15,000	\$111,361	\$115,000	3%
<b>3.3</b>	<b>Education and Outreach</b>							
3.310	Public Education	\$1,500	\$1,500	\$6,000	\$0	\$4,500	\$6,000	25%
3.320	Comm., Outreach & Marketing	\$938	\$938	\$20,000	\$2,000	\$21,062	\$22,000	4%
3.330	Community Blue Ed Grant			\$8,000	\$0	\$8,000	\$8,000	0%
<i>Total Core functions: Ops, Monitoring, Education</i>		\$53,258	\$53,258	\$905,742	\$44,000	\$896,484	\$949,742	6%
<b>Capital Improvement Projects and Programs</b>								
<b>3.4</b>	<b>Subwatershed Activity</b>							
3.410	Gem Lake			\$25,000	\$10,000	\$35,000	\$35,000	
3.420	Lambert Creek			\$90,000	\$0	\$90,000	\$90,000	0%
3.421	Lambert Lake Loan			\$38,569	\$0	\$38,569	\$38,569	0%

3.425	Goose Lake	\$23,250	\$23,250	\$85,000	\$0	\$61,750	\$85,000	27%
3.430	Birch Lake	\$6,150	\$6,150	\$48,000	\$0	\$41,850	\$48,000	13%
3.440	Gilf Black Tam Wilk Amelia	\$17,564	\$17,564	\$345,000	\$60,000	\$387,436	\$405,000	4%
3.450	Pleasant Charley Deep	\$4,563	\$4,563	\$145,000	\$0	\$140,438	\$145,000	3%
3.460	Sucker Vadnais	\$8,861	\$8,861	\$90,000	\$33,000	\$114,139	\$123,000	7%
3.48	<b>Programs</b>							
3.480	Soil Health Grant	\$70	\$70	\$10,500	\$4,500	\$14,930	\$15,000	0%
3.481	Landscape 1			\$40,000	\$16,263	\$56,263	\$56,263	0%
3.482	Landscape 2/BWSR WBF	\$900	\$900	\$60,000	\$25,299	\$84,399	\$85,299	1%
3.483	Project Research & feasibility			\$5,000	\$0	\$5,000	\$5,000	0%
3.485	Facilities Maintenanc/ Pub. Ditch Main.	\$2,550	\$2,550	\$78,000	\$0	\$75,450	\$78,000	3%
3.5	<b>Regulatory</b>							
3.510	Engineer Plan review			\$5,000	\$0	\$5,000	\$5,000	0%
	<i>Total CIP &amp; Program</i>	\$63,907	\$63,907	\$1,065,069	\$149,062	\$1,150,224	\$1,214,131	5%
	<b>Total of Core Operations &amp; CIP</b>	<b>\$117,164</b>	\$117,164	\$1,970,811	\$193,062	<b>\$2,046,709</b>	\$2,163,873	<b>5%</b>

Fund Balance	1/1/2024	2/1/2024
4M Account	\$921,058	\$819,208
4M Plus Savings	\$240,180	\$241,261
Total	\$1,161,238	\$1,060,469

Restricted funds	2/1/2024
Mitigation Savings	\$21,021
Term Series	\$300,000

**Vadnais Lake Area Water Management Orga**  
**Profit & Loss**  
 January 11 through February 14, 2024

12:42 PM

02/01/2024

Cash Basis

Jan 11 - Feb 14, 24

Ordinary Income/Expense	
Income	
Misc.	1,829.86
5.1 · Income	
5.13 · Interest	4,862.32
Total 5.1 · Income	<u>4,862.32</u>
Total Income	<u>6,692.18</u>
Gross Profit	6,692.18
Expense	
3.1 · Administrative/Operations	
3.110 · Office	
Copies	22.10
Phone/Internet/Machine Overhead	315.00
Postage	14.73
Rent	1,765.00
Total 3.110 · Office	<u>2,116.83</u>
3.120 · Information Systems	
IT Support	1,571.00
Total 3.120 · Information Systems	<u>1,571.00</u>
3.142 · Bookkeeping help	47.29
3.144 · Eng. & Tech.	1,505.00
3.170 · Misc. & mileage	69.90
3.191 · Employee Payroll	
payroll	31,912.21
Total 3.191 · Employee Payroll	<u>31,912.21</u>
3.192 · Employer Liabilities	
Admin payroll processing	244.33
Administration FICA	2,267.58
Administration PERA	2,393.41
Insurance Benefit	4,906.08
Total 3.192 · Employer Liabilities	<u>9,811.40</u>
Total 3.1 · Administrative/Operations	<u>47,033.63</u>
3.2 · Monitoring and Studies	
3.210 · Lake & Creek lab analysis	147.35
3.240 · Watershed Plan Amendment	3,639.16
Total 3.2 · Monitoring and Studies	<u>3,786.51</u>
3.3 · Education and Outreach	
3.310 · Public Education	1,500.00
3.320 · Marketing	937.60
Total 3.3 · Education and Outreach	<u>2,437.60</u>
3.4 · Capital Imp. Projects/Programs	
3.425 · Goose Lake	

Oak Knoll	23,250.00
<b>Total 3.425 · Goose Lake</b>	<b>23,250.00</b>
<b>3.430 · Birch Lake</b>	6,150.00
<b>3.440 · Gilfillan Black Tamarack Wilkin</b>	17,563.75
<b>3.450 · Pleasant Charley Deep</b>	4,562.50
<b>3.460 · Sucker Vadnais</b>	8,860.66
<b>Total 3.4 · Capital Imp. Projects/Programs</b>	<b>60,386.91</b>
<b>3.48 · Programs</b>	
<b>3.480 · Soil Health Grant</b>	69.79
<b>3.482 · Landscape 2</b>	900.00
<b>3.485 · Facilities &amp; Maintenance</b>	2,550.00
<b>Total 3.48 · Programs</b>	<b>3,519.79</b>
<b>Total Expense</b>	<b>117,164.44</b>
<b>Net Ordinary Income</b>	<b>-110,472.26</b>
<b>Net Income</b>	<b><u><u>-110,472.26</u></u></b>

**Vadnais Lake Area Water Management Organization**  
**Check Detail**

12:38 PM

02/01/2024

January 11 through February 14, 2024

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Check	eft	01/22/2024	further		Checking - 1987		-6.00
				Insurance Benefit		-6.00	6.00
TOTAL						-6.00	6.00
Check	eft	02/01/2024	US Bank		Checking - 1987		-47.29
				3.142 · Bookkeeping help		-47.29	47.29
TOTAL						-47.29	47.29
Check	5711	02/14/2024	Nicholas Voss		Checking - 1987		-117.97
				3.170 · Misc. & mileage		-19.65	19.65
				3.320 · Marketing		-43.33	43.33
				3.320 · Marketing		-54.99	54.99
TOTAL						-117.97	117.97
Check	5712	02/14/2024	Dawn Tanner		Checking - 1987		-50.25
				3.170 · Misc. & mileage		-50.25	50.25
TOTAL						-50.25	50.25
Check	5713	02/14/2024	Department of Corrections		Checking - 1987		-2,550.00
				3.485 · Facilities & Maintenance		-2,550.00	2,550.00
TOTAL						-2,550.00	2,550.00
Check	5714	02/14/2024	Ramsey County		Checking - 1987		-8,931.25
				3.430 · Birch Lake		-1,150.00	1,150.00
				3.440 · Gilfillan Black Tamarack Wilkin		-1,500.00	1,500.00
				3.450 · Pleasant Charley Deep		-4,562.50	4,562.50
				3.440 · Gilfillan Black Tamarack Wilkin		-1,718.75	1,718.75
TOTAL						-8,931.25	8,931.25
Check	5715	02/14/2024	Metro - Inet		Checking - 1987		-1,571.00
				IT Support		-1,571.00	1,571.00
TOTAL						-1,571.00	1,571.00
Check	5716	02/14/2024	Gallagher		Checking - 1987		-3,416.66
				3.240 · Watershed Plan Amendment		-3,416.66	3,416.66
TOTAL						-3,416.66	3,416.66
Check	5717	02/14/2024	Ramsey County		Checking - 1987		-900.00

		3.482 · Landscape 2	-900.00	900.00
TOTAL			<u>-900.00</u>	900.00
	<b>Check 5718</b>	<b>02/14/2024 Rose Bussjaeger</b>		<b>Checking - 1987</b>
				<b>-69.79</b>
		3.480 · Soil Health Grant	-69.79	69.79
TOTAL			<u>-69.79</u>	69.79
	<b>Check 5719</b>	<b>02/14/2024 Metro Blooms</b>		<b>Checking - 1987</b>
				<b>-300.00</b>
		3.320 · Marketing	-300.00	300.00
TOTAL			<u>-300.00</u>	300.00
	<b>Check 5720</b>	<b>02/14/2024 Bolton &amp; Menk</b>		<b>Checking - 1987</b>
				<b>-1,500.00</b>
		3.310 · Public Education	-1,500.00	1,500.00
TOTAL			<u>-1,500.00</u>	1,500.00
	<b>Check 5721</b>	<b>02/14/2024 City of Vadnais Heights</b>		<b>Checking - 1987</b>
				<b>-2,116.83</b>
		Rent	-1,765.00	1,765.00
		Phone/Internet/Machine Overhead	-315.00	315.00
		Postage	-14.73	14.73
		Copies	-22.10	22.10
TOTAL			<u>-2,116.83</u>	2,116.83
	<b>Check 5722</b>	<b>RMB Environmental Laboratories, 02/14/2024 Inc.</b>		<b>Checking - 1987</b>
				<b>-147.35</b>
		3.210 · Lake & Creek lab analysis	-147.35	147.35
TOTAL			<u>-147.35</u>	147.35
	<b>Check 5723</b>	<b>02/14/2024 City of Lino Lakes</b>		<b>Checking - 1987</b>
				<b>-13,950.00</b>
		3.440 · Gilfillan Black Tamarack Wilkin	-13,950.00	13,950.00
TOTAL			<u>-13,950.00</u>	13,950.00
	<b>Check 5724</b>	<b>02/14/2024 Houston Engineering, Inc</b>		<b>Checking - 1987</b>
				<b>-222.50</b>
		3.240 · Watershed Plan Amendment	-222.50	222.50
TOTAL			<u>-222.50</u>	222.50
	<b>Check 5725</b>	<b>02/14/2024 SRF Consulting Group</b>		<b>Checking - 1987</b>
				<b>-8,860.66</b>
		3.460 · Sucker Vadnais	-8,860.66	8,860.66
TOTAL			<u>-8,860.66</u>	8,860.66
	<b>Check 5726</b>	<b>02/14/2024 SEH</b>		<b>Checking - 1987</b>
				<b>-1,284.98</b>
		3.144 · Eng. & Tech.	-1,284.98	1,284.98
TOTAL			<u>-1,284.98</u>	1,284.98
	<b>Check 5727</b>	<b>02/14/2024 Barr Engineering Co</b>		<b>Checking - 1987</b>
				<b>-395.00</b>

		3.440 · Gilfillan Black Tamarack Wilkin	-395.00	395.00
TOTAL			<u>-395.00</u>	<u>395.00</u>
	<b>Check 5728</b>	<b>02/14/2024 Erosion Works</b>	<b>Checking - 1987</b>	<b>-23,250.00</b>
		Oak Knoll	-23,250.00	23,250.00
TOTAL			<u>-23,250.00</u>	<u>23,250.00</u>
	<b>Check 5729</b>	<b>02/14/2024 City of White Bear Lake</b>	<b>Checking - 1987</b>	<b>-46,937.63</b>
		payroll	-31,912.21	31,912.21
		Administration FICA	-2,267.58	2,267.58
		Administration PERA	-2,393.41	2,393.41
		Insurance Benefit	-4,900.08	4,900.08
		Admin payroll processing	-244.33	244.33
		3.430 · Birch Lake	-5,000.00	5,000.00
		3.144 · Eng. & Tech.	-220.02	220.02
TOTAL			<u>-46,937.63</u>	<u>46,937.63</u>

**Vadnais Lake Area Water Management Organization**  
**Custom Transaction Detail Report**  
 December 1, 2023 through February 1, 2024

12:36 PM

02/01/2024

Accrual Basis

Type	Date	Num	Name	Memo	Account	Clr	Split	Amount	Balance
<b>Dec 1, '23 - Feb 1, 24</b>									
Credit Card Charge	12/04/2023		Google*SVCAPPS_VLAWM		US Bank CC	√ WEB		42.00	42.00
Credit Card Charge	12/06/2023		field environmental instruments Inc	pH meter renewal	US Bank CC	√ Oak Knoll		250.00	292.00
Credit Card Charge	12/06/2023		mn Department of Agriculture	renewal pest 2024 license	US Bank CC	√ 3.170 · Misc. & mileage		10.22	302.22
Credit Card Charge	12/07/2023		field environmental instruments Inc	pH meter renewal	US Bank CC	√ Oak Knoll		250.00	552.22
Credit Card Charge	12/08/2023		adobe *photography plan		US Bank CC	√ Software		9.99	562.21
Transfer	12/20/2023			Funds Transfer	US Bank CC	√ Checking - 1987		-1,080.47	-518.26
Credit Card Charge	12/26/2023		Adobe "Creative Cloud		US Bank CC	√ Software		32.50	-485.76
Credit Card Charge	01/02/2024		Google*SVCAPPS_VLAWM		US Bank CC	√ WEB		42.00	-443.76
Credit Card Charge	01/03/2024		University of Minnesota	Dawn 2024 project management training	US Bank CC	3.170 · Misc. & mileage		900.00	456.24
Credit Card Charge	01/08/2024		adobe *photography plan		US Bank CC	√ Software		9.99	466.23
Credit Card Charge	01/25/2024		Innovative Office Solutions	wmp envelopes	US Bank CC	3.320 · Marketing		71.28	537.51
Credit Card Charge	01/31/2024		Survey Monkey	2024 renewal	US Bank CC	3.320 · Marketing		468.00	1,005.51
								<b>1,005.51</b>	<b>1,005.51</b>
<b>Dec 1, '23 - Feb 1, 24</b>									

**TEC Report to the Board  
February 2024**

Programs & Projects	Effort Level	Completion Date	Comments																									
	LOW																											
	MED																											
	HIGH																											
<b>Projects</b>				<b>Administration &amp; Operation</b>																								
E. Vadnais Lake Subwatershed Resiliency Study		Mid 2024	Working with SRF on concept designs and future based H/H modeling results. Consideration of possible grant application to the MPCA for resiliency stormwater grant.	Audit		2023	Staff has begun the process of working with CLA on the 2023 Audit.																					
Oak Knoll Pond/Wood Lake		2024	Contractor pay request received for work completed in the fall, plan to resume project with support from the City of WBL anticipated to go to the Board, and, upon authorization, work to extend temporary easements with residents to cover 2024 project season will begin.	Budget		for 2024 budget	2024 "Working" Budget /2023 carryover budget will be considered at the Dec. 13 Board meeting.																					
Public Ditch Maintenance		ongoing	2024 Ditch inspection report completed.	Personnel /HR		ongoing	End of year 2023 staff discussions and reviews are underway.																					
MPCA 319 /Wilkinson Lake BMP		2024	Buckthorn removal completed on islands, and eagle monitoring ongoing.	SSU		ongoing	The approved 2024 SSU certifications have been submitted to Anoka and Ramsey County.																					
Pleasant Lake Carp Management		ongoing	Telemetry checks conducted periodically over winter and will pick up in the spring to detect movement of carp out of Pleasant Lake.	Strategic /watershed planning		2023-2025	Engagement process underway. 60-comment from State and local entities closed on Feb. 13. Public and TEC/CAC/partner surveys being promoted and open. Initial planning meeting prep underway for April 24.																					
<b>Programs</b>																												
City/Township MS4		Feb	Continuation of efforts in training, documentation, and BMP maintenance for 2024. New pet waste graphics and initiatives.	<table border="1"> <thead> <tr> <th colspan="3">FINANCIAL SUMMARY as of 2/1/2024</th> </tr> <tr> <th>4M Account (1.10)</th> <th>4M Plus (1.23)</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>\$819,208</td> <td>\$241,261</td> <td>\$1,060,469</td> </tr> </tbody> </table>					FINANCIAL SUMMARY as of 2/1/2024			4M Account (1.10)	4M Plus (1.23)	Total	\$819,208	\$241,261	\$1,060,469											
FINANCIAL SUMMARY as of 2/1/2024																												
4M Account (1.10)	4M Plus (1.23)	Total																										
\$819,208	\$241,261	\$1,060,469																										
Education/Outreach		Feb-April	Watershed Management Plan engagement efforts, spring grant and raingarden workshops, Bluethumb shorelines webinar.																									
Website		Feb-Sept	Website renovation in progress. Launch expected 9/24.																									
WAV		March	WAV start-of-year meeting TBD in March to coordinate this year's primary WAV activities.																									
Cost Share & BWSR WBIF		ongoing	Site visits coming to an end for the season and a few 2023 projects are getting closed out. Minor updates to the cost share program policies and renewal of the Ramsey County SWCD design services contract are underway consistent with the TEC's action on 11/8. Continuing to work on projects for the BWSR WBIF grant program with partners, such as a potential raingarden at Elmwood Park in Vadnais Heights and potential raingardens in the Birch Lake subwatershed.	<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>\$53,258</td> <td>\$949,742</td> <td>\$896,484</td> <td>6%</td> </tr> <tr> <td>CIP</td> <td>\$63,907</td> <td>\$1,214,131</td> <td>\$1,150,224</td> <td>5%</td> </tr> <tr> <td>Total</td> <td>\$117,165</td> <td>\$2,163,873</td> <td>\$2,046,708</td> <td>5%</td> </tr> </tbody> </table>					Budget Summary	Actual Expense YTD	2024 Budget "working"	Remaining in Budget	% YTD	Operations	\$53,258	\$949,742	\$896,484	6%	CIP	\$63,907	\$1,214,131	\$1,150,224	5%	Total	\$117,165	\$2,163,873	\$2,046,708	5%
Budget Summary	Actual Expense YTD	2024 Budget "working"	Remaining in Budget	% YTD																								
Operations	\$53,258	\$949,742	\$896,484	6%																								
CIP	\$63,907	\$1,214,131	\$1,150,224	5%																								
Total	\$117,165	\$2,163,873	\$2,046,708	5%																								
GIS		ongoing	Working on maps for the website renovation, updating the online GIS viewer as needed.																									
Monitoring		ongoing	2023 year ended reports started																									
WCA		ongoing	Administering WCA as needed.																									

## TEC Staff Memo – February 14, 2024

### IV. Administration & Operations

#### A. February Financial Report and Consider Authorization for Payment

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

#### B. February TEC Report to the Board

### V. Programs

#### A. LL2 2024-01 The Pines HOA Smart Irrigation Controllers

The Pines HOA submitted a Landscape Level 2 Grant application for installing five smart irrigation controllers across their residential community. The HOA is located across 100 acres in North Oaks south of Black Lake in the Gilfillan-Tamarack-Black-Wilkinson-Amelia subwatershed around north and south mallard ponds. In 2017, VLAWMO provided \$10,000 to the Pines HOA for installing two smart irrigation controller systems in the neighborhood. This application will be building off of that work and upgrading the remaining five irrigation controller systems to newer-technology smart irrigation controllers to further reduce groundwater consumption and control overall water usage in the community. The smart irrigation controllers will include weather and flow sensors and online monitoring capabilities. The Pines HOA has monitored water usage from 2021-2023, which will allow VLAWMO staff to review groundwater usage changes after the smart irrigation controllers are installed. Five bids were received for the project and the total estimated cost is based on the lowest bid of \$21,239.95. Staff recommends approval of LL2 2024-01 in the amount of 90% of eligible project expenses, not to exceed \$19,115.96 in accordance with program guidelines.

#### B. 2024 VLAWMO Education and Outreach Plan

Staff will present an overview of the 2024 Education and Outreach Plan including how it connects to continuing education of VLAWMO TEC, Board, and CAC.

Find the full 2024 EOP online here:

[https://www.vlawmo.org/index.php/download\\_file/4793/](https://www.vlawmo.org/index.php/download_file/4793/)

Attachment: Powerpoint

**Blue Thumb Partner Meeting:** TEC and CAC are welcome to attend Blue Thumb Partner meetings that occur 2-3 times/year. VLAWMO is a member of the Blue Thumb partnership, which provides education resources, connections to expert

workshops and guest speakers, and close working relationships with the State Lawns to Legumes grant program. Partner meetings consist of networking and various guest speakers and special presentations from the field of native plants and stormwater Best Management Practices. The next Blue Thumb meeting is occurring on Thursday February 29 at 4:30-6:30 pm. Contact Nick for more details or to express interest in future Blue Thumb engagements.

## VI. Projects

### A. **Comprehensive Watershed Management Plan (WMP): Public and TEC/CAC/Partner surveys**

Engagement is underway for the next 10-year Comprehensive Watershed Management Plan (WMP). The required 60-day comment period closed on February 13. Feedback received is being compiled by VLAWMO and HEI staff. The TEC/CAC/Partner survey opened on Feb. 5. All TEC members should have received an email invitation. The survey closes on Feb. 26. Please take the survey before Feb. 26.

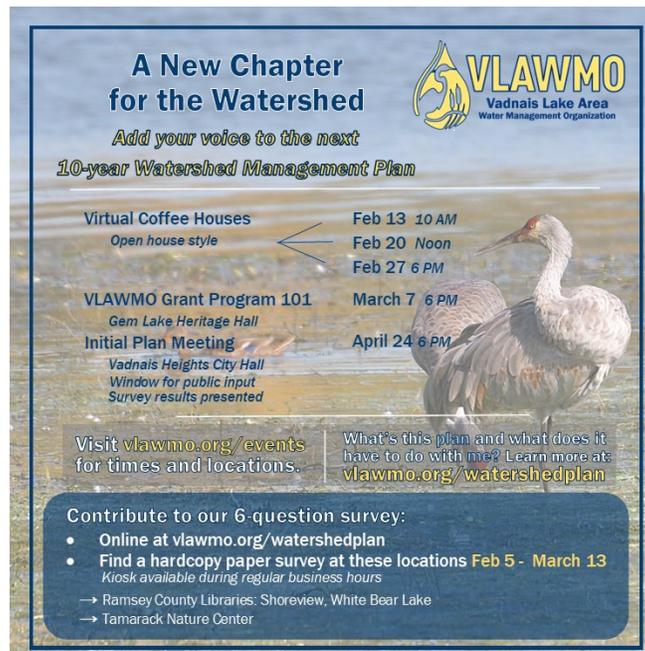
<https://www.surveymonkey.com/r/SFBZHBS>

A short ppt is included in the packet with more information on the engagement process and TEC/CAC/Partner survey. The engagement process will help to inform the required initial planning meeting on April 24.

Events that are part of the engagement process are summarized in the graphic below.

#### **Attachment:**

- PowerPoint



**A New Chapter for the Watershed**

Add your voice to the next **10-year Watershed Management Plan**

Virtual Coffee Houses <i>Open house style</i>	Feb 13 10 AM Feb 20 Noon Feb 27 6 PM
VLAWMO Grant Program 101 <i>Gem Lake Heritage Hall</i>	March 7 6 PM
Initial Plan Meeting <i>Vadnais Heights City Hall</i> <i>Window for public input</i> <i>Survey results presented</i>	April 24 6 PM

Visit [vlawmo.org/events](http://vlawmo.org/events) for times and locations.

What's this plan and what does it have to do with me? Learn more at: [vlawmo.org/watershedplan](http://vlawmo.org/watershedplan)

Contribute to our 6-question survey:

- Online at [vlawmo.org/watershedplan](http://vlawmo.org/watershedplan)
- Find a hardcopy paper survey at these locations **Feb 5 - March 13**  
*Kiosk available during regular business hours*

→ Ramsey County Libraries: Shoreview, White Bear Lake  
→ Tamarack Nature Center

**B. Spent lime demonstration project update, recommendation for payment, and Barr recommendation for 2024**

The spent lime demonstration project at Oak Knoll Pond included 7 loads of spent lime applied during summer and fall, 2023. A request for payment from Erosion Works has been received by VLAWMO and recommended for payment by Barr Engineering. Project progress and recommendations are included in the attached memos from Barr Engineering. Barr Engineering recommends resuming the demonstration project during 2024. The City of WBL is continuing to partner with VLAWMO and support the project extension. The water department has also been consulted and is working to collaborate and coordinate as the project resumes. VLAWMO's attorney prepared a contract amendment to extend the timeframe of the project. The contractor has signed and returned the amendment to VLAWMO and stated a willingness to continue working to complete the project. Following authorization from the Board at the February regular meeting, VLAWMO staff will work to obtain extended temporary easements with affected Oak Knoll Pond landowners.

**Requested Action:** VLAWMO staff request a TEC recommendation to the Board to authorize extending the demonstration project through 2024 to allow project completion as deemed by the project engineer, sign and return the contract extension, and authorize VLAWMO staff to pursue an amendment extension with existing temporary easements from landowners. The TEC is also requested to approve the pay request as part of the bills for February and inform the Board of this action.

**Attachments:**

- Barr Engineering Memo: Recommendation for payment
- Barr Engineering Memo: Recommendation for project continuation
- Contract amendment to extend the deadline for completion

**C. Wilkinson deep water wetland restoration minor status update**

Natural Shore Technologies completed buckthorn removal on the islands within the project site in January, when frozen conditions allowed safe access. Eagle monitoring is ongoing by VLAWMO staff.

**Pre-condition with thick buckthorn in the understory of the islands**



**Post-condition with buckthorn removed; native willows remain**



#### D. NOHOA partnership MOU on invasive yellow iris removal

VLAWMO received the signed MOU from NOHOA for partnership on invasive yellow iris removal in 2024.

**Requested Action:** VLAWMO staff request a TEC recommendation to the Board to sign the MOU with NOHOA for 2024 and return the fully executed MOU to NOHOA.

**Attachment:**

- MOU for invasive yellow iris removal between VLAWMO and NOHOA

#### E. Pleasant Lake aquatic plant article #3

The third article in the Pleasant Lake aquatic plant series was included in the February issue of North Oaks News. These articles were prepared in partnership with VLAWMO, SPRWS, and NOHOA. The published article has been shared with partners. NOHOA is including the article in an e-newsletter to all residents in North Oaks.

**Attachment:**

- Pleasant Lake Aquatic Plant Article #3

# LL2 Grant Application



Submit completed application to:

Lauren Sampedro

lauren.sampedro@vlawmo.org

## Applicant Information:

Organization Name:	The Pines of North Oaks
Project Contact:	Jennifer Morris
Address:	PO BOX PO Box 270811
City/Township, State, Zip:	Vadnais Heights, MN 55127
Phone:	651-429-2223 office / 612-226-0523 cell
Email:	thepines@advtm.com

## Project Summary:

ESTIMATED TOTAL PROJECT COST (\$)	\$21,239.95
AMOUNT REQUESTED	\$19,115.96
EXPECTED PROJECT COMPLETION (Month, Year)	June, 2024

### PROJECT TYPE:

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

If other, please describe the proposed project: Smart Irrigation Controller Installation

## Project Background:

Describe the project location and water resources that will benefit from the project.	The Association has a total of 7 irrigation controllers throughout the 100+ acre community. Five out of the seven irrigation controllers are not on a smart irrigation controller system. The intent is to upgrade the remaining 5 controllers to assist in saving on water consumption, optimize on reduction for maintenance costs and control overall water usage.
What issues will be addressed with this project?	

## Project Background: Continued

<p>Provide estimated water quality results, stormwater rate/volume reduction, or groundwater conservation benefits associated with the project.</p>	<p>I have included a water usage report to assist in showing how much water has been used / cost from 2021-2023. The smart controllers are expected to result in reduction of groundwater usage over the 100+ acra community.</p>
<p>Describe the public education and outreach efforts or signage planned for the project.</p>	<p>Association works with the grounds contractor and homeowners on any irrigation issues and concerns. Grounds contractor conducts inspections throughout the season to assist in pro-active measures to identify leaks, over/under watering areas. Once the project is completed, the Association would welcome to assist/advertise the results with the community, including NOHOA.</p>
<p>List or describe any partnerships or other forms of support for the project, including external funding sources.</p>	<p>The Pines received grant funding from Vlawmo in 2017 to install two smart irrigation controllers. The DNR also supports reducing groundwater consumption in the North and East metro and this would aid in the regions water conservation goals.</p>

## Project Specifications:

<p>TOTAL PROPERTY AREA (Acres)</p>	<p>100+ acres</p>	<p>Total PROJECT SIZE (Sq Ft)</p>	<p>99 single family community</p>
<p>IMPERVIOUS AREA DRAINING TO PROJECT (Sq Ft):</p>	<p>n/a</p>	<p>PERVIOUS AREA DRAINING TO PROJECT (Sq Ft):</p>	<p>n/a</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.

## Irrigation System Range

System Location	# of Homes	# of Zones
Pine Cone	8	15
White Pine + Hawthorne Ct	20	27
Buchel Heights	13	18
Marsh Ridge	4	6
Larch Lane	17	24
Pine Rd	11	15
Knoll and Pearson	23	24

**The Pines of North Oaks  
2024 Irrigation Smart Controller Bids**

	<b>Horticulture Services</b>	<b>Williston Irrigation</b>	<b>Williston Irrigation</b>	<b>Global Irrigation Solutions</b>	<b>Prescription Landscape</b>
Product Type	Weathermatic	Weathermatic	Hunter ICC2	RainBird ESP	RainBird ESP
Wire System	2-wire	2-wire	n/a	2-wire	2-wire
Master Valve / Flow Sensors	YES	YES	YES	YES	YES
Pine Cone Road	\$4,584.35	\$4,446.82	\$4,357.88		
Marsh Ridge	\$4,351.30	\$4,220.76	\$4,136.34		
Knoll / Pearson	\$5,100.21	\$4,947.20	\$4,848.26		
Pine Road	\$3,021.24	\$2,930.60	\$6,147.62		
Buchal Heights	\$4,839.76	\$4,694.57	\$4,600.68		
<b>Total Premium</b>	<b>\$21,896.86</b>	<b>\$21,239.95</b>	<b>\$24,090.78</b>	<b>\$92,000.00</b>	<b>\$ 123,241.09</b>



# HORTICULTURE SERVICES

2930 Quant Ave. N  
Stillwater, MN 55082  
651-433-4338

info@horticultureservices.com  
www.horticultureservices.com

## Proposal

Customer Purchase Order	Proposal No.	Date
	12778	10/18/2023
Job	Account No.	Terms
The Pines of North Oaks	168	Net 30

### Submitted To:

The Pines of North Oaks  
1 Pine Road  
North Oaks, MN 55127

**We propose to furnish the following scope of work. To be billed upon completion, applicable sales tax not included.**

This proposal is for the installation of the Weathermatic SmartLink irrigation management system with flow sensing on the remaining five irrigation systems at The Pines of North Oaks that do not currently have Weathermatic. The proposal is split in to five sections below, one for each system. (Note: The Larch Lane and White Pine Rd systems already have Weathermatic SmartLink and are not included in this proposal).

Each individual system includes:

- A Weathermatic SmartLine irrigation controller
- A wireless Weather Sensor
- A Weathermatic Internet Aircard with support for Flow Sensor
- A flow sensor master valve (this is installed underground near the water source and can sense the flow of water, detect leaks and send alerts, and automatically shut the main line water off to stop a leak, among other features)

Following the installation of the Weathermatic irrigation systems, the Weathermatic SmartLink Service Plan will need to be activated for each system in order to use the internet-connected functionality.

This service plan is a continuing annual subscription plan. It has two available tiers:

- Baseline Service Plan with Flow Sensor support: \$432 per year
- Add on the continual warranty: An additional \$72 per year

### NOTES:

- Each controller will need its own individual service plan.
- The Weathermatic Service Plan pricing is subject to change if Weathermatic adjusts their pricing.

While people have mixed feelings on warranty plans like this, we do recommend the Weathermatic warranty. HS doesn't get any kickback for it, we just think it is a real benefit for our clients. For the additional \$72 per year, the warranty covers ALL parts of the system up to twice in a 12-month period, for ANY reason. If any part is struck by lightning, vandalized, etc, you will get that replacement part at no charge. The only expense would be the labor involved to install it.

### Weathermatic - Pine Cone Rd

This section contains the pricing and details for converting the existing Pine Cone Rd irrigation system to the Weathermatic SmartLink irrigation system with flow sensor master valve.

Description	Quantity	Unit	Price
Controller, Weathermatic SL1600 16-Station w/Weather Sensor Installed	1.00	Ea	1,563.11
Controller, Weathermatic SmartLink Flow Capable Aircard Installed	1.00	Ea	870.12
Flow Control Weathermatic - 1.5" PVC Flow Sensor Assembly	1.00	Ea	1,307.57
Flow Sensor Master Valve Install Labor	6.00	HR	843.55

Price	\$4,584.35
-------	------------

Initial to Accept

**Weathermatic - Marsh Ridge**

This section contains the pricing and details for converting the existing Marsh Ridge irrigation system to the Weathermatic SmartLink irrigation system with flow sensor master valve.

Description	Quantity	Unit	Price
Controller, Weathermatic SL1600 8-Station w/Weather Sensor Installed	1.00	Ea	1,330.06
Controller, Weathermatic SmartLink Flow Capable Aircard Installed	1.00	Ea	870.12
Flow Control Weathermatic - 1.5" PVC Flow Sensor Assembly	1.00	Ea	1,307.57
Flow Sensor Master Valve Install Labor	6.00	HR	843.55

Price	\$4,351.30
-------	------------

Initial to Accept

**Weathermatic - Knoll/Pearson**

This section contains the pricing and details for converting the existing Knoll/Pearson irrigation system to the Weathermatic SmartLink irrigation system with flow sensor master valve.

Description	Quantity	Unit	Price
Controller, Weathermatic SL4800 24-Station w/Weather Sensor Installed	1.00	Ea	2,078.97
Controller, Weathermatic SmartLink Flow Capable Aircard Installed	1.00	Ea	870.12
Flow Control Weathermatic - 1.5" PVC Flow Sensor Assembly	1.00	Ea	1,307.57
Flow Sensor Master Valve Install Labor	6.00	HR	843.55

Price	\$5,100.21
-------	------------

Initial to Accept

**Weathermatic - Pine Rd**

This section contains the pricing and details for converting the existing Pine Rd irrigation system to the Weathermatic SmartLink irrigation system with flow sensor master valve.

NOTE: Pine Rd already has a Weathermatic controller in place after it was installed in 2022 to replace the existing malfunctioning Hunter controller. As a result, this existing Weathermatic controller does not need to be replaced.

Description	Quantity	Unit	Price
Controller, Weathermatic SmartLink Flow Capable Aircard Installed	1.00	Ea	870.12
Flow Control Weathermatic - 1.5" PVC Flow Sensor Assembly	1.00	Ea	1,307.57
Flow Sensor Master Valve Install Labor	6.00	HR	843.55

Price	\$3,021.24
-------	------------

Initial to Accept

**Weathermatic - Buchal Heights**

This section contains the pricing and details for converting the existing Buchal Heights irrigation system to the Weathermatic SmartLink irrigation system with flow sensor master valve.

Description	Quantity	Unit	Price
Controller, Weathermatic SL1620 20-Station w/Weather Sensor Installed	1.00	Ea	1,818.52
Controller, Weathermatic SmartLink Flow Capable Aircard Installed	1.00	Ea	870.12
Flow Control Weathermatic - 1.5" PVC Flow Sensor Assembly	1.00	Ea	1,307.57
Flow Sensor Master Valve Install Labor	6.00	HR	843.55

<b>Price</b>	<b>\$4,839.76</b>
--------------	-------------------

Initial to Accept

Accepted:

\_\_\_\_\_  
The Pines of North Oaks

\_\_\_\_\_  
Date

**Terms & Conditions**

- Pricing Valid for 60 days
- When excavation is required, the contractor is responsible for having public utilities marked.
- Locating and marking of private utilities is the responsibility of the customer. Contractor is not responsible for damage to unmarked private utilities such as underground dog fences or private electrical wires.

## The Pines of North Oaks

### Hunter Controller Bid

**Location:** 1 Pine Rd  
North Oaks, MN 55127

**Scope of Work:** To replace controllers with smart Hunter Centralus controllers capable of flow sensing and online monitoring. Also, all the flow sensing components and rain sensors at each site.

**Product each site will be equipped with:**

- Hunter ICC2 Centralus controller that fits each site's zone count
- On-site rain sensor
- ICC2 LTE Communication module – to give controller cellular capability
- Flow sensor
- Master valve

Yearly cost for Hunter Centralus module for each controller - \$106.00/year or \$10.00/month

All Hunter products come with a 5-year warranty.

Hunter smart controllers use local weather stations to predict weather before the watering cycle.

P.O. Box 64  
Cedar, MN 55011

763-286-9781  
Info@willistonirrigation.com

## Pine Cone Road

- Hunter ICC2 8 station controller
- 8 station module
- ICC2 LTE Communication Module
- Rain sensor
- Flow sensor

Total price installed - **\$4,357.88**

## Marsh Ridge

- Hunter ICC2 8 station controller
- ICC2 LTE Communication Module
- Rain sensor
- Flow sensor

Total price installed - **\$4,136.34**

## Knoll/Pearson

- Hunter ICC2 8 station controller
- 2 - 8 station modules
- ICC2 LTE Communication Module
- Rain sensor
- Flow sensor

Total price installed - **\$4,848.26**

P.O. Box 64  
Cedar, MN 55011

763-286-9781  
Info@willistonirrigation.com

## Pine Road

- Hunter ICC2 8 station controller
- 2 Wire Module
- 15 EZ Decoders
- ICC2 LTE Communication Module
- Rain sensor
- Flow sensor

Total installed - **\$6,147.62**

## Buchal Heights

- Hunter ICC2 8 station controller
- 8 station module
- 4 station module
- ICC2 LTE Communication Module
- Rain sensor
- Flow sensor

Total price installed - **\$4,600.68**

**Acceptance**

**Date**

---

P.O. Box 64  
Cedar, MN 55011

763-286-9781  
Info@willistonirrigation.com

27

## The Pines of North Oaks

### Weathermatic Controller Bid

**Location :** 1 Pine Rd  
North Oaks, MN 55127

**Scope of Work:** To replace controllers with smart Weathermatic controllers capable of flow sensing and online monitoring. Also, all the flow sensing components and weather stations at each site.

#### Product each site will be equipped with:

- Weathermatic controller that fits each site's zone count
- On-site weather station
- Aircard – to give the controller cellular capability
- Flow sensor
- Master valve

Yearly cost for the Weathermatic Aircard with flow sensing for each controller: **\$432.00/year**

All Weathermatic products come with a 2-year warranty.

Weathermatic smart controllers rely on the on-site weather sensor to make changes to run time.

P.O. Box 64  
Cedar, MN 55011

763-286-9781  
Info@willistonirrigation.com

25

## Pine Cone Road

- Weathermatic SL1600 16 Station Controller
- Weather Sensor
- Aircard
- Flow Sensor – 1.5”
- Master Valve

Total price installed - **\$4,446.82**

## Marsh Ridge

- Weathermatic SL1600 8 Station Controller
- Weather Sensor
- Aircard
- Flow Sensor – 1.5”
- Master Valve

Total price installed - **\$4,220.76**

## Knoll/Pearson

- Weathermatic SL4800 24 Station Controller
- Weather Sensor
- Aircard
- Flow Sensor – 1.5”
- Master Valve

Total price installed - **\$4,947.20**

P.O. Box 64  
Cedar, MN 55011

763-286-9781  
Info@willistonirrigation.com

*24*

## Pine Road

- Weather Sensor
- Aircard
- Flow Sensor – 1.5”
- Master Valve

Total price installed - **\$2,930.60**

## Buchal Heights

- Weathermatic SL1620 20 Station Controller
- Weather Sensor
- Aircard
- Flow Sensor – 1.5”
- Master Valve

Total price installed - **\$4,694.57**

Acceptance \_\_\_\_\_ Date \_\_\_\_\_

P.O. Box 64  
Cedar, MN 55011

763-286-9781  
Info@willistonirrigation.com

27



# Global Irrigation Solutions

Water Resource Consulting

This Service Agreement ("Agreement") is being made between The Pines of North Oaks Homeowners Association 1 Hawthorne Court, North Oaks, MN 55127 (Herein referred to as "You" or "Your" or "Client") and Global Irrigation Solutions, LLC. (Herein referred to as "We" or "Our"). The Pines of North Oaks Homeowners Association may also be referred to as "Party" or together as the "Parties". This Agreement will become effective on the date of signed acceptance ("Effective Date").

## 1) Services

We agree to perform the services ("Services") listed in this Section 1a. The Parties acknowledge that their obligations pursuant to this Agreement serve as good and valuable consideration for this Agreement.

### a) Services

i) We will replace seven (7) existing irrigation controllers with three Rainbird ESP LXIVM 2-wire controllers and four Rainbird ESP LXME2Pro controllers including master valves and flow sensors and other components to ensure operation of (no more than) 129 irrigation valves (zones).

### b) Materials

- i) 3ea. Rainbird ESP LXIVM controller with IQ communication cartridge
- ii) 4ea. Rainbird ESP LXME2Pro controller with IQ communication cartridge
- iii) 7ea. Rainbird PEB master valve
- iv) 7ea. Rainbird flow sensor
- v) 3ea. Rainbird IVMSOL
- vi) 3ea. Rainbird IVMSEN
- vii) 66ea. Hunter DC latching solenoid
- viii) 66ea. Rainbird IVMOUT

## 2) Compensation

a) Total Estimated Cost of the Services: **\$92,000.00** plus applicable sales tax\*

\*This job will require a 50% deposit prior to ordering the materials

## 3) Expenses

We will be reimbursed by You for any reasonable and necessary additional expenses incurred in providing the Services detailed above should unseen issues arise in performance of the Services listed above. You must pre-approve all expenses.

## 4) Payment

Invoiced amounts are due upon receipt of the invoice. Payment may be made by Check, direct EFT, or Credit Card. Check payments must be made to:

Global Irrigation Solutions, LLC.  
12090 N Thornydale Road

Be Better!

2A



Suite 110, PMB 318  
Marana, AZ 85658

**5) Term**

The term of this Agreement is [six] (6) months from the Effective Date, unless terminated earlier for other reasons available in this Agreement.

**6) Termination**

- a) If either Party wants to terminate the Agreement before the termination date, they must provide the other Party a seven (7) day written notice. If You terminate the Agreement before the Services have been completed, You will be liable to Us for a pro rata share of the total cost of the Services as outlined in Section 2.
- b) This Agreement will automatically terminate when both Parties have performed all of their obligations under the Agreement and all payments have been received.

**7) Relationship of the Parties**

- a) No Exclusivity. The Parties understand that this Agreement is not an exclusive arrangement. The Parties agree that they are free to enter into other similar agreements with other parties.
- b) Independent Contractors. The Parties to this Agreement are independent contractors. Neither Party is an agent, representative, partner, or employee of the other Party.

**8) Waiver**

Neither Party can waive any provision of this Agreement, or any rights or obligations under this Agreement, unless agreed to in writing by the Parties. If any provision, right, or obligation is waived, it's only waived to the extent agreed to in writing

**9) Amendments**

This Agreement may be modified as needed. To make a modification, the Parties have to agree to the modification in writing (an "Amendment"). The terms of this Agreement will apply to any Amendment the Parties make.

**10) Assignment**

The Parties may not assign the responsibilities that they have under this Agreement to anyone else unless both Parties agree to the assignment in writing

**11) Dispute Resolution**

- a) Negotiation. In the event of a dispute, the Parties agree to work towards a resolution through good faith negotiation.
- b) Mediation/Arbitration. If negation is unsuccessful, either Party may initiate mediation or binding arbitration in the State of Florida.



# Global Irrigation Solutions

Water Resource Consulting

- c) Litigation and Choice of Law. If litigation is necessary this Agreement will be interpreted based on the laws of the State of Florida, regardless of any conflict of law issues that may arise. The Parties agree the dispute will be resolved at a court of competent jurisdiction in the State of Florida.
- d) Attorney's Fees. In the event mediation is required, the prevailing party, will be able to recover its attorney's fees and other reasonable costs for a dispute resolved by binding arbitration or litigation.

## 12) Entire Agreement

This Agreement puts the Parties entire understanding of the Services to be performed and anything else the Parties have agreed to in black and white. This Agreement supersedes any other written or verbal communications between the Parties.

## 13) Severability

If any section of this Agreement is found to be invalid, illegal, or unenforceable, the rest of the Agreement will still stand.

## 14) Notices

All notices under this Agreement must be sent by email with read receipt, or by certified or registered mail with return receipt requested.

## 15) Notices must be sent to:

Client	Global Irrigation Solutions, LLC.
The Pines of North Oaks Homeowners Association Attn: Jenniferr Morris PO box 270811 North Oaks, MN 55127	Attn: Jeremy M Mansell 12090 N Thornydale Rd Suite 110, PMB 318 Marana, AZ 85658 jeremy@globalirrigationsolutions.com

21



January 04, 2024

Quality, Efficiency, Integrity

www.rxlandscape.com

## Proposal

### Customer:

The Pines of North Oaks  
1310 East Highway 96, Suite #214  
White Bear Lake, MN 55110

**Salesperson:** David Eddy

**Proposal #:** 60310

### Service Includes:

Per the recommendations of Craig Otto:

- Install (3) Rainbird ESP-LXD 2-Wire Controllers.
- Install (4) Rainbird ESP-LX12MEF Module Controllers.
- Install (7) Master Valves & Flow Meters.
- Replace (66) Hunter Decoders with Rainbird Decoders.
- Install (7) Rainbird IQ Cards and Set Up Central Control.

- (3) EA Rain Bird ESPLXD
- (4) EA Rain Bird ESP12LXMEF
- (4) EA Rain Bird Expansion Module 8 Station for ESPLX Controller
- (7) EA Pig Tail Power Cord
- (7) Each Irrigation Supplies
- (7) EA IQ 4G Cellular Communication Cartridge w/ 1 Year of Service (USA)
- (66) EA Rain Bird FD-101 Field Decoder 1 station 1 Solenoid
- (66) EA King DryConn DBYN-600 Direct Bury Silicone Tube with Yellow Nut (Bag of 2)
- (132) Each Wire Nut
- (7) Each Rainbird FS150B Flow Sensor
- (7) Each 1-1/2" Flo-Span Coupling
- (3) EA Rain Bird Flow Decoder SD210Turf
- (7) Each 12" Standard Valve Box
- (7) EA Hunter PGV Globe/Angle Valve Plastic 1-1/2 in. w/ Flow Control FIPT x FIPT
- (3) EA Rain Bird FD-101 Field Decoder 1 station 1 Solenoid
- (3) EA King DryConn DBYN-600 Direct Bury Silicone Tube with Yellow Nut (Bag of 2)
- (14) Each Wire Nut
- (7) Each 10" Round Valve Box
- (7) Each 1-1/2" Flo-Span Coupling
- (42) Each 1-1/2" PVC Fitting
- (20) Each Wire Nut

(100) Feet Multistrand Wire  
(7) Each 9-Volt Battery  
(7) Each Wireless Rain Sensor

Price: \$123,241.09

\*Price includes materials, delivery and labor to complete the project. Price does not include applicable sales tax. Owner may pay by credit or debit card but is responsible for all transaction fees charged to Prescription Landscape for the processing of the transaction by credit or debit card.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Print Name \_\_\_\_\_

### Terms and Conditions

RESPONSIBILITY FOR DAMAGES: Property damaged caused by Contractor's negligence shall be Contractor's responsibility, except that in no event shall Contractor be responsible or liable for any costs or damages, including consequential or incidental damages, which may arise in any way from the services or information provided herein. The Owner shall report all damages to the Contractor within forty-eight (48) hours after discovery of such damage and permit the Contractor the opportunity to review the damages and determine how to make repairs. Owner shall not have the right to hire someone else to do any repair work without first providing written notice via certified, return receipt mail to Contractor and giving Contractor a maximum of thirty (30) days to perform repairs, or a time period that is mutually agreed upon in writing by the Owner and Contractor. This Service Agreement and Contract constitutes the sole obligation of Contractor.

PRICING: Pricing is Valid for 90 days.

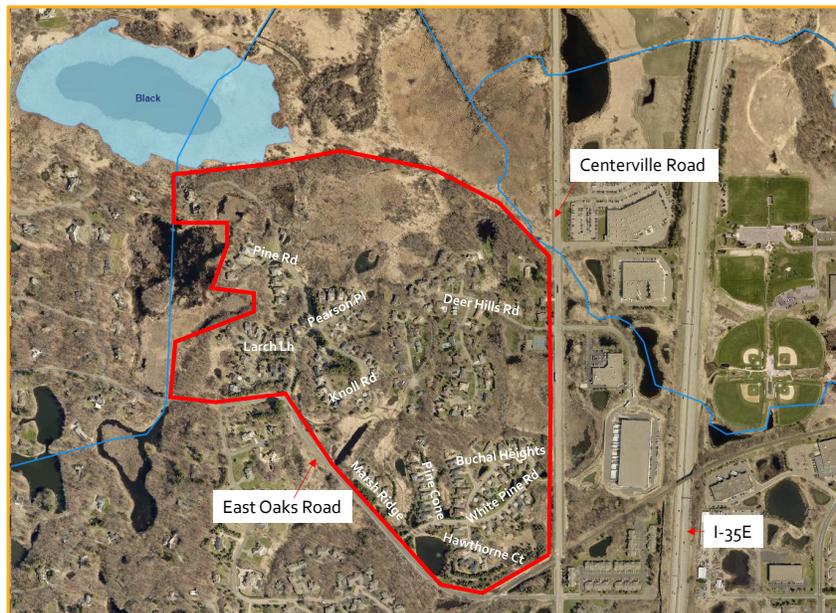
# V. A. The Pines HOA Smart Irrigation Controllers

## LL2 2024-01 Grant Application

Lauren Sampedro  
TEC Meeting  
2/14/2024



### LL2 2024-01 Location Aerial



# Bid Summary



	Horticulture Services	Williston Irrigation	Williston Irrigation	Global Irrigation Solutions	Prescription Landscape
Product Type	Weathermatic	Weathermatic	Hunter ICC2	RainBird ESP	RainBird ESP
Wire System	2-wire	2-wire	n/a	2-wire	2-wire
Master Valve / Flow Sensor	YES	YES	YES	YES	YES
Pine Cone Road	\$4,584.35	\$4,446.82	\$4,357.88		
Marsh Ridge	\$4,351.30	\$4,220.76	\$4,136.34		
Knoll / Pearson	\$5,100.21	\$4,947.20	\$4,848.26		
Pine Road	\$3,021.24	\$2,930.60	\$6,147.62		
Buchal Heights	\$4,839.76	\$4,694.57	\$4,600.68		
<b>Total Premium</b>	<b>\$21,896.86</b>	<b>\$21,239.95</b>	<b>\$24,090.78</b>	<b>\$92,000.00</b>	<b>\$ 123,241.09</b>

## V. B. Education and Outreach Plan

**2024 Edition**  
 Overview and Goals  
 2/14/24



Vadnais Lake Area Water Management Organization

## Overview



The Education and Outreach Plan (EOP) is updated annually as an extension of the 10-year Watershed Management Plan

### **Priority Issue 3: Need for education and involvement from citizens and stakeholders**

Goal 3-1: Support MS4 partners in the implementation of their MS4 permits through VLA WMO's Education and Outreach Program

Goal 3-2: Implement the Education and Outreach Plan

Goal 3-3: Implement education and outreach programs and activities that engage adult and school age residents in the watershed

### **Priority Issue 2: Threatened or impaired groundwater quality or quantity**

Goal 2-3: Enhance education and communication on the use of groundwater and increase focus on water conservation

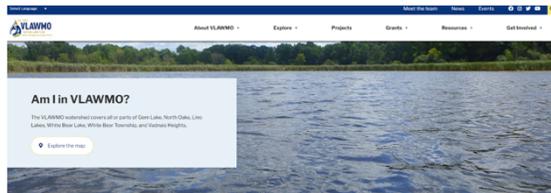
Vadnais Lake Area Water Management Organization



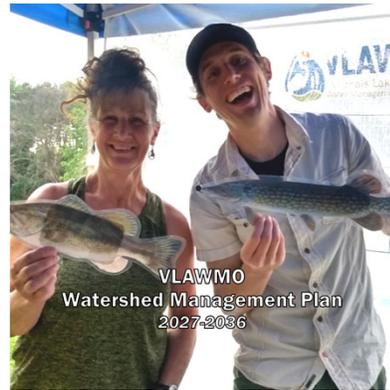
# 2024 Goals

## Capital Improvement Campaigns

- 1) Watershed Management Plan (WMP) stakeholder engagement
- 2) VLAWMO website renovation



Welcome to VLAWMO



- 3) Major BMP campaigns: Wilkinson Deep-Water Wetland, Elmwood Park raingarden, Oak Knoll/Wood Lake Spent Lime study, East Vadnais climate resiliency study

Vadnais Lake Area Water Management Organization



# 2024 Goals

## MS4 Permit Support

- 1) VLAWMO will support partner Cities and Townships in making progress in their MS4s.

### Help Out in a Drought.

**Water efforts are community efforts.**  
Practicing water conservation supports our community. Every effort counts. Save water and save lives for emergencies, firefighting, hospitals, drinking, and many other uses.

**"It's not dead, it's the droughtiest around!"**  
The drought may not end after one or several seasons. Even when drought conditions are officially over, the impact of the drought on forests is long-lasting. They take a couple of years to regenerate themselves. One of the things that rain water slowly soaks into the ground. That moisture is important to the trees. Practice water conservation, even when it looks like water is pouring on the surface.

**Well interference**  
When you have a well, you're tapping into the ground. If you have a neighbor with a well, you're tapping into the same ground. If you have a well that's deeper than your neighbor's, you're tapping into the same ground. If you have a well that's shallower than your neighbor's, you're tapping into the same ground. If you have a well that's the same depth as your neighbor's, you're tapping into the same ground. If you have a well that's deeper than your neighbor's, you're tapping into the same ground. If you have a well that's shallower than your neighbor's, you're tapping into the same ground. If you have a well that's the same depth as your neighbor's, you're tapping into the same ground.

**Prevent water headaches.**  
Well interference occurs when groundwater levels drop below the level of a well, often without the owner's knowledge. This can happen if you have a well that's deeper than your neighbor's, or if you have a well that's shallower than your neighbor's. This can happen if you have a well that's the same depth as your neighbor's, or if you have a well that's deeper than your neighbor's. This can happen if you have a well that's shallower than your neighbor's, or if you have a well that's the same depth as your neighbor's.

### IDDE Overview

Illicit Discharge Detection and Elimination

### Grass clippings are rich in nutrients.

Grass clipping "dumps":  
• Don't blow them into the street or other paved areas. Nitrogen and phosphorus become pollutants when running free on the surface.  
• Never dump them into neighborhood streets, storm drains, waterways, wash basins, forest patches, or your neighbor's yard. The nutrients will pollute and degrade the quality and efficiency of the water.  
• Don't burn. They can add to air pollution and are too valuable of a nutrient to throw away. Nutrients are most at home in the soil.

**Be quick!** More time on the ground is a bigger risk to communities, streams, and wetlands. The resulting algae blooms threaten water of babies and can be toxic.

**Remember not** debris being common or innocuous. Leaving grass clippings into the street, into water ways, dumping into a stream.

**Keep yards, streets, and communities clean and healthy.**

Vadnais Lake Area Water Management Organization

# 2024 Goals



## Communications and Volunteer Community

- 1) Community members utilize watershed knowledge to act on watershed issues with help from VLAWMO's tools and resources.
- 2) Community members are educated on VLAWMO issues and projects.
- 3) Coordinate an active volunteer base that learns and leads.
- 4) Watershed communications are accountable and active in the community

**VLAWMO Grant Programs 101**

Check out local examples and hear the nuts and bolts of our grant program.



Drainage improvements, erosion control, alternative turf, native plantings, and more!

**March 7, 2024**  
6:00-7:00 pm  
Gem Lake Heritage Hall  
4200 Otter Lake Rd Gem Lake, MN 55110

Gain ideas and inspiration for your next water-friendly landscaping project

- Paperwork and planning
- Soil Health Grant
- Landscape Level 1 & 2
- Rain barrels
- Local success stories
- Scheduling an on-site consultation

Free to attend! Register at: [vlawmo.org/events](http://vlawmo.org/events)

or contact:  
651.204.6070  
[nick.voss@vlawmo.org](mailto:nick.voss@vlawmo.org)

 VLAWMO



Vadnais Lake Area Water Management Organization

# 2024 Goals



## Formal Education: Schools

- 1) Schools have established and maintained stormwater BMPs integrated with watershed education efforts.



Vadnais Lake Area Water Management Organization



# 2024 Goals

## Informal Education and Interpretation

1) An appreciation of natural resources is established in the community, fostering ecological awareness, a sense of place, and civic participation.



Vadnais Lake Area Water Management Organization



# 2024 Goals

## Professional Support: BOD, TEC, WAV

1) Key personnel have continued to advance their knowledge of water and related natural resources.

- Supplementary learning
- Blue Thumb partner meetings (new)
- Articles, presentations, or workshops
- News and events in the watershed field
- Volunteer opportunities
- Updated on staff projects and efforts



Vadnais Lake Area Water Management Organization



# Staying connected

TEC packets and upcoming events on agenda

E-newsletter

Social media: @VLAWMO - LinkedIn, Facebook, Instagram

Thank you for serving on our TEC!



Vadnais Lake Area Water Management Organization



# Questions & Discussion



Vadnais Lake Area Water Management Organization

VI. A.

Attachment 1

## Comprehensive Watershed Management Plan:

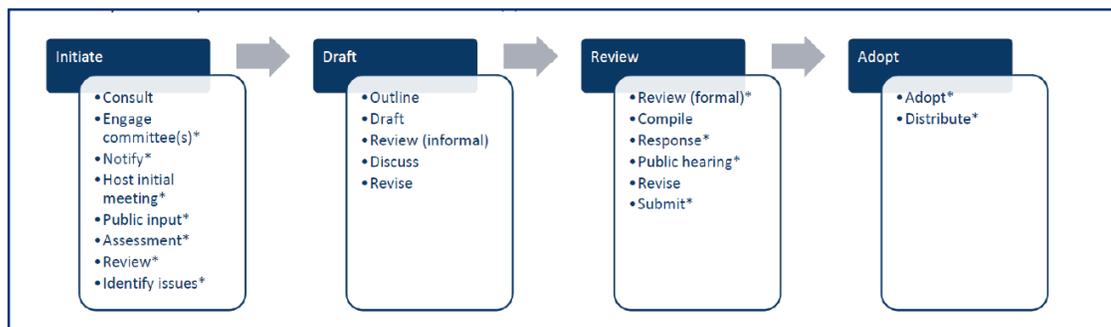
### Update on WMP overall engagement efforts and TEC, CAC, and partner survey

February 14, 2024  
VLAWMO TEC Meeting



## Background

- Since last TEC update, **Initiate** process and public engagement in progress
- VLAWMO staff working closely with HEI
- 60-day comment letters from State review agencies and local partners received (closed Feb. 13)



## Background: Public engagement and survey

- Various events: Virtual and in-person
- Focus on public survey input and invitation to Initial Plan meeting
- Public survey open now (closes March 13)

**A New Chapter for the Watershed**  
*Add your voice to the next 10-year Watershed Management Plan*

**Virtual Coffee Houses**  
*Open house style*

Feb 13 10 AM	←
Feb 20 Noon	←
Feb 27 6 PM	←

**VLAWMO Grant Program 101**  
*Gem Lake Heritage Hall*

**Initial Plan Meeting**  
*Vadnais Heights City Hall*  
*Window for public input*  
*Survey results presented*

March 7 6 PM	←
April 24 6 PM	←

Visit [vlawmo.org/events](http://vlawmo.org/events) for times and locations.

What's this plan and what does it have to do with me? Learn more at: [vlawmo.org/watershedplan](http://vlawmo.org/watershedplan)

**Contribute to our 6-question survey:**

- Online at [vlawmo.org/watershedplan](http://vlawmo.org/watershedplan)
- Find a hardcopy paper survey at these locations **Feb 5 - March 13**  
*Kiosk available during regular business hours*

→ Ramsey County Libraries: Shoreview, White Bear Lake  
 → Tamarack Nature Center

## Background: WMP public engagement survey

- Link on the VLAWMO website
- 6-question survey
- Asks about priorities and places people value
- Includes opportunity for more-detailed response
- Promoted through kiosks at libraries and TNC, flyers at city halls, direct mailing to environmental justice area, and noticed in Press Pubs

**You're Invited:**  
**Provide input for the next 10-year Watershed Management Plan**

*What are your priorities and concerns when it comes to local water resources?*

*How can the public be involved and in the know?*

Learn more and help us assemble the 2027-2036 watershed management plan by:

- \* Take a brief survey: Open Feb 5 – March 13
- \* Consider attending one of our February – April plan-focused events (in-person or virtual)

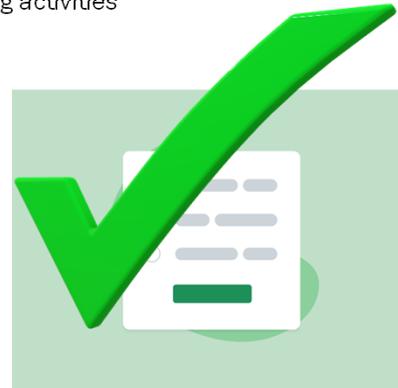
The finished plan will be a tool for completing studies, budgeting, applying for grants, and completing projects that help improve community water resources.

The VLAWMO watershed covers all or parts of Vadnais Heights, White Bear Lake, White Bear Township, North Oaks, Lind Lake, and Gem Lake.

**Learn more and participate at:**  
[vlawmo.org/watershedplan](http://vlawmo.org/watershedplan)

## TEC, CAC, partner survey

- Invitation with link emailed to you on Feb. 5
- Similar goals as public survey with more technical language
- Survey to people working closely with and part of VLAWMO's ongoing activities
- Similar questions to Strategic Direction survey to Board in 2021 and connects smoothly to public survey for analysis
- Working to establish and clarify priorities for new Plan



## TEC, CAC, partner survey

- 7-question survey
- Features more open-ended questions to allow text responses
- Recognizes multiple roles of people surveyed (e.g., TEC representative and city affiliation)
- Asks for ranking of previously established priorities and to select top 7 priorities from a list of 21
- Asks for possible priorities not already included
- Survey link sent on Feb. 5



## TEC, CAC, partner survey

- Have you had a change to review or complete survey?
- Do you have any questions on the survey so far?
- ❖ Please complete before Feb. 26



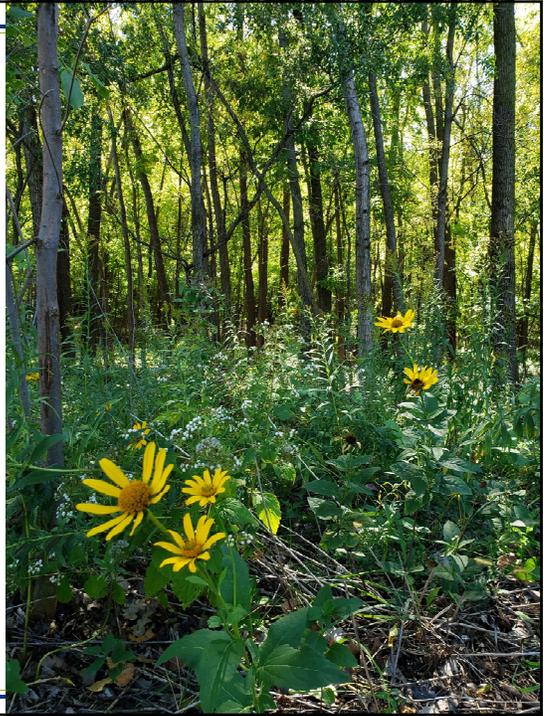
## Board survey

- A survey to the Board will follow the close of both currently open surveys
- The Board survey will have similar questions and include a synthesis of input received from surveys and 60-day comment
- Focus on refining and finalizing priority issues



**Thank you  
for taking this survey**

And for everything that you do as part of VLAWMO



## Memorandum

**To:** Vadnais Lake Area Water Management Organization (VLAWMO)  
**From:** Greg Wilson, Barr Engineering Co.  
**Subject:** Recommended Payment #1 for Oak Knoll Pond Spent Lime Application  
**Date:** January 24, 2024

At its August 2024 meeting, VLAWMO entered into an agreement with Erosion Works to apply spent lime, obtained from the White Bear Lake water treatment facility to Oak Knoll Pond to control sediment phosphorus release. The contract called for a \$1,750 unit price for each load of spent lime applied to the shallower zone (Zone 1) of the pond and a \$4,500 unit price for each load of spent lime applied to the deeper zone (Zone 2) of the pond.

Erosion Works commenced work on the project and applied a single load of spent lime, for the respective zones of the pond, on each of the following dates:

- 8/23/23—Zone 1
- 8/28/23—Zone 1
- 8/30/23—Zone 1
- 10/30/23—Zone 2
- 11/1/23—Zone 2
- 11/6/23—Zone 2
- 11/10/23—Zone 2

The attachment provides copies of Erosion Works' invoicing for each spent lime load applied to Oak Knoll Pond. Barr recommends that VLAWMO pay Erosion Works the total invoiced amount of \$23,250 for the seven (7) loads of spent lime applied to Oak Knoll Pond in 2023.



Erosion Works  
 8177 199th Ave NW  
 Elk River, MN 55330

# Invoice

Date	Invoice #
8/23/2023	86501

Phone 763-262-7458  
 Fax 763-712-1851  
 Email: erosionworks@msn.com  
 Website: www.erosionworks.net

<b>Bill To</b>
Vadnais Lake Area Water Management 800 East Co. Rd E Vadnais Heights, MN 55127

P.O. No.	Terms	Project

Description	Quantity	Rate	Amount
Hydro Seed @ Oak Knoll Pond Easements	1	1,750.00	1,750.00
Did the above work on 8/23 as requested by Wade			

Thank you for your business.	<b>Total</b>	\$1,750.00
------------------------------	--------------	------------



Erosion Works  
 8177 199th Ave NW  
 Elk River, MN 55330

# Invoice

Date	Invoice #
11/10/2023	88341

Phone 763-262-7458  
 Fax 763-712-1851  
 Email: erosionworks@msn.com  
 Website: www.erosionworks.net

Bill To
Vadnais Lake Area Water Management 800 East Co. Rd E Vadnais Heights, MN 55127

P.O. No.	Terms	Project

Description	Quantity	Rate	Amount
Hydro Seed - Spent Lime Treatment @ Oak Knoll White Bear Lake	1	4,500.00	4,500.00
Did the above work on 11/10 as requested by Greg			

Thank you for your business.	<b>Total</b>	\$4,500.00
------------------------------	--------------	------------



Erosion Works  
 8177 199th Ave NW  
 Elk River, MN 55330

# Invoice

Date	Invoice #
11/6/2023	88216

Phone 763-262-7458  
 Fax 763-712-1851  
 Email: [erosionworks@msn.com](mailto:erosionworks@msn.com)  
 Website: [www.erosionworks.net](http://www.erosionworks.net)

<b>Bill To</b>
Vadnais Lake Area Water Management 800 East Co. Rd E Vadnais Heights, MN 55127

P.O. No.	Terms	Project

Description	Quantity	Rate	Amount
Hydro Seed - Spent Lime Treatment @ Zone 2 Oak Knoll Pond	1	4,500.00	4,500.00
Did the above work on 11/6 as requested by Greg			

Thank you for your business.	<b>Total</b>	\$4,500.00
------------------------------	--------------	------------



Erosion Works  
 8177 199th Ave NW  
 Elk River, MN 55330

# Invoice

Date	Invoice #
11/1/2023	88088

Bill To
Vadnais Lake Area Water Management 800 East Co. Rd E Vadnais Heights, MN 55127

Phone 763-262-7458 Fax 763-712-1851 Email: erosionworks@msn.com Website: www.erosionworks.net
--

P.O. No.	Terms	Project

Description	Quantity	Rate	Amount
Hydro Seed - Spent Lime Treatment @ Oak Knoll Pond	1	4,500.00	4,500.00
Did the above work on 11/1 as requested by Greg			

Thank you for your business.	<b>Total</b>	\$4,500.00
------------------------------	--------------	------------



Erosion Works  
 8177 199th Ave NW  
 Elk River, MN 55330

# Invoice

Date	Invoice #
10/30/2023	88050

<b>Bill To</b>
Vadnais Lake Area Water Management 800 East Co. Rd E Vadnais Heights, MN 55127

Phone 763-262-7458 Fax 763-712-1851 Email: erosionworks@msn.com Website: www.erosionworks.net
--

P.O. No.	Terms	Project

Description	Quantity	Rate	Amount
Hydro Seed @ Oak Knoll Pond White Bear Lake - Zone 2	1	4,500.00	4,500.00
Did the above work on 10/30 as requested by Greg			

Thank you for your business.	<b>Total</b>	\$4,500.00
------------------------------	--------------	------------



Erosion Works  
 8177 199th Ave NW  
 Elk River, MN 55330

# Invoice

Date	Invoice #
8/30/2023	86662

Phone 763-262-7458  
 Fax 763-712-1851  
 Email: erosionworks@msn.com  
 Website: www.erosionworks.net

Bill To
Vadnais Lake Area Water Management 800 East Co. Rd E Vadnais Heights, MN 55127

P.O. No.	Terms	Project

Description	Quantity	Rate	Amount
Hydro Seed @ Oak Knoll Pond Easements on 8/30	1	1,750.00	1,750.00
Did the above work on 8/30 as requested by Dylan			

Thank you for your business.	<b>Total</b>	\$1,750.00
------------------------------	--------------	------------



Erosion Works  
 8177 199th Ave NW  
 Elk River, MN 55330

# Invoice

Date	Invoice #
8/28/2023	86590

Phone 763-262-7458  
 Fax 763-712-1851  
 Email: erosionworks@msn.com  
 Website: www.erosionworks.net

<b>Bill To</b>
Vadnais Lake Area Water Management 800 East Co. Rd E Vadnais Heights, MN 55127

P.O. No.	Terms	Project

Description	Quantity	Rate	Amount
Hydro Seed @ Oak Knoll Pond Easements	1	1,750.00	1,750.00
Did the above work on 8/28 as requested by Wade			

Thank you for your business.	<b>Total</b>	\$1,750.00
------------------------------	--------------	------------

## Memorandum

**To:** Vadnais Lake Area Water Management Organization (VLAWMO)  
**From:** Greg Wilson, Barr Engineering Co. (Barr)  
**Subject:** Recommended Approach for 2024 Oak Knoll Pond Spent Lime Applications  
**Date:** January 31, 2024

At its August 2024 meeting, VLAWMO entered into an agreement with Erosion Works to apply spent lime, obtained from the White Bear Lake water treatment facility to Oak Knoll Pond to control sediment phosphorus release. The contract called for 14 loads of spent lime applied to the shallower zone (Zone 1) of the pond and eight loads of spent lime applied to the deeper zone (Zone 2) of the pond.

Erosion Works commenced work on the project and applied three loads of spent lime to the shallower zone (Zone 1) of the pond during the latter half of August 2023 and four loads to the deeper zone (Zone 2) between late October and the middle of November 2023. As a result, the difference between the contracted and actual applied amount of spent lime corresponds with approximately 11 loads of spent lime that could still be applied to Zone 1 and four loads that could be applied to Zone 2 of Oak Knoll Pond to complete the full scope of work envisioned for the overall treatment contract.

VLAWMO staff have also completed pond water quality monitoring efforts since the spring of 2023 that provide insight into how the spent lime applications resulted in baseline water quality changes to Oak Knoll Pond. In general, it appears that the spent lime volume applied to-date has dropped the total phosphorus concentrations in Oak Knoll Pond by approximately half, both at the surface and bottom of the pond, with no sign of internal phosphorus release since the Zone 2 applications occurred.

Since Erosion Works expressed an interest and willingness to extend the contract end date at the agreed upon unit prices for completing the prescribed spent lime applications to Oak Knoll Pond in 2024, Barr recommends that VLAWMO continue to work with them to apply the remaining contracted loads of spent lime to the respective treatment zones of Oak Knoll Pond during the spring and early summer months of this year. It is also recommended that VLAWMO staff continue to monitor the pond water quality throughout the 2024 open water season, following previous recommendations for monitoring parameters, locations, and frequencies.

**FIRST AMENDMENT TO CONTRACTOR SERVICES AGREEMENT**

THIS FIRST AMENDMENT TO CONTRACTOR SERVICES AGREEMENT (“**Amendment**”) is made and entered into this 24 day of January 2024, by and between Vadnais Lake Area Water Management Organization, a Minnesota joint powers entity (“**VLAWMO**”), and Erosion Works (“**Contractor**”). VLAWMO and Contractor may hereinafter be referred to individually as a “party” or collectively as the “parties.”

**RECITALS**

- A. VLAWMO and Contractor entered into a Contractor Services Agreement (“**Agreement**”) effective as of August 10, 2023, to apply spent lime on Oak Knoll Pond.
- B. Contractor was to complete the project by November 3, 2023 under the Agreement, but due to a period of unavailability of the spent lime product through no fault of VLAWMO or Contractor, the 2023 application season ended with only part of the project being completed.
- C. The parties desire to adopt this Amendment to extend the Agreement and the project completion deadline through the 2024 season to allow Contractor to complete the project.

**AMENDMENT**

In consideration of the ongoing promises and agreements by the parties, the parties hereby agree as follows:

- 1. Schedule. Section 3 of the Agreement is hereby amended by deleting the reference to “November 3, 2023” and replacing it with “November 29, 2024.”
- 2. No Other Changes. The parties agree the Agreement, as amended herein, is extended and remains in full force and effect, and that no other modifications to its terms or conditions are intended by this Amendment.

IN WITNESS THEREOF, the parties hereto have executed this Amendment effective as of the date of the last party to execute it.

VLAWMO:

Contractor:

By: \_\_\_\_\_

By: Chad Mitchell

Its: \_\_\_\_\_

By: \_\_\_\_\_

Its: Manager

Its: \_\_\_\_\_

Date: \_\_\_\_\_

Date: 01/24/2024

**Memorandum of Understanding Between  
Vadnais Lake Area Watershed Management Organization  
and the North Oaks Home Owners' Association**

This Memorandum of Understanding (“MOU”) is made and entered into by and between the Vadnais Lake Area Watershed Management Organization (“VLAWMO”) and the North Oaks Home Owners’ Association (“NOHOA”) each acting by and through its duly authorized governing bodies.

Whereas, VLAWMO and NOHOA mutually desire to improve and protect shoreline areas and water quality;

Whereas, the invasive Yellow iris removal project has been underway for the past 4 years—beginning with shoreline areas around Deep Lake and expanding to include shoreline areas around Pleasant Lake in 2023—and is making important progress in removing this invasive species and protecting native plant community abundance and diversity;

Whereas, rare plant species of conservation concern, including Water willow (*Decodon verticillatus*), are found in North Oaks, and these plants are found in shoreline areas that are also infested with Yellow iris;

Whereas, Yellow iris infestations occur in the drinking water chain of lakes and are most abundant in North Oaks waterbodies in the Vadnais Lake Area Watershed;

Whereas, control of Yellow iris in North Oaks waterbodies helps to protect uninvaded shoreline areas downstream such as Sucker and East Vadnais Lakes;

Whereas, healthy native plant communities offer increased resilience and ability to buffer against climate variability and disturbance;

Whereas, the parties wish to clearly define their respective roles and financial support for Yellow iris removal in 2024 as part of the VLAWMO maintenance agreement with Natural Shore Technologies, Inc. (NST);

Now, therefore, the parties hereby agree to enter into this MOU:

1. NOHOA. NOHOA agrees to do the following:

- a. Reimburse the VLAWMO for \$3,000 of the costs in the maintenance contract between VLAWMO and NST for Yellow iris removal on Deep and Pleasant Lakes.

2. VLAWMO Responsibilities. VLAWMO agrees to do each of the following:

- a. Provide for management and oversight of the maintenance agreement and activities included therein with NST.
- b. Pay the overall contract with NST at the end of the 2024 growing season that includes a VLAWMO contribution of \$3,000 and NOHOA contribution of \$3,000 for Yellow iris removal on Deep and Pleasant Lakes.

c. Invoice NOHOA for its portion of completed Yellow iris removal efforts after the invoice for 2024 work has been received from NST by VLAWMO.

3. Use of Any Related Documentation. Reports or documents produced in whole or in part under this MOU will be subject to fair use and may not be the subject of an application for copyright by or on behalf of VLAWMO nor NOHOA. VLAWMO and NOHOA may use, without restriction, products of the removal and maintenance work including, but not limited to, any associated reports and documents.
4. Term. This MOU is effective on the date of the last party to execute it. This MOU shall terminate upon completion of maintenance work with NST in 2024 and reimbursement for the professional services costs incurred as provided herein.
5. Termination. Each party has the right to terminate this MOU at any time and for any reason by submitting written notice of the intention to do so to the other party at least thirty (30) days prior to the specified effective date of such termination. NOHOA shall remain responsible for reimbursing the VLAWMO for the professional costs it incurs prior to the effective date of the termination.
6. Entire Agreement: Amendments. This MOU constitutes the entire agreement between the parties regarding this matter. No amendments to this MOU are valid unless they are in writing and signed by both parties.

IN WITNESS WHEREOF, the parties have caused this MOU to be executed by their duly authorized representatives and is effective as of the date of the last party to execute it.

**Vadnais Lake Area Watershed  
Management Organization**

\_\_\_\_\_  
Chairperson

\_\_\_\_\_  
Administrator

Date: \_\_\_\_\_

**North Oaks Home Owners' Association**

  
\_\_\_\_\_  
Authorized Representative

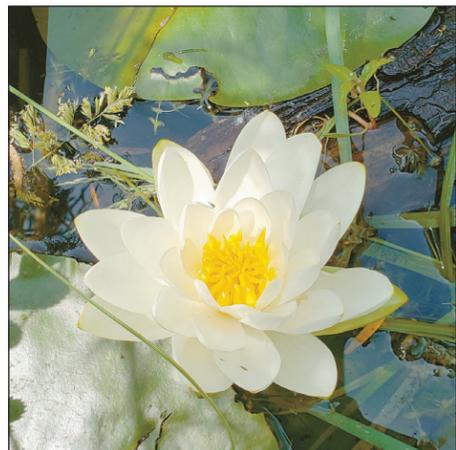
Date: 1/11/23

# Aquatic plants vs native plants found in Pleasant Lake

By Dawn Tanner

Contributing Writer

A priority for VLAWMO, NOHOA, and SPRWS during the 2023 growing season was to learn and share more information about aquatic plants and their distribution in Pleasant Lake. In the spring, we conducted a survey for Curly-leaf pondweed. Curly-leaf pondweed is invasive and grows early in the season, often starting to grow even under the ice and before native aquatic plants. Curly-leaf pondweed dies back in the summer. Other plant species, especially natives, grow where Curly-leaf pondweed was found early in the season. Later in the summer, we came back and did a plant survey that was focused on native plant species and also included Eurasian watermilfoil, which is invasive but tends to grow along with Minnesota native plants. Early- and late-season plant surveys combined together provide a more complete picture of vegetation in a lake.



The white water lily is recognized by its large, floating, circular leaves and large, white flowers. The flower can be up to 5 inches wide with numerous white petals and is attached to a separate stem from the leaf.

To conduct plant surveys, VLAWMO staff work with Ramsey County Soil and Water Conservation Division (RCSWCD). RCSWCD provides staff, expertise, and equipment for standardized surveys that can be compared across the watershed. Those surveys include using a rake head that is tied to a rope to sample vegetation throughout the lake at regular intervals. This type of survey at standardized points is a "point-intercept survey." A special GPS unit is also used to capture the bottom contours of the lake and measure where and how thick the plants are. The output from that unit allows RCSWCD to build a map of

the vegetation in the lake. This map doesn't tell us what kind of plants are there; it tells us how much of the water is filled with plants.



Here is a sampling rake for surveys.

The actual relationship is a little more complicated than a simple density measure. Stay with me here. It is a measure of "biovolume," which means the amount of plant height in a pixel of water column. The output spectrum ranges from blue to red. Blue shows no plant height compared to the bottom, while red shows plants that are growing close to the surface and filling the water column.

The biovolume spectrum is measured along a continuum that has smaller increments and ranges from blue to green (no plants to sparse plants in the water column), then yellow (medium), orange (fairly dense plants that approach the surface), to red. Red is plants that fill the water column from the bottom of the lake to the surface of the water. When we add the information that we get from throwing the rake and directly sampling the plants, we can say more about species diversity and distribution.

As we've discussed in previous articles this fall in North Oaks News, native aquatic plants take up nutrients in the lake and make the water more clear. Native plants are good for water quality. Without them, algae, especially blue-green algae, take up those nutrients, making the water murky and green. These algae can produce harmful toxins that are dangerous for humans and pets.

We often see increased plant growth as water quality improves in a lake. This happens because the algae are no longer capturing so much of the nutrients and sunlight to fuel their growth. But, you may be wondering, do these plants grow everywhere?

This is where the GPS survey of the lake is especially helpful. When we look at Pleasant Lake (see the attached figure), we see that a fairly large area doesn't have plants filling the water column at all. This occurs in the deeper-water areas, where plants are unable to reach the sunlight because it is filtered out by the water. The figure shows contour lines with depth in feet. Deeper water filters out more light than shallow water. Plants tend to be abundant in shallow water and grow to the surface, from the shore to 10-15 feet of water, depending upon water quality. Beyond that, plants can't reach the light and aren't found or are only very sparse.

Looking closely at Pleasant Lake, this pattern holds. The middle of the lake is solid blue, without plants filling the water column. The blue range on the map is 61% of the lake, or 368 acres out of 603 acres that were surveyed. When we throw the rake in these areas, we pull up an empty rake, which reinforces what we learn by measuring biovolume.

As we move along the continuum from blue, there is a large area of green that is sparsely filled with plants. The green and blue areas combined are 79% of the lake. Looking close to the shoreline areas around the lake and where the water is most shallow, plants are abundant, and this is where we see areas shaded in yellow, orange, and red. Combined yellow, orange and red constitutes 21% of the lake. Very thick areas of plants that often reach the surface account for only 11% of the lake and the shallowest areas. Those plants in shallow water provide important

habitat for wildlife. These areas are some of the best places for watching fish, birds, muskrats, and, if you're very lucky, the occasional family of otters.

Check the VLAWMO website for aquatic vegetation survey results and reports for Pleasant Lake and other lakes in the watershed.

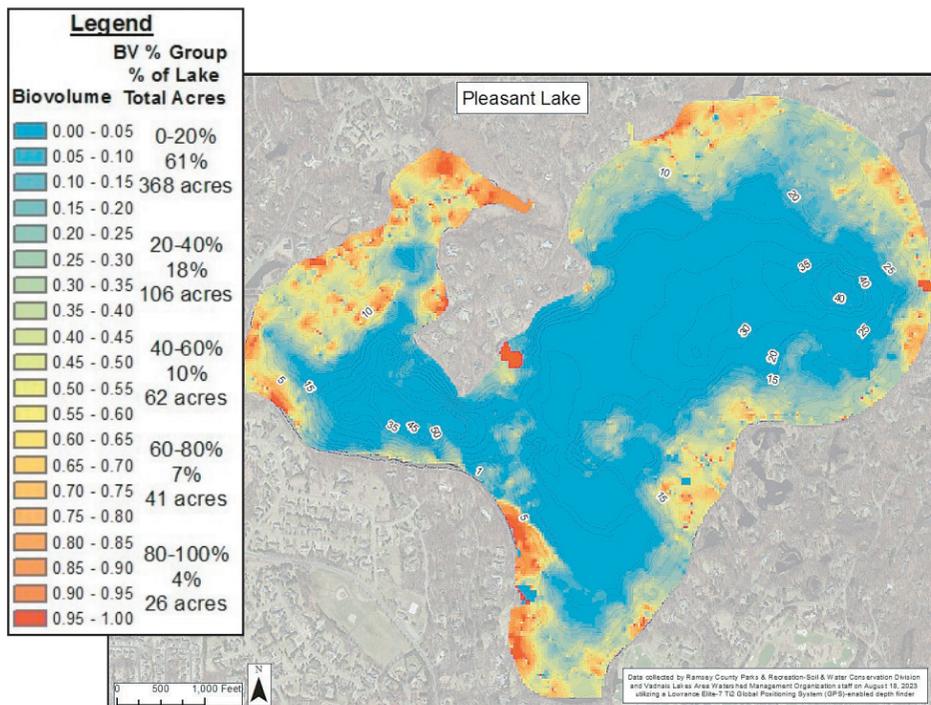
*Dawn Tanner is the VLAWMO Program Development Coordinator. Submitted in partnership with the North Oaks Homeowners' Association (NOHOA) and St. Paul Regional Water Services (SPRWS)*



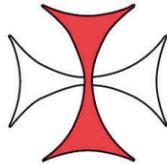
A plant community from under water to the surface.



A family of otters.



The figure shows contour lines with depth in feet. Deeper water filters out more light than shallow water.



**St. Odilia School**  
*Educating minds and hearts since 1962*



*Perfect class sizes & individualized attention for children to grow in*

***Faith, Knowledge, Compassion & Courage.***

**www.stodiliaschool.org | 651-415-3310**  
3495 Victoria St N, Shoreview, MN 55126