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VLAWMO
Vadnais Lake Area
Water Management Organization

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

BOARD OF DIRECTORS MEETING AGENDA

7:00 PM
April 26, 2023
Vadnais Heights City Hall, Council Chambers; 800 County Road E, East, Vadnais Heights

= requested Board action

I. **Call to Order**, Chair, Jim Lindner

II. **Approval of Agenda**

III. **Approval of February 28th, 2022 Board Meeting Minutes**

IV. **Visitors and Presentations**
- A. Oath of Office - Welcome Directors John Shuman and Katherine Doll Kanne **Pg. 11**
- B. TEC Report to the Board & Finance Report – April 2023– Terry Huntrods **Pg. 13**
- C. Public visitors – non agenda items

V. **Consent Agenda** - *Directors may request to move any item to business agenda for discussion*
- A. Update on Wilkinson Lake Deep Water Wetland Restoration Project **Pg. 23**
- B. Consider Public Drainage Inspection Protocol & 2023 Public Drainage System Inspection Report **Pg. 27**
- C. Consider VLAWMO Monitoring Field Safety Policy **Pg. 49**
- D. Consider authorizing Amelia Lake SLMR **Pg. 55**
- E. Consider MOU with NOHOA and revised service agreement for 2023 with RCD for Pleasant Lk aquatic plant survey **Pg. 57**
- F. Update on E Vadnais Lake Subwatershed Resiliency Study **Pg. 69**

VI. **Business**
- A. **Administration**
  1. Election of Board Officers, VLAWMO Subcommittee and Update on TEC chair /officers- Phil (10 Mins.) **Pg. 71**
- B. **Projects and Programming**
  1. Consider 2022 Audit –presentation CLA - (10 mins.) **Pg. 74**
  2. Consider Resolution 01-2023 regarding Oak Knoll Pond spent lime demonstration project. Phil/Dawn/Greg Wilson. - (10 mins.) **Pg. 81**
- C. **Budgets**
  1. Discussion and Consideration of 4-year partnership projects table- Phil (15 mins) **Pg. 107**
  2. Discussion and authorization of VLAWMO subcommittee to provide recommendations on rough draft preliminary 2024 budget –Phil (10 mins.) **Pg. 118**

VII. **Discussion**

VIII. **Administration Communication**
- A. Discussion on possible VLAWMO project summer tour

IX. **Adjourn:** Next regular meeting: June 28, 2023

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The Vadnais Lake Area Water Management Organization
800 County Road E East, Vadnais Heights, 55127 651-204-6070
Website: www.vlawmo.org; Email: office@vlawmo.org

MINUTES OF THE BOARD OF DIRECTORS – FEBRUARY 28, 2023 REGULAR BOARD MEETING
GEM LAKE HERITAGE HALL 4200 OTTER LAKE ROAD – GEM LAKE, MN 55110

Attendance		Present	Absent
Jim Lindner, Chair	City of Gem Lake	x	
John Shuman	City of North Oaks	x	
Rob Rafferty	City of Lino Lakes	x	
Ed Prudhon	White Bear Township	x	
Dan Jones, Vice Chair	City of White Bear Lake		x*
Steve Rogers	City of Vadnais Heights	x**	
Phil Belfiori	Administrator	x	
Brian Corcoran	Water Resources Mgr.	x	
Dawn Tanner	Program Development Coord.	x	
Nick Voss	Education & Outreach Coord.	x	
Lauren Sampedro	Watershed Tech & Program Coord.	x	

*= with prior notice
** = alternate

Others in attendance: None

I. Call to Order

The meeting was called to order at 7:00 pm by Chair Lindner.

II. Approval of Agenda

The agenda for the February 28, 2023 Board meeting was presented for approval.

A motion was made by Director Rafferty and seconded by Director Rogers to approve the February Board meeting agenda.

Vote: Shuman: aye, Rogers: aye. Lindner: aye, Prudhon: aye, Rafferty: aye. Motion passed.

III. Approval of Minutes

The minutes from the December 16, 2022 Board meeting were placed on the agenda for approval, as presented. No comments from the Directors.

A motion was made by Chair Lindner and seconded by Director Rafferty to approve the December 16th meeting minutes. Vote: Shuman: aye, Rogers: aye. Lindner: aye, Prudhon: aye, Rafferty: aye Motion passed.

IV. Visitors and Presentations

A. TEC Report to the Board and February Finance Report

Administrator Belfiori presented the February finance report and February TEC report to the Board as included in the packet. Notable items include finalization of the biochar project, efforts in spent lime studies, and a TEC elevator speech resource from the February 2023 TEC meeting.

B. Public Visitors

None

V. Consent Agenda

Chair Lindner asked if any Board members wished to speak on any of the consent agenda items, no requests were made from directors.

Consent agenda items on the agenda and included in the February Board packet were as follows:

A. Consider MOU for Deep Lake shore land wetland restoration with NOHOA

B. Consider Rotary Park MOU with City of White Bear Lake on wetland restoration plan development

C. Update February 1 public meeting on spent lime demonstration feasibility study at Oak Knoll Pond

D. Consider 2022 annual report draft and monitoring report for submittal to BWSR et. al.

E. Consider designation of legal publication – Press Publications and VLAWMO website

F. Consider 2023 Board meeting dates

G. update on Vadnais-Sucker Lakes Regional Park restoration project

A motion was made by Director Rafferty and seconded by Director Prudhon to approve the consent agenda. Vote: Shuman: aye, Rogers: aye. Lindner: aye, Prudhon: aye. Rafferty: aye Motion passed.

D. Public Visitors – Non agenda items

None

VI. Business

A. Administration

1. Consider tabling oath of office for new members, election of Board, subcommittee officers and appointment of TEC chair/officers to April 26, 2023 meeting

Chair Lindner proposed tabling this item until the April 2023 Board of Directors meeting.

A motion was made by Director Rafferty and seconded by Director Shuman to approve tabling oath of office for new members, election of Board, subcommittee officers and

appointment of TEC chair/officers to the April 26, 2023 Board meeting, Vote: Rafferty: aye, Shuman: aye, Rogers: aye. Lindner: aye, Prudhon: aye. Motion passed.

B. Projects and Programming

1. Consider landscape level 2 grant application LL2 2023-01 WBT smart irrigation controllers pilot

Sampedro presented the proposed project locations at Polar Lakes Park, the Township administration office, and Columbia Park, noting that the projects support the North and East Metro Groundwater Management Area conservation efforts. Upgrades to the irrigation systems will be installed with weather sensors, creating more efficient watering schedules and reducing groundwater use. It is anticipated that the project will result in a groundwater use reduction over an area of 46 acres.

Discussion:

Chair Lindner asked what a smart irrigation controller is. Sampedro explained that it's a programmable irrigation system controller that corresponds to weather or soil moisture conditions. It also allows for remote scheduling using apps on a phone or tablet.

Director Shuman asked about if this smart irrigation is replacing another system. Sampedro provided that smart irrigation controllers are intended to replace the current system with technological advances and water conservation improvements.

Chair Lindner asked about whether the systems are dependent on wifi, Sampedro provided that the systems would be connected to cell service since the proposed locations are not set up to support wifi.

Director Prudhon inquired on whether the cell reception might connect to other municipal communication systems such as well monitoring, Sampedro responded that this was a good question and stated that it's possible but it would require further investigation.

Director Rogers asked about estimated water savings, Sampedro provided that each system would have a flow sensor to measure the benefits. Director Rogers asked about how the effort began, Administrator Belfiori noted that it began in January 2022 as part of a Board strategic visioning meeting. Following this meeting, planning and discussions took place throughout 2022 to get the effort to the current status with a grant application that we see presented before the Board now. Per Board direction the findings of the pilot program will be brought to the Board for review regarding possible expansion or continuation of similar irrigation efforts.

Director Prudhon commented that it's a smart effort for a City or Township's array of water saving strategies. He asked if school districts are capable of using the program, Sampedro affirmed that they are eligible to apply.

Director Rafferty commented that the City of Lino Lakes implements a program for residents to purchase smart irrigation controllers, supported by an Anoka County grant program. Rafferty asked about future possibilities for applying it to other cities. Administrator Belfiori responded that the VLAWMO Board supported including irrigation

controllers in the scope of VLAWMO's grant programs in 2022 and that VLAWMO will continue to seek opportunities through that venue until the funding is depleted. Chair Lindner provided that the 2024 budget conversation is soon to occur in upcoming Board meetings and this program may be included in it. Sampedro provided that more funding is available in the Landscape Level 2 grant program for 2023 due to the $75,000 of additional funding that was received from BWSR for partnership projects.

A motion was made by Director Prudhon and seconded by Director Rafferty to approve the Landscape Level 2 grant application 2023-01 at 90% of eligible project expenses, not to exceed $12,949.20 in accordance with VLAWMO staff's recommendation and established program guidelines and authorize staff to sign grant agreement with the Township consistent with approved application. Vote: Shuman: aye, Rogers: aye, Rafferty: aye, Lindner: aye, Prudhon: aye. Motion passed.

2. Consider landscape level 2 grant application LL2 2023-02 City of VH smart irrigation controllers pilot

Sampedro presented the grant application proposed from the City of Vadnais Heights for smart irrigation controllers. This effort proposes updates to the irrigation systems at the Vadnais Heights City Hall and the Vadnais Commons Community Park. The project is within the North and East Metro Groundwater Management Area. The two locations will implement two types of irrigation controllers, and the pilot program will seek to compare the two controller types to determine the best fit for the City and which have the greatest groundwater conservation benefits.

Discussion:

Director Lindner commented that this effort benefits from evaluating technology at the very start, and that this helps balance the rapid pace at which technology is advancing.

Director Shuman asked whether equipment is being leased or bought. Sampedro responded that the soil moisture sensor (Baseline) is being leased for 1 year while the Hunter controller is being purchased with the expectation the City will use it for 5 years.

Director Rogers asked what the difference is between the two types of sensors as well as the difference between VLAWMO's Landscape Level 1 and Landscape Level 2 grant programs. Sampedro responded that the Baseline controller uses a soil moisture sensor to determine when to water and the Hunter controller uses a weather-based sensor. She explained that the Landscape Level 1 projects are smaller scale and are primarily residential projects like shoreline stabilization projects and yard raingardens and the Landscape Level 2 grant projects are larger scale and focus on partnership projects with VLAWMO's communities.

A motion was made by Director Rogers and Seconded by Director Shuman to approve the Landscape Level 2 grant application 2023-02 at 90% of eligible project expenses, not to exceed $7,211.70 in accordance with VLAWMO staff's recommendation and established program guidelines and authorize staff to sign the grant agreement with the City consistent with the approved application. Vote: Shuman: aye, Rogers: aye, Rafferty: aye, Lindner: aye, Prudhon: aye. Motion passed.

3. Consider landscape level 2 grant application LL2 2023-03 City of VH Westfield Park

Sampedro presented the grant application from the City of Vadnais Heights for a bioswale at Westfield Park northwest of the park's warming house. The project would be over 3,700 sq feet and would involve the installation of a dry creek bed and rock checks to slow down runoff coming from the street, and over 600 plants. Sampedro noted that native plantings help to provide water quality benefits and improve pollinator habitat. She also noted this project would have high visibility from the public, and that formal education signage is proposed to coincide with the bioswale.

Discussion:

Director Shuman asked about the neighborhood beautification benefits of the project, Sampedro responded that the project is designed with a planting plan that supports durability, practical maintenance, and diverse flowering plants.

Director Rogers asked about what a bioswale is. Sampedro provided that a bioswale is a vegetated channel designed to convey stormwater runoff while filtering it so that pollutants are reduced downstream.

Director Prudhon asked how a bioswale is different from a raingarden. Sampedro replied that raingardens have amended soil designed for infiltration and are typically 6-12 inches in depth.

Chair Lindner commented that while public works is expected to maintain the project, public works is also the applicant. Sampedro concurred and added that planning and conversations took place with the City and public works to compose the grant application.

Director Rogers asked how pollutant loads are calculated. Sampedro explained that they're derived from the Minimal Impact Design Standards (MIDS) calculator, which is a software tool from the MPCA.

Director Prudhon commented that he thought the bid turnout was impressive. Sampedro concurred and noted that the grant award is based on the lowest bidder per VLAWMO's grant policy.

A motion was made by Director Rogers and Seconded by Director Prudhon to approve the Landscape Level 2 grant application 2023-03 at 50% of eligible project expenses, not to exceed $15,994.09 in accordance with VLAWMO staff's recommendation and established program guidelines and authorize staff to sign grant agreement with the City consistent with the approved application. Vote: Shuman: aye, Rogers: aye, Rafferty: aye, Lindner: aye, Prudhon: aye. Motion passed.

4. Consider in-lake management feasibility study of Tamarack and Wilkinson Lakes

Tanner introduced the scope and contract as provided in the packet, noting that Tamarack and Wilkinson Lakes are listed by the MPCA as impaired waterbodies for nutrients. The scope for the feasibility effort is to be completed in 2023 by Barr Engineering and will include sediment core collection, phosphorus fractionation, development of an alum dosage and application plan, and an in-lake treatment feasibility report. Addressing the internal load of the lakes may be an appropriate action for lake improvements. The feasibility study will indicate if internal load treatment is a viable and cost-effective strategy for lake improvement. Tanner noted that this feasibility may have additional partner support from RCSWCD as part of their WBIF grant with BWSR.

Tanner concluded that VLAWMO has sufficient funds identified in the 2023 VLAWMO budget if support from RCSWCD/BWSR is not approved by BWSR.

Discussion:

Director Prudhon asked about a time estimate for the study. Tanner replied that the study will be completed in the growing season of 2023 with additional time for write-up and analysis.

A motion was made by Director Shuman and seconded by Director Rafferty to authorize the scope of work and contract with Barr Engineering for the In-Lake Management Feasibility Study of Tamarack and Wilkinson Lakes, at a cost to VLAWMO of $26,500. Vote: Shuman: aye, Rogers: aye, Rafferty: aye, Lindner: aye, Prudhon: aye. Motion passed.

5. Update on Wilkinson BMP technical memos, permitting, and public engagement

Tanner presented the Wilkinson BMP project update starting with the Excel Dashboard project status to date. Tanner noted that the joint application for the wetland exemption was submitted by HEI, and the application comment period closes tomorrow (3-1-23). Tanner explained efforts in stakeholder engagement that have taken place in recent months including public meetings and a current newspaper publication update on the project.

Discussion:

Chair Lindner asked about whether this item requires Board action, Tanner replied that no action is requested and that the update is informational.

6. Update on drone inspection for public ditch 14 main stem

Corcoran provided background on County Ditch 14, Lambert Creek, noting that it operates under State statute 103 B. The ditch transfer from County authority to VLAWMO took place in the early 1980's. He discussed in 2022, the VLAWMO Board approved a public drainage ditch policy and in late 2022, VLAWMO and the City of Vadnais Heights surveyed a portion of the ditch using a drone. Another drone survey is expected to occur on the un-surveyed portion this spring. Corcoran added that the tool is especially efficient to take records and document problem areas. Corcoran played a video of the ditch survey with a narration of the visuals.

Discussion:

Director Rogers inquired about the benefits of the Lambert Lake meander. Tanner explained that the water will move through the system slower and sediment and nutrients will settle out and stay in the wetland system longer.

Director Prudhon asked to verify the date that the drone footage was taken. Corcoran replied footage was taken 11/22/22 and that it was intentionally selected to target partially frozen conditions with dead foliage for enhanced visibility. Corcoran concluded that drone surveys are intended to be completed annually and will be made available for the Board to view.

VII. Discussion

Administrator Belfiori relayed an update from the MPCA. The MPCA recently contacted VLAWMO regarding scheduling a meeting about beginning TMDL reports for Tamarack, West Vadnais, and Pleasant Lakes. The VLAWMO Board's 5-year plan includes strategies for these

studies. The status of RWMWD proposed boundary change in the West Vadnais Lake area has not been determined.

VIII. Administration Communication

None

VII. Adjourn

A motion was made by Director Rafferty and seconded by Director Rogers to adjourn at 8:09 pm.

Vote: Shuman: aye, Rogers: aye, Rafferty: aye, Lindner: aye, Prudhon: aye. Motion passed.

Minutes compiled and submitted by Nick Voss.

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IV. A. New Board Member Oath of Office

OFFICIAL OATH OF OFFICE

State of Minnesota,
Counties of Ramsey
Vadnais Lake Area Water Management
Organization

I, _____(your name) DO SOLEMNLY SWEAR (OR AFFIRM), to support the Constitution and the Laws of the United States, and of the State of Minnesota, and the and Policies of the Vadnais Lake Area Water Management Organization and to discharge faithfully the duties devolving upon me as director of the Vadnais Lake Area Water Management Organization to the best of my judgment and ability.

_____ Chair _____ Date

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VLAWMO Finance Summary: April 2023

Mar-23		Actual 4/1/23	Actual to Date	2023 Budget	Carry over from 2022 to 2023	Remaining in Budget	2023 Available	Act vs. Budget
BUDGET #	**INCOME**							
5.11	Storm Water Utility	$0	$10,891	$1,090,887	$0	$1,079,996	$1,090,887	1%
5.12	Service Fees	$0	$0	$200	$0	$200	$200	0%
5.13	Interest + mitigation acct	$4,754	$13,365	$1,000	$0	($12,365)	$1,000	1337%
5.14	Misc. income - WCA admin & other	$0	$0	$3,000	$0	$3,000	$3,000	0%
5.15	Other Income Grants/loan	$0	$69,693	$385,284	$0	$315,591	$385,284	18%
5.16	Transfer from reserves	$0	$0	$294,364	$231,999	$526,363	$526,363	0%
	TOTAL	$4,754	$93,949	$1,774,735	$231,999	$1,912,785	$2,006,734	5%
	EXPENSES							
3.1	**Operations & Administration**							
3.110	Office - rent, copies, post tel supplies	$2,114	$8,464	$28,181	$0	$19,717	$28,181	30%
3.120	Information Systems	$1,546	$6,014	$33,300	$0	$27,286	$33,300	18%
3.130	Insurance	$0	$0	$7,571	$0	$7,571	$7,571	0%
3.141	Consulting - Audit	$1,785	$8,061	$9,000	$0	$939	$9,000	90%
3.142	Consulting - Bookkeeping	$45	$90	$1,500	$0	$1,410	$1,500	6%
3.143	Consulting - Legal	$0	$641	$6,000	$0	$5,359	$6,000	11%
3.144	Consulting - Eng. & Tech.	$0	$0	$30,000	$15,000	$45,000	$45,000	0%
3.150	Storm Sewer Utility	$215	$1,255	$15,000	$0	$13,745	$15,000	8%
3.160	Training (staff/board)	$0	$7,800	$13,250	$0	$5,450	$13,250	59%
3.170	Misc. & mileage	$123	$377	$6,300	$0	$5,923	$6,300	6%
3.191	Administration - staff	$47,105	$139,426	$422,353	$0	$282,927	$422,353	33%
3.192	Employer Liability	$11,860	$39,745	$122,428	$0	$82,683	$122,428	32%
3.2	**Monitoring and Studies**							
3.210	Lake and Creek lab analysis	$0	$0	$18,000	$0	$18,000	$18,000	0%
3.220	Equipment	$741	$856	$3,000	$1,000	$3,144	$4,000	21%
3.230	Wetland assessment & management	$0	$0	$0	$10,000	$10,000	$10,000	0%
3.240	Watershed planning /special study	$0	$0	$10,000	$5,000	$15,000	$15,000	0%
3.3	**Education and Outreach**							
3.310	Public Education	$7	$2,007	$6,000	$0	$3,993	$6,000	33%
3.320	Marketing	$848	$2,279	$15,000	$9,500	$22,221	$24,500	9%
3.330	Community Blue Ed Grant	$0	$0	$8,000	$0	$8,000	$8,000	0%
Total Core functions: Ops, Monitoring, Education		*$66,389*	*$217,015*	*$754,883*	*$40,500*	*$578,368*	*$795,383*	*27%*
Capital Improvement Projects and Programs								
3.4	**Subwatershed Activity**							
3.410	Gem Lake	$0	$0	$15,000	$10,000	$25,000	$25,000	
3.420	Lambert Creek	$0	$2,083	$55,000	$0	$52,917	$55,000	4%
3.421	Lambert Lake Loan	$0	$0	$38,568	$0	$38,568	$38,568	0%

3.425	Goose Lake	$3,531	$12,006	$92,500	$0	$80,494	$92,500	13%
3.430	Birch Lake	$0	$0	$20,000	$0	$20,000	$20,000	0%
3.440	Gilf Black Tam Wilk Amelia	$13,696	$41,504	$157,500	$43,000	$158,996	$200,500	21%
3.450	Pleasant Charley Deep	$0	$0	$48,000	$30,000	$78,000	$78,000	0%
3.460	Sucker Vadnais	$287	$1,857	$35,000	$28,000	$61,143	$63,000	3%
3.48	**Programs**							
3.480	Soil Health Grant	$0	$78	$8,000	$0	$7,922	$8,000	1%
3.481	Landscape 1	$0	$0	$30,000	$6,263	$36,263	$36,263	0%
3.482	Landscape 2/BWSR WBF	$0	$938	$35,000	$36,636	$70,698	$71,636	1%
3.483	Project Research & feasibility	$0	$0	$5,000	$0	$5,000	$5,000	0%
3.485	Facilities Maintenan/ Pub. Ditch Main.	$455	$2,692	$90,000	$37,600	$124,908	$127,600	2%
3.5	**Regulatory**							
3.510	Engineer Plan review	$0	$0	$5,000	$0	$5,000	$5,000	0%
	Total CIP & Program	*$17,969*	*$61,158*	$634,568	$191,499	*$764,909*	*$826,067*	*7%*
	Total of Core Operations & CIP	**$84,358**	$278,173	$1,389,451	$231,999	**$1,343,277**	$1,621,450	**17%**

Fund Balance		3/1/2023	4/1/2023
4M Account		$1,002,779	$927,289
4M Plus Savings		$230,027	$230,942
Total		$1,232,806	$1,158,231

Restricted funds		4/1/2023
Mitigation Savings		$21,014
Term Series		$0

Vadnais Lake Area Water Management Organization
Check Detail
March 9 through April 12, 2023

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Check	**eft**	**03/09/2023**	**US Bank**		**Checking - 1987**		**-45.10**
					3.142 · Bookkeeping help	-45.10	45.10
TOTAL						-45.10	45.10
Check	**eft**	**03/20/2023**	**further**		**Checking - 1987**		**-6.00**
					Insurance Benefit	-6.00	6.00
TOTAL						-6.00	6.00
Check	**eft**	**04/01/2023**	**Reliance Standard**		**Checking - 1987**		**-312.17**
					Insurance Benefit	-91.50	91.50
					Insurance Benefit	-220.67	220.67
TOTAL						-312.17	312.17
Check	**5528**	**04/12/2023**	**Dawn Tanner**		**Checking - 1987**		**-73.75**
					3.170 · Misc. & mileage	-73.75	73.75
TOTAL						-73.75	73.75
Check	**5529**	**04/12/2023**	**Nicholas Voss**		**Checking - 1987**		**-50.01**
					3.170 · Misc. & mileage	-36.03	36.03
					3.320 · Marketing	-13.98	13.98
TOTAL						-50.01	50.01
Check	**5530**	**04/12/2023**	**Brian Corcoran**		**Checking - 1987**		**-82.85**
					3.170 · Misc. & mileage	-13.10	13.10
					3.220 · Equipment	-69.75	69.75
TOTAL						-82.85	82.85
Check	**5531**	**04/12/2023**	**Metro - Inet**		**Checking - 1987**		**-1,439.00**
					IT Support	-1,439.00	1,439.00
TOTAL						-1,439.00	1,439.00
Check	**5532**	**04/12/2023**	**Houston Engineering, Inc**		**Checking - 1987**		**-13,696.50**
					Wilk 319 cash match $182,137	-13,696.50	13,696.50
TOTAL						-13,696.50	13,696.50
Check	**5533**	**04/12/2023**	**Barr Engineering Co**		**Checking - 1987**		**-3,013.58**

				Oak Knoll	-1,985.08	1,985.08
				Oak Knoll	-1,028.50	1,028.50
TOTAL					-3,013.58	3,013.58
Check	**5534**	**04/12/2023**	**Anoka County**	**Checking - 1987**		**-215.00**
				3.150 · Storm Sewer Utility	-215.00	215.00
TOTAL					-215.00	215.00
Check	**5535**	**04/12/2023**	**Kennedy & Graven, Chartered**	**Checking - 1987**		**-972.90**
				Oak Knoll	-517.50	517.50
				3.485 · Facilities & Maintenance	-455.40	455.40
TOTAL					-972.90	972.90
Check	**5536**	**04/12/2023**	**CliftonLarsonAllen**	**Checking - 1987**		**-1,785.00**
				3.141 · Audit	-1,785.00	1,785.00
TOTAL					-1,785.00	1,785.00
Check	**5537**	**04/12/2023**	**City of Vadnais Heights**	**Checking - 1987**		**-2,114.41**
				Rent	-1,715.00	1,715.00
				Phone/Internet/Machine Overhead	-305.00	305.00
				Postage	-38.70	38.70
				Copies	-55.71	55.71
TOTAL					-2,114.41	2,114.41
Check	**5538**	**04/12/2023**	**City of White Bear Lake**	**Checking - 1987**		**-58,646.60**
				Payroll	-47,104.91	47,104.91
				Administration FICA	-3,484.13	3,484.13
				Administration PERA	-3,532.86	3,532.86
				Insurance Benefit	-4,479.78	4,479.78
				Admin payroll processing	-44.92	44.92
TOTAL					-58,646.60	58,646.60
Check	**5539**	**04/12/2023**	**FastSigns**	**Checking - 1987**		**-246.87**
				3.320 · Marketing	-75.47	75.47
				3.320 · Marketing	-171.40	171.40
TOTAL					-246.87	246.87
Check	**5540**	**04/12/2023**	**HDR Engineering, Inc.**	**Checking - 1987**		**-587.00**
				3.320 · Marketing	-587.00	587.00
TOTAL					-587.00	587.00

Profit & Loss

March 9 through April 12, 2023

	Mar 9 - Apr 12, 23
Ordinary Income/Expense	
Income	
5.1 · Income	
5.13 · Interest	4,754.22
Total 5.1 · Income	4,754.22
Total Income	4,754.22
Gross Profit	4,754.22
Expense	
3.1 · Administrative/Operations	
3.110 · Office	
Copies	55.71
Phone/Internet/Machine Overhead	305.00
Postage	38.70
Rent	1,715.00
Total 3.110 · Office	2,114.41
3.120 · Information Systems	
Hardware	107.17
IT Support	1,439.00
Total 3.120 · Information Systems	1,546.17
3.141 · Audit	1,785.00
3.142 · Bookkeeping help	45.10
3.150 · Storm Sewer Utility	215.00
3.170 · Misc. & mileage	122.88
3.191 · Employee Payroll	
Payroll	47,104.91
Total 3.191 · Employee Payroll	47,104.91
3.192 · Employer Liabilities	
Admin payroll processing	44.92
Administration FICA	3,484.13
Administration PERA	3,532.86
Insurance Benefit	4,797.95
Total 3.192 · Employer Liabilities	11,859.86
Total 3.1 · Administrative/Operations	64,793.33
3.2 · Monitoring and Studies	
3.220 · Equipment	741.39
Total 3.2 · Monitoring and Studies	741.39
3.3 · Education and Outreach	
3.310 · Public Education	7.00
3.320 · Marketing	847.85
Total 3.3 · Education and Outreach	854.85
3.4 · Capital Imp. Projects/Programs	
3.425 · Goose Lake	

Oak Knoll	3,531.08
Total 3.425 · Goose Lake	3,531.08
3.440 · Gilfillan Black Tamarack Wilkin	
Wilk 319 cash match $182,137	13,696.50
Total 3.440 · Gilfillan Black Tamarack Wilkin	13,696.50
3.460 · Sucker Vadnais	287.02
Total 3.4 · Capital Imp. Projects/Programs	17,514.60
3.48 · Programs	
3.485 · Facilities & Maintenance	455.40
Total 3.48 · Programs	455.40
Total Expense	84,359.57
Net Ordinary Income	-79,605.35
Net Income	**-79,605.35**

Vadnais Lake Area Water Management Organization

2:40 PM

Custom Transaction Detail Report

04/04/2023

February 1 through April 1, 2023

Accrual Basis

	Type	Date	Num	Name	Memo	Account	Clr	Split	Amount	Balance
Feb 1 - Apr 1, 23										
	Credit Card Charge	02/02/2023		Google*SVCAPPS_VLAWM		US Bank CC	√	WEB	42.00	42.00
	Credit Card Charge	02/09/2023		Amazon.com	laptop memory - lauren	US Bank CC	√	Hardware	27.98	69.98
	Credit Card Charge	02/09/2023		adobe *photography plan		US Bank CC	√	Software	9.99	79.97
	Credit Card Charge	02/09/2023		MAWD	2023 MAWD Legislative Event Phil	US Bank CC	√	3.160 · Training (staff/board)	38.77	118.74
	Transfer	02/20/2023			Funds Transfer	US Bank CC	√	Checking - 1987	-507.28	-388.54
	Credit Card Charge	02/27/2023		Adobe "Creative Cloud		US Bank CC	√	Software	32.20	-356.34
	Credit Card Charge	03/02/2023		Google*SVCAPPS_VLAWM		US Bank CC	√	WEB	42.00	-314.34
	Credit Card Charge	03/10/2023		CN Labs	YSI diagnostics	US Bank CC		3.220 · Equipment	651.64	337.30
	Credit Card Charge	03/23/2023		Prairie Restorations	seed for E. Vadnais resto.	US Bank CC		3.460 · Sucker Vadnais	287.02	624.32
	Credit Card Charge	03/24/2023		Prairie Moon Nursery	seed for E. Vadnais resto.	US Bank CC		3.220 · Equipment	20.00	644.32
	Credit Card Charge	03/27/2023		POND5	picture of salamander	US Bank CC		3.310 · Public Education	7.00	651.32
	Credit Card Charge	03/29/2023		CDW Government	phil laptop battery	US Bank CC		Hardware	107.17	758.49
Feb 1 - Apr 1, 23									**758.49**	**758.49**

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TEC Report to the Board
April 2023

Programs & Projects	Effort Level (LOW / MED / HIGH)	Completion Date	Comments
Projects			
319 Biochar			Monitoring starting spring 2023.
Oak Knoll Pond/Wood Lake		ongoing	Temporary easements received by VLAWMO. Feasibility study to be completed for April Board for Spent Lime study. Resolution will be provided to Board with recommended actions.
Public Ditch Maintenance		ongoing	Drainage inspections complete, working on report.
MPCA 319 /Wilkinson Lake BMP		2021-24	Partner coordination continues. Permitting nearly complete; discussions continue with City for final remaining permits. HEI will provide final plans and specs to the Board for April.
Pleasant Lake Carp Management		2022-28	Field monitoring underway, permits in, and site prep will begin once ice-out occurs; Carp Solutions is preparing for spring removal.
Programs			
City/Township MS4		April-June	Focus on IDDE inspection Minimum control Measure 3 for spring 2023. Spring workshop promotion and watershed communication print outs comeplete, including the 2023 "Watershed at a Glance" to supplement MS4 Minimum Control Measure 1-2.
Education/Outreach		Feb-May	Supporting communications and signage developing for Whitaker Pond Biochar, Spent Lime at Oak Knoll Pond, Vadnais-Sucker Park Restoration, and Westfield Park Bioswale. Partnership continuing with City of White Bear Lake, WBL Rotatary, and Birch Lake Elementary to provide education programming in conjunction with WB Rotary Park restoration (cost-share).
Website		Feb-May	New groundwater web page posted, weekly maintenance proceeding.
WAV		April-June	MN Water Steward training occuring with staff assistance from Jan-May '23. Spring planning meeting in progress. Focus on mini tour opportunities at select cost-share highlight sites.
Cost Share & BWSR WBIF		ongoing	One potential Landscape Level 1 grant application in progress. Cost share site visits are starting up with snowmelt and are expected to increase in number. New site visit packets will be used. Discussion with White Bear Lake School District on potential cost share opportunities. BWSR WBIF reporting system recently updated. Staff learning new reporting system and continuing to consider potential projects for the grant.
GIS		ongoing	Completed maps for the Westfield Park bioswale sign. Updating the online GIS viewer as needed.
Monitoring		ongoing	starting 2023 season prep.
WCA		ongoing	Administering WCA as needed.

Administration & Operation			
Audit		2022/2023	2022 audit has started. Anticipate Audit will be considered by Board at the April meeting.
Budget		for 2024 budget	Board Subcommittee discussed long range project budgeting on March 28. Presentation and discussion anticpated at April Board meeting regarding long range project budget planning.
Personnel /HR		ongoing	Staff continue to pursue professional development per their approved training plans.
SSU		ongoing	2023 SSU certifications submited to Ramsey and Anoka County.
Strategic /watershed planning		2023	SLMP/SLMRs now complete for each lake. Updates will continue annually to maintain current technical information.

FINANCIAL SUMMARY as of 4/1/2023

4M Account (1.10)	4M Plus (1.23)	Total
$927,289	$230,942	$1,158,231

Budget Summary	Actual Expense YTD	2023 Budget "working"	Remaining in Budget	% YTD
Operations	*$217,015*	*$795,383*	*$578,368*	27%
CIP	*$61,158*	$826,067	*$764,909*	7%
Total	$278,173	$1,621,450	$1,343,277	17%

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VLAWMO
Vadnais Lake Area
Water Management Organization
55127

800 County Road E East, Vadnais Heights, MN

www.vlawmo.org; Office@vlawmo.org

To: VLAWMO Board of Directors

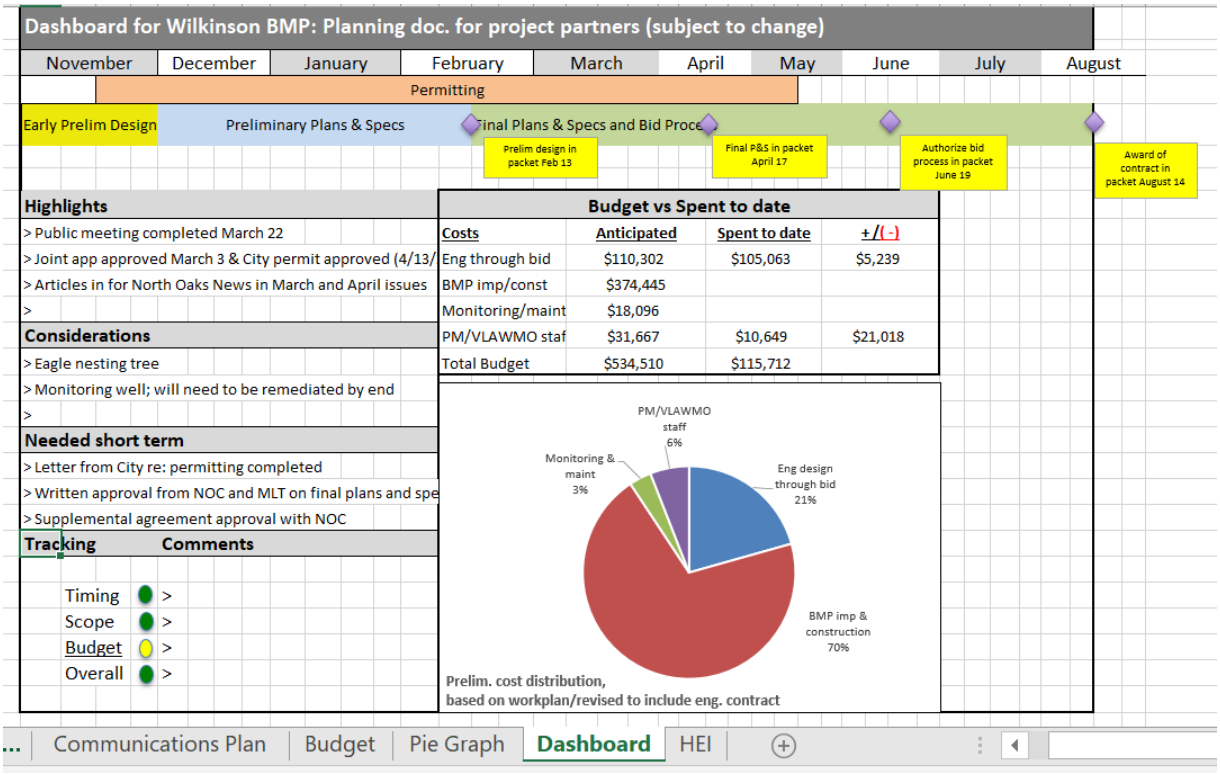
From: Dawn Tanner

Through: Phil Belfiori

Date: April 19, 2023

Re: V. A. Wilkinson BMP Project update: Overall status, permitting, and request to authorize subcommittee

Overall status



Overall, the project is proceeding according to the established timeline and within budget for the project. Engineering design required more permitting facilitation than expected. Engineering design is expected to be slightly higher than the allocated $110,302 due to this increased facilitation required. Permitting is now complete and includes the Notice of Decision from WCA, USACE secured permits, and North Oaks City approval. The screenshot above shows the current project Dashboard as it stands as of April 17, 2023.

Permitting and Technical memos

Memos included in the packet provide final verification from permitting entities of relevant permits and permit completion. Those memos include: (link in red)

1. V. A. Memo (this document)
2. Wilkinson Lake BMP Project Summary of Permit Authorization Memo from HEI
   https://www.vlawmo.org/index.php/download_file/4444/
3. Permitting confirmation and authorization from USACE for the project, Regulatory File MVP-2021-00635-SSC
   https://www.vlawmo.org/index.php/download_file/4445/
4. The Joint Application Memo and Preliminary Plans: for WCA
   https://www.vlawmo.org/index.php/download_file/4446/
5. The Notice of Decision regarding the Joint Application, as noticed by WCA
   https://www.vlawmo.org/index.php/download_file/4447/
6. Letter stating permitting completion with the City of North Oaks (included in packet)

Permitting and public engagement

VLAWMO staff with HEI held a community meeting in North Oaks to present the project and respond to questions. That meeting was held on March 22, 2023. VLAWMO staff presented to the City Council to provide a project update and request final notification of completed permitting with the City on April 13, 2023. The City Council voted to approve the request and a letter from the City is included in the packet. Articles were published in the March and April issues of North Oaks News. Those articles included project status and design updates to the community.

Engagement is ongoing with partners, including ongoing review and comment on plans and specifications. VLAWMO staff are working with legal counsel to prepare a supplemental agreement with the landowner and major project partner, NOC, consistent with the agreement established in the signed Memorandum of Understanding for the project.

Final plans and specs are in late review stages with partners and have been through a complete round of comments with updates. Some partner comments are still being addressed by the engineering team. Final version of plans and specs are planned for Board consideration at the June regular meeting.

CITY OF
NorthOaks
Building on a tradition of innovation

April 18, 2023

Phil Belfiori
VLAWMO
800 Co Rd E East
St Paul, MN 55127

RE: Wilkinson Lake BMP Deep-Water Wetland Restoration Project

The City Council at their meeting on Thursday, April 13, 2023 motioned authorizing VLAWMO to perform the Wilkinson Lake BMP Deep-Water Wetland Restoration Project. This letter serves as acknowledgement and approval to implement the project with the typical review by the City Engineer and other City staff. Typical construction review will be performed by the City Engineer.

The City of North Oaks looks forward to our continued partnership and support the Wilkinson Lake Deep-Water Wetland Restoration Project.

Sincerely,

Kevin Kress
City Administrator

p 651-792-7750
f 651-792-7751
northoaks@northoaksmn.gov
www.northoaksmn.gov
100 Village Center Drive, Suite 230
North Oaks, MN 55127

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VLAWMO
Vadnais Lake Area
Water Management Organization

800 County Road E E, Vadnais Heights, MN 55127
www.vlawmo.org; Office@vlawmo.org

To: VLAWMO Board of Directors

From: Brian Corcoran and Phil Belfiori

Date: April 19, 2023

Re: Consent Agenda item V. B. Consideration of Public Drainage Inspection Protocol & 2023 Public Drainage System Inspection Report

VLAWMO staff has prepared the attached Public Drainage Inspection Protocol & 2023 Public Drainage System Inspection Report for consideration by the VLAWMO Board. These documents are a product of the approved June 22, 2022 Public Drainage Management Policy.

The Public Drainage Inspection Protocol outlines the primary goals of VLAWMO's public drainage system inspections, frequencies of those inspections and entity responsible for maintenance if needed.

The 2023 Public Drainage System Inspection Report is prepared in accordance to the March 31, 2023 Public Drainage Inspection Protocol. This report provides the VLAWMO Board of Directors with a summary of potential drainage system maintenance projects and will be used to plan for the upcoming year's potential maintenance activities.

Please find attached the 3/31/2023 Public Drainage Inspection Protocol & 2023 Public Drainage System Inspection Report.

Recommendation
Staff recommends approval of the 3/31/2023 Public Drainage Inspection Protocol & 2023 Public Drainage System Inspection Report

Requested Motion
Director _____ Moves and Director _____ seconds approval of the 3/31/2023 Public Drainage Inspection Protocol & 2023 Public Drainage System Inspection Report

Attached:

- 3/31/2023 Public Drainage Inspection Protocol
- 2023 Public Drainage System Inspection Report

Technical Memorandum

To: Brian Corcoran, VLAWMO

From: Chris Otterness, PE
Houston Engineering, Inc.

Subject: Public Drainage System Inspection Protocol

Date: March 31, 2023

Project: R007057-0015

INTRODUCTION

The purpose of this memorandum is to develop a drainage system inspection protocol for the Vadnais Lake Area Water Management Organization (VLAWMO) in its role as a Drainage Authority for County Ditch (CD) 14. This inspection protocol is to compliment the June 22, 2022 approved drainage policy. The VLAWMO operates under Minnesota Statue 103B. The following inspection protocol will provide the VLAWMO a timeframe and methodology to assess the conditions and effectively manage the CD 14 public drainage system under MS103B authority.

DRAINAGE SYSTEM INSPECTION PROTOCOL

The inspection protocol has been organized into three categories of public drainage system components:

- Open Channel / Flumes
- Stormsewer
- Roadway Culverts and Weirs

Each category requires varying levels of detail and frequency of inspection. The location of the systems within the VLAWMO are shown in **Figure 1 & Figure 2** and are identified in the attached Drainage System Inspection Schedule.

OPEN CHANNELS / FLUMES

Inspection needed to identify deficiencies and necessary maintenance can be categorized into three “inspection levels” based on the nature of the inspection and frequency it needs to be performed. **Table 1** identifies recommended frequencies for each inspection level for open channel/weir systems.

Table 1 – Open Channel/Flume System Inspection Levels and Frequencies

Inspection Level	Nature of Inspection	Frequency Interval	
		High Priority	Normal Priority
1	View system from road crossings, at complaint locations, and at other known problem areas	Yearly	Every 5 years, or in response to a complaint
2	Aerial drone survey or walking inspection of the entire ditch	Every 5 years, or one year after a major repair	Every 10 years, or one year after a major repair
3	Field survey of channel (ditch centerline at 200' spacing, follow 2018 HEI survey)	Preceding and following a major repair, and every 10 years thereafter	

Deficiencies in open channel/flume systems to be identified during the inspection include, but are not limited to:

- General lack of flow;
- Blockages to the open channel including localized deposits of sediment, trees, other woody debris, bogs, and beaver dams;
- Bank failures;
- Damaged or obstructed private culverts (system map **Figure 2**)
- Unpermitted crossings;
- Obstructions in right-of-way to access for future maintenance; and
- Extended portions of the drainage system needing repair.

STORMSEWER

Table 2 identifies recommended frequencies for each inspection level for systems.

Table 2 – Storm Sewer System Inspection Levels and Frequencies

Inspection Level	Nature of Inspection	Frequency Interval
1	View outlets and known problem areas	Every 5 years or in response to a complaint
2	Full televising of storm sewer	(By Municipality) Every 20 years
3	Field survey of inverts entering public drainage system	As needed

Deficiencies in storm sewer systems to be identified during the inspection include, but are not limited to:

- Separated pipe sections;
- Cracked, spalling, and otherwise failing pipe sections;
- Blockages; and
- Erosion at inlet and outlet end sections.

Note: There are three locations on CD 14 where flows are conveyed via stormsewer that is within road right-of-way or easements held by a municipality. The locations include:

Location 1: Branch crossing under Clover Avenue, including outlet of Basswood Lake
Location 2: Main Trunk stormsewer parallel to County Road F outletting to Lambert Lake
Location 3: Branch 5 crossing of Edgerton Road, draining into Main Trunk

The locations of these three stormsewer segments are shown in **Figure 2**. Historic documentation of these system modifications is limited. As there is a dual role in managing these locations in the public drainage system that are within the road authority right-of-way or easement, additional coordination with these entities is required prior to interior inspection and maintenance of these systems. Maintenance and inspection of any structures placed in the public drainage system is the responsibility of the entity that placed it.

ROADWAY CULVERTS (ROAD AUTHORITY RESPONSIBILITY) & WEIRS

Table 3 identifies recommended frequencies for each inspection level for systems.

Table 3 – Roadway Culvert and Weir Inspection Levels and Frequencies

Inspection Level	Nature of Inspection	Frequency Interval
1	View outlets and known problem areas	Every 5 years and following significant (>3") rainfall events
2	Full televising of storm sewer inlets	As needed

Deficiencies in roadway culverts and weirs to be identified during the inspection include, but are not limited to:

- Blockages at the culvert inlet end;
- Pipe joint failures;
- Frost heaving; and
- Obstructions in right-of-way to access for future maintenance

Maintenance and inspection of any structures placed in the public drainage system is the responsibility of the entity that placed it.

DOCUMENTATION

All inspections and documents of the public drainage system (completed by VLAWMO or City staff or their consultants) should be documented within the VLAWMO shared drive, under the "Public Drainage Maintenance" file: (S:\Public Drainage Maintenance)

SCHEDULE

A proposed schedule for inspection is provided in **Figure 3**. The schedule identifies recommended inspections over a 16-year period by level for the public drainage system and/or branch. This schedule is intended to not only coordinate yearly inspections, but also assist with annual budgeting.

RECOMMENDATION

We recommend that the VLAWMO Board of Directors formally adopt the preceding public drainage system inspection protocol and that VLAWMO staff begin implementation immediately. Further, we recommend the VLAWMO reference this inspection protocol within the public drainage policy, as amended. VLAWMO staff should revisit the schedule in **Figure 3** yearly to verify that it reflects current priorities and budgets and revise the schedule accordingly.

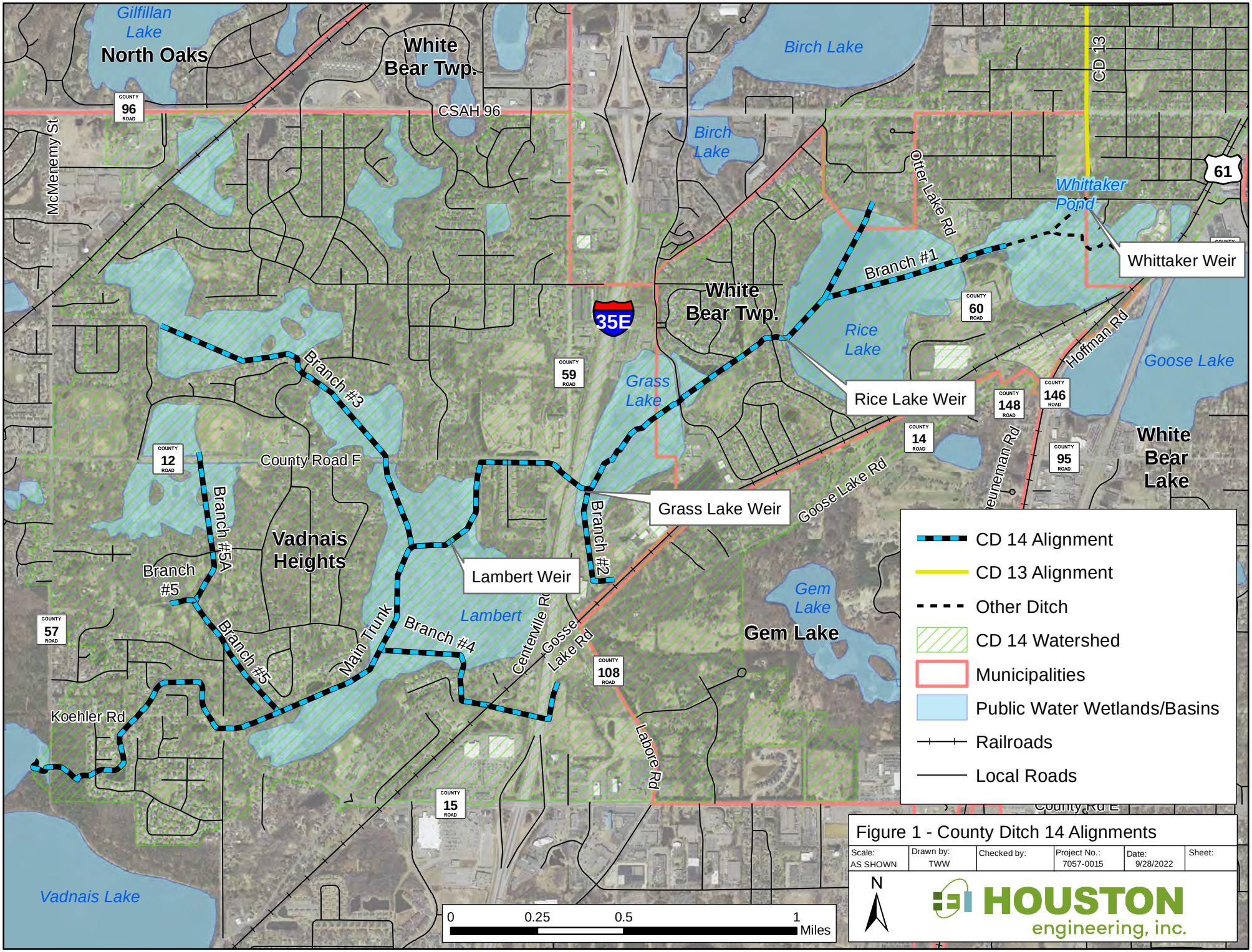


Figure 1 - County Ditch 14 Alignments

Scale:	Drawn by:	Checked by:	Project No.:	Date:	Sheet:
AS SHOWN	TWW		7057-0015	9/28/2022	

HOUSTON engineering, inc.

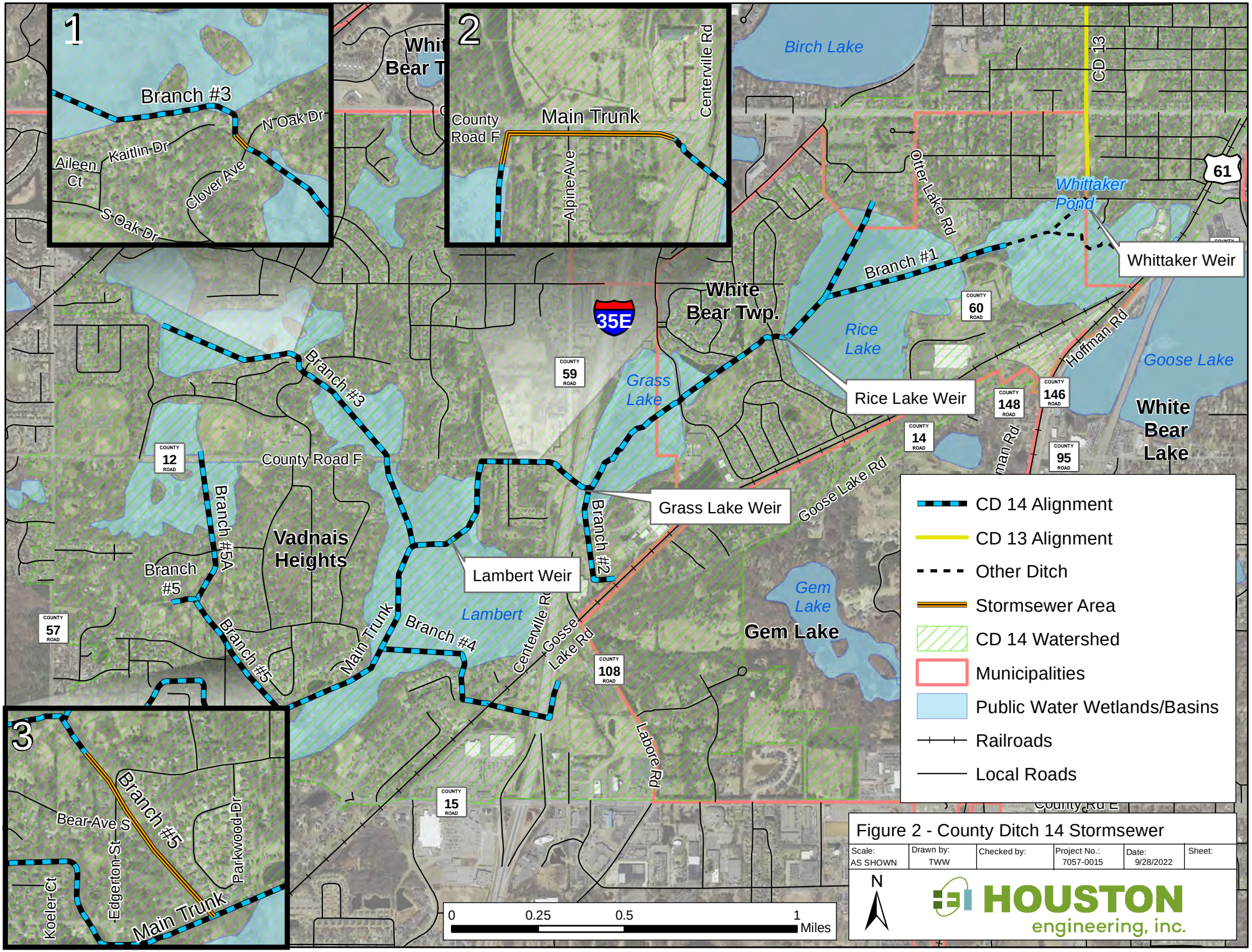


Figure 2 - County Ditch 14 Stormsewer

Scale:	Drawn by:	Checked by:	Project No.:	Date:	Sheet:
AS SHOWN	TWW		7057-0015	9/28/2022	

HOUSTON engineering, inc.

Figure 3

VLAWMO Drainage System Inspection Schedule

Last Updated: 30-Mar-23

Inspection Type

- Level 1
- Level 2
- Level 3

X - repair completed or scheduled

- Level 2 and 3 inspections completed

Drainage System	Branch	System Type	Inspection Priority	2023	2024	2025	2026	2027		2028	2029	2030	2031	2032	2033	2034	2035	2036	2037		2038	2039
Lambert Creek (CD14)	Main Trunk	Open Channel	High																			
	Branch 1	Open Channel	normal																			
	Branch 2	Open Channel	normal																			
	Branch 3	Open Channel	normal																			
	Branch 4	Open Channel	normal																			
	Branch 5	Open Channel	normal																			
	Branch 5A	Open Channel	normal																			

*We intend on doing a level 1 on entire system in 2023

Open Channel and Flumes

Level 1 inspection – View from road crossings, and at known problem areas. Schedule: every year (high priority), every 10 years (normal priority), or in response to complaint

Level 2 inspection – Aerial drone survey or walking survey. Schedule: Every 5 years (high priority), every ten years (normal priority), or one year following a major repair

Level 3 inspection – Full survey of ditch (200' spacing on centerline, follow 2018 HEI survey). Schedule: Prior to a major repair (Repair Report); every 10 years following a major repair.

Stormsewer

Level 1 inspection – Check outlets and known problem areas

Level 2 inspection – Full televising of stormsewer. City,Township & County responsibility

Roadway Culverts and Weirs

Responsibility of entity that constructed the structure

EST 1983
VLAWMO
Vadnais Lake Area
Water Management Organization

PUBLIC DRAINAGE SYSTEM INSPECTION REPORT

2023

Brian Corcoran

Vadnais Lake Area WMO

2023 Public Drainage System Inspection Report

Vadnais Lake Area WMO (VLAWMO), as the Drainage Authority for the public drainage system within its boundaries, is required per the VLAWMO Public Drainage Policy dated June 22, 2022, to provide a yearly Public Drainage Inspection Report. This report is prepared in accordance to the March 31, 2023 Public Drainage Inspection Protocol. The Public Drainage System Inspection Report provides the VLAWMO Board of Directors with a summary of potential drainage system maintenance projects and will be used to plan for the upcoming year's potential maintenance activities.

County Ditch 14 (CD14) received a Level 1 & 2 inspection in 2023 per **Figure 1A**. The CD 14 alignment is shown in **Figure 1**. This report contains recommendations and locations for potential future maintenance projects.

Any questions or comments regarding the content of this report can be submitted to:

Brian Corcoran
651-204-6075
brian.corcoran@vlawmo.org

V. B. 2.

Figure 1A

VLAWMO Drainage System Inspection Schedule

Last Updated: 30-Mar-23

Inspection Type
- Level 1
- Level 2
- Level 3

X - repair completed or scheduled
- Level 2 and 3 inspections completed

Drainage System	Branch	System Type	Inspection Priority	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Lambert Creek (CD14)	Main Trunk	Open Channel	High						X											
	Branch 1	Open Channel	normal																	
	Branch 2	Open Channel	normal																	
	Branch 3	Open Channel	normal																	
	Branch 4	Open Channel	normal																	
	Branch 5	Open Channel	normal																	
	Branch 5A	Open Channel	normal																	

*We intend on doing a level 1 on entire system in 2023

Open Channel and Flumes

Level 1 inspection – View from road crossings, and at known problem areas. Schedule: every year (high priority), every 10 years (normal priority), or in response to complaint

Level 2 inspection – Aerial drone survey or walking survey. Schedule: Every 5 years (high priority), every ten years (normal priority), or one year following a major repair

Level 3 inspection – Full survey of ditch (200' spacing on centerline, follow 2018 HEI survey). Schedule: Prior to a major repair (Repair Report); every 10 years following a major repair.

Stormsewer

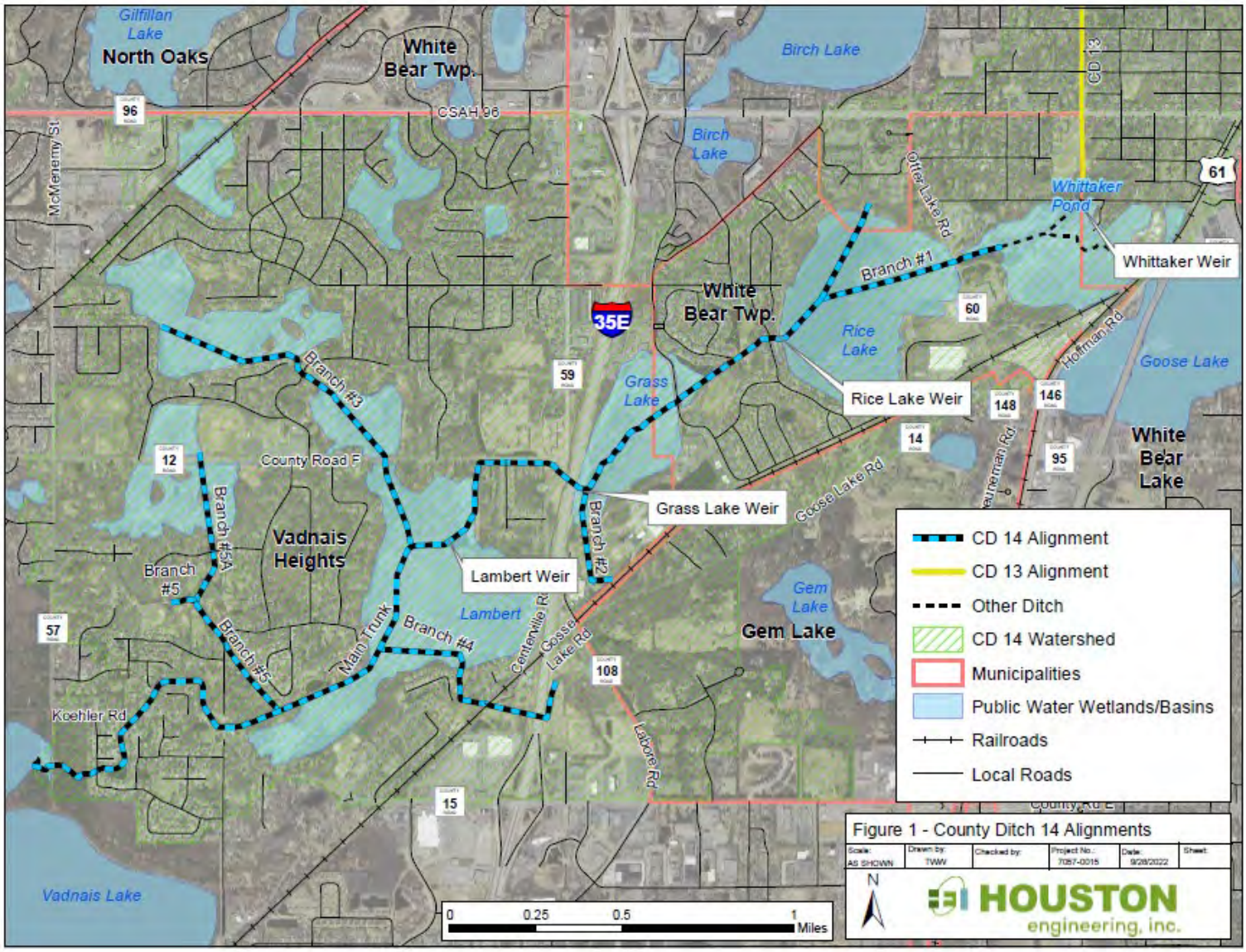
Level 1 inspection – Check outlets and known problem areas

Level 2 inspection – Full televising of stormsewer. City,Township & County responsibility

Roadway Culverts and Weirs

Responsibility of entity that constructed the structure

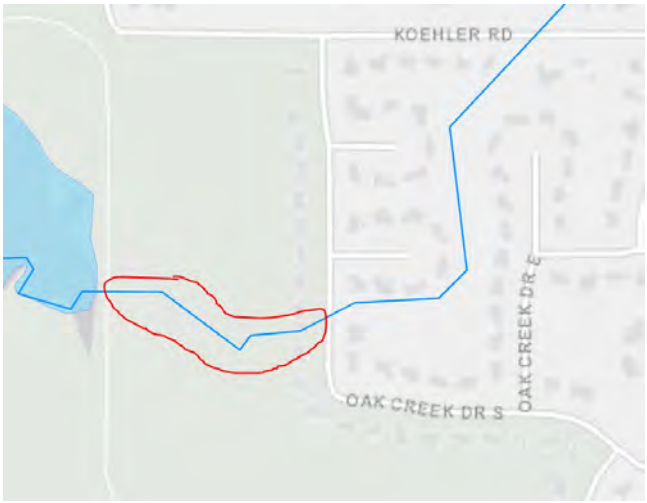
Figure 1 - County Ditch Alignment Map



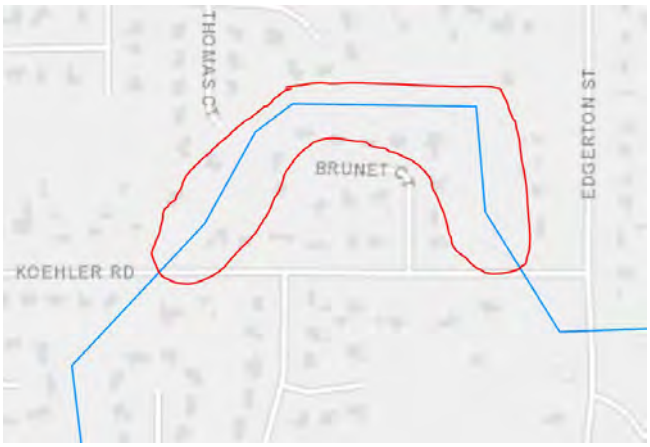
C D 1 4 Prioritized Drainage System Maintenance Projects

(Note: This list of potential maintenance projects is preliminary and subject to change. Timing of repairs is subject to a number of factors, including but not limited to available funding, resources, and coordination.)

- Main Trunk - Upstream of East Vadnais Lake (Phase I)
  - Remove downed trees with corrections crew



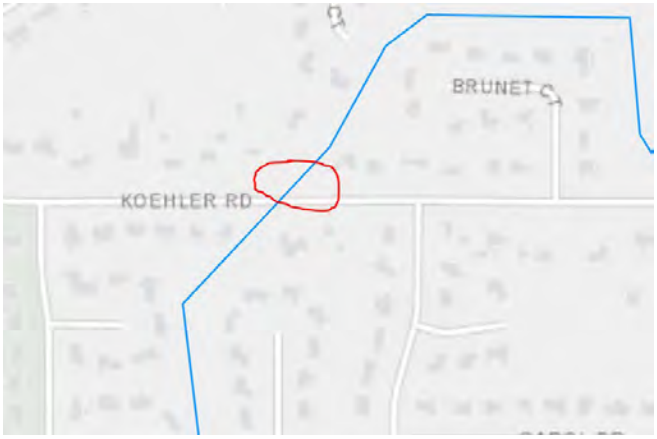
- Main Trunk - Koehler Bend
  - Remove downed trees with corrections crew



- Main Trunk - Culvert under Koehler Rd up stream of flume
  - Remove debris partially plugging culvert flow

- Main Trunk - Erosion at Koehler Rd up stream of flume
  - Major gully has formed from stormwater runoff, possible drop structure for fix. Located in both public drainage and road ROW

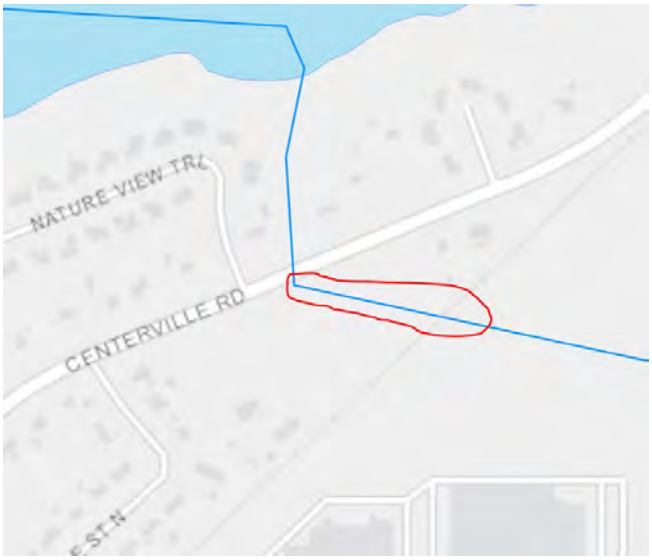
V. B. 2.



- Main Trunk - Sink hole and gully at Edgerton & Koehler
    - Address stormwater runoff in area on both sides of Edgerton. Located in both public drainage and road ROW

- Branch #4 – Entire branch
    - Remove downed trees with corrections crew

V. B. 2.



Recent /Anticipated 2023 Drone Flight Inspections -

11/22/2022 Main Trunk - East Vadnais Lake to Centerville Rd
TBA - 2023 Main Trunk - Centerville Rd to Whitaker Pond


Branch 4 downed trees


Branch 4 downed trees


Culvert under Koehler Rd up stream of flume back-up

V. B. 2.

Trees down up stream of East Vadnais Lake

V. B. 2.

Sink hole at Edgerton & Koehler Rd

V. B. 2.

Gully Koehler Road

800 County Road E E, Vadnais Heights, MN 55127
www.vlawmo.org; Office@vlawmo.org

To: VLAWMO Board of Directors

From: Brian Corcoran

Date: April 26, 2023

Re: **V. C. Consent** - Monitoring Safety Policy

Staff developed a Monitoring Safety Protocol for team members to follow when working outside during different weather conditions and field terrains. It is important for field members to understand the potential risks when performing fieldwork and to know how to respond. Staff reviewed the safety policies of other watershed districts and WMO's and used that information to create the VLAWMO Monitoring Policy.

Recommendation

Staff recommends approval of the Monitoring Policy

Requested Motion

Director _____ Moves and Director _____ seconds approval of the Monitoring Policy

V. C. 2.

VLAWMO Monitoring Policy

Field Safety Guidelines

As a monitoring team member, you will be expected to work outside during many different weather conditions and places throughout our watershed. It is important to understand the potential risks when performing field work and know how to respond. The objective of these guidelines is to provide information for best fieldwork practice and to minimize the occurrence and severity of injuries and accidents. Staff are expected to identify and mitigate potential hazards, follow safety protocols, and report any incidents to a supervisor as soon as possible. Staff always have the right to postpone or not participate in a work assignment where the risk of injury is perceived. Remember, there is no reason to take serious risks to collect a sample or perform site maintenance. Safety equipment and supplies are provided by the VLAWMO.

Weather Conditions

Always check the forecast for the day before and the morning of fieldwork. This will help you to determine potential hazards such as lightning, icy roads, hail etc. that would postpone field work, and will also help you determine what field clothing and personal protective equipment is necessary. Wet, cold, and hot weather conditions can be frequent. If you are ever unsure about whether or not it's safe to go into the field, consult your supervisor.

Rain

Possible Hazards: Poor visibility, possibility of lightning; slippery conditions, high waters

Boating is called off when there's a thunderstorm or moderate to heavy rain.

VLAWMO will provide waterproof pants, jackets and rain boots for monitoring staff that should be utilized when needed to keep dry and stay warm. Some monitoring sites have steep embankments or open soils that have the potential to cause slips and falls during wet conditions. Always wear appropriate footwear! If you see lightning, find shelter inside your vehicle. Wait for 20 minutes after the last lightning strike and don't go in the water.

Hot Weather and Insects

Possible Hazards: Dehydration, sunburn, fatigue, heatstroke, mosquitos, ticks, wasps

Field work may be called off when temperatures reach 95 degrees (including humidity and heat index).

Summers in the Twin Cities are very humid and can reach temperatures over 100 degrees Fahrenheit. Many VLAWMO monitoring sites also have very little shade and therefore expose staff to direct sunlight. It's important to listen to your body and take breaks when needed. If you ever feel faint, dizzy, have nausea, or have a severe headache, stop working and take time to cool off. Apply sunscreen before leaving the office or wear a long sleeve lightweight shirt. Bring enough water with you to stay hydrated as it is easy to become dehydrated during summer field work. To ward off ticks and mosquitos, wear high socks and long pants. Bug spray is provided by the VLAWMO if a chemical deterrent is preferred. Check for ticks after any day involving field work.

V. C. 2.

Cold Weather

Possible Hazards: Frostbite, hypothermia, thin ice, slippery conditions, precarious icicles

Field work may be called off when temperatures (including wind chill) are below 10 degrees Fahrenheit.

The watershed may monitor some sites year-round and some of the sites become icy and more difficult to navigate during the winter. If sampling on a lake or the creek use caution. Take breaks to warm up as needed. It's important to have the proper field clothes so that you will stay warm, comfortable, and safe. It is highly recommended that you have insulated shoes, wear thick wool socks, and dress in insulating layers. VLAWMO may supply insulated work gloves, warm hats, hand warmers and waterproof pants.

Ice Safety

Items to bring when monitoring on ice:

Life jacket

Emergency whistle

Chisel or drill and tape measure

Cell phone

Rope

Warm outerwear

General guidelines for monitoring on ice:

- Ice is never 100% safe
- At least two employees are required for any work that requires being on ice
- Extra caution is advised at the beginning and end of winter, and anytime there is a significant extended warmup, when ice conditions will be less safe

How to check ice thickness:

- Measure the thickness of the ice every 150 feet using a drill or chisel
- Only stay on the ice if it continues to be at least 4" for new clear ice, or 8" for ice/snow combination

What to do if you fall through the ice:

- Don't remove your winter clothing. Heavy clothes won't drag you down, but instead can trap air to provide warmth and flotation. This is especially true with a snowmobile suit.
- Turn toward the direction you came. That's probably the strongest ice.

- Place your hands and arms on the unbroken surface. This is where a pair of nails, sharpened screwdrivers or ice picks come in handy in providing the extra traction you need to pull yourself up onto the ice.

- Kick your feet and dig in your ice picks to work your way back onto the solid ice. If your clothes have trapped a lot of water, you may have to lift yourself partially out of the water on your elbows to let the water drain before starting forward.

- Lie flat on the ice once you are out and roll away from the hole to keep your weight spread out. This may help prevent you from breaking through again.

- Get to a warm, dry, sheltered area and re-warm yourself immediately. In moderate to severe cases of cold-water hypothermia, you must seek medical attention. Cold blood trapped in your extremities can come rushing back to your heart after you begin to re-warm. The shock of the chilled blood may cause ventricular fibrillation leading to a heart attack and death!

What to do if you are with someone that falls through the ice:

- Call 911 immediately and stay by the victim.

- Shout to the victim to encourage them and help direct them in the above steps to help themselves. Help them get control of their breathing and avoid panic.

- Do not attempt to move towards them on the weak ice

- If you can safely extend an object (rope, sled etc.) to the victim, tell them what you are doing, and help pull them out.

- If the situation is too dangerous for you to help the victim and the victim is unable to pull themselves from the water, stay by the victim and wait for emergency help to arrive

Driving

Despite how mundane driving seems, it is often the most dangerous activity we partake in while monitoring. The VLAWMO watershed is located in an urban setting and may require staff to drive on the freeway, drive in areas of high pedestrian traffic, and drive on construction sites. A good driver is a defensive driver. This means that the driver should always be alert, free of distractions, looking ahead, expecting the unexpected, yielding to pedestrians, maintaining a safe distance, obeying speed limits, and be respectful to others on the road.

http://www.dmv.org/defensive-driving/defensive-driving-101.php

Boat Safety

- It's always colder on the boat than on shore. Dress for colder weather than you would expect.

- Resist the urge to stand up. If you must move around, keep your weight low and close to the center of the craft. Keep at least three points of contact to the boat at all times.

- Wear your personal flotation device (PFD or life jacket).

Person Overboard Protocol

V. C. 2.

If someone is in trouble in the water, throw something that floats to the victim, such as the ring buoy attached to a rope. Only as a last resort should you ever enter the water to save someone. Even then, take a buoyant object like a PFD with you.

Cold Water Safety

Cold water shock and hypothermia (below normal body temperature) can be deadly. The reflexive gasp that occurs when you hit cold water can be fatal if your head is under water when you take that sudden breath and inhale water. Try to remain calm if thrown overboard. If you survive the first minute of immersion in water less than 50 degrees, you only have about ten minutes of meaningful movement to re-board your boat, tread water or zip on a life vest before your muscles stiffen from the cold. Then, there is only about one hour before the cold renders you unconscious. Unless you are wearing a life jacket, drowning is inevitable before the hour runs out.

Cold water robs body heat 25 times faster than air of the same temperature, so if you capsize or fall out of your boat, immediately attempt to re-board your craft. If you can't right the boat - climb on top and hang on.

Wearing your PFD will help protect you from hypothermia. It decreases the amount of movement necessary to remain afloat, and it also helps to insulate you from heat loss. A PFD will also keep you afloat if you become unconscious due to hypothermia.

Working in the Street and around the Public

In some locations, it may be necessary to access a manhole in the street. Being visible to oncoming traffic is vital. Everyone is required to wear safety vests.

- Park near the access point and turn on flashers.
- Place safety cones around the worksite to alert drivers of work and to slow the flow of traffic.
- Make sure pedestrians and pets stay away from open manhole at all times.

Our fieldwork is performed throughout the VLAWMO and some sampling sites are secluded. You will undoubtedly come across curious community members. Use your judgement to assess the situation, and answer questions if it does not interfere with your work. For safety reasons, it is recommended that two people go out together to collect samples.

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VLAWMO
Vadnais Lake Area
Water Management Organization
55127

800 County Road E East, Vadnais Heights, MN

www.vlawmo.org; Office@vlawmo.org

To: VLAWMO Board of Directors

From: Dawn Tanner

Date: April 19, 2023

Re: V. D. Consider authorizing Amelia Lake SLMR

The Amelia Sustainable Lake Management Report (SLMR) was approved by the TEC in March and is linked here for Board review:
https://www.vlawmo.org/index.php/download_file/4403/

The completion of this plan marks the final SLMP/SLMR for VLAWMO lakes. The development of the SLMR for Amelia was especially informative as it included a meeting with residents living around the lake with a chance for VLAWMO staff to hear directly from lakeshore owners, included the identification of an invasive Flowering rush infestation that is planned for treatment in partnership with RCSWCD and Anoka Conservation District, and illuminated a VLAWMO connection to Aldo Leopard, among other planning and survey work.

The completion of the Amelia SLMR is also notable because it wraps up a 15+-year process begun around 2009 for VLAWMO to develop and SLMP/SLMR for each VLAWMO lake. These were done to provide a synthesis of knowledge compiled to date and provide planning for future projects. VLAWMO staff plan to keep these current annually to maintain resources for project planning, interested stakeholders, and to maintain a synthesis of current knowledge regarding these waterbodies and related projects toward their improvement.

Requested action: VLAWMO staff request the Board authorize finalizing the Amelia SLMR and post it on the VLAWMO website.

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VLAWMO
Vadnais Lake Area
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55127

800 County Road E East, Vadnais Heights, MN

www.vlawmo.org; Office@vlawmo.org

To: VLAWMO Board of Directors

From: Dawn Tanner

Through: Phil Belfiori

Date: April 19, 2023

Re: V. E. Consider authorizing updated survey work with RCSWCD and MOU with NOHOA for Pleasant Lake surveys

Invasive aquatic plant management in Pleasant Lake is an issue that has been raised by residents in North Oaks. Invasive plants found in Pleasant Lake include Curly-leaf pondweed, which can increase internal phosphorus loading when it dies back in the early summer and releases nutrients into the water column, and Eurasian watermilfoil. In the past VLAWMO and NOHOA have considered chemical treatment of Curly-leaf pondweed to control this invasive plant species. The Minnesota Department of Health (MDH) would not allow permitting for chemical treatment because they had identified a priority to measure baseline chemical statewide and wanted to complete that effort prior to possible chemical use in Pleasant Lake. Baseline data collection and analysis was completed in 2022.

MDH has stated that they are willing to discuss possible chemical treatment with VLAWMO and partners. Partners in this effort would include the North Oaks Homeowners' Association (NOHOA) and St. Paul Regional Water Services (SPRWS). Both entities have expressed willingness to participate in conversations with MDH.

To consider chemical treatment and begin a conversation, MDH requires updated plant surveys. To capture Curly-leaf pondweed maximum extent requires an early season survey and delineation because of this species' growth cycle (begins growing under the ice in the winter, reaches maximum growth early in the season, and dies back around late June). To capture native species, a late summer/early fall survey is recommended.

Ramsey County Soil and Water Conservation Division (RCSWCD) was requested and provided an updated quote for survey work to include Pleasant Lake survey during 2023, at an estimated cost of ~$10,000. Aquatic plant survey work was approved by the VLAWMO Board for 2023 at their December, 2022, regular Board meeting. **The updated quote from RCSWCD is attached in the packet.**

At the time of VLAWMO packet preparation, NOHOA will approve an MOU at their April 19, 2023, Board meeting. **The draft MOU is attached in the packet.** NOHOA will also be considering financial support at that time. This is a request for NOHOA that was not built into

their 2023 budget. A small financial contribution may be extended. An update will be provided at the VLAWMO Board meeting. The full survey amount is available in the approved 2023 VLAWMO budget.

Requested Board action: VLAWMO staff request authorizing:

1) The revised quote from RCSWCD to perform 2 aquatic vegetation surveys, one early and one late in the season, and a delineation for invasive Curly-leaf pondweed
2) The MOU with NOHOA with possible financial support and with both organizations expressing a joint interest in reducing aquatic invasive plants in Pleasant Lake

Proposed Motion

Director _____ Moves and Director _____ seconds approval of updated quote from RCSWCD for 2023 survey work on Pleasant Lake and the MOU with NOHOA for support of partnership.

Attachments:

1. **Revised quote from RCSWCD**
2. **Draft MOU with NOHOA (update provided at Board meeting)**

2023 VLAWMO Lake Vegetation and Bathymetric Survey Proposal

March 10, 2023

Prepared for:
Vadnais Lake Area Water Management Organization

Prepared by:
Ramsey County Parks & Recreation-Soil and Water Conservation Division (SWCD)

Scope of Services

Macrophyte Surveys

Macrophyte surveys will consist of data sampling at evenly spaced geo-referenced points throughout the lake to characterize the diversity and abundance of aquatic vegetation using a point intercept survey method. SWCD staff members will also use Lowrance unit and transducer to generate data to produce a biovolume map showing concentration of aquatic vegetation growing in the lake.

Bathymetry Surveys

Bathymetric surveys are completed by connecting a Lowrance unit and transducer to the boat and following pre-determined transect lines across the lake to capture lake bottom depth data. This data is then processed, corrected using physically measured field data points where necessary, and then used to create new contour lines with the BioBase application. It may be completed in conjunction with macrophyte surveys when there is a clear enough sonar signal in the lake.

GILFILLAN LAKE

Bathymetry and Macrophyte Survey Cost Estimate

Task	Cost/Hour	Hours	Cost
Boat Use	unit	-	$50
BioBase Upload	unit	-	$300
Lake Survey Prepwork	$75	7	$525
Field Work: 1, 8-hour day (2 people)	$75	16	$1,200
Data entry (Species & Depths)	$75	4	$300
GIS Post-processing and Mapping	$75	2	$150
Report Completion, Contour Generation	$75	6	$450
TOTAL		35	$2,975

*VLAWMO staff as the second staff for field work will reduce total by $600 to $2,375

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PLEASANT LAKE

Bathymetry and Macrophyte Survey Cost Estimate

Task	Cost/Hour	Hours	Cost
Boat Use	unit	-	$50
BioBase Upload	unit	-	$300
Lake Survey Prepwork	$75	7	$525
Field Work: 1, 10-hour day (2 people)	$75	20	$1,500
Data entry (Species & Depths)	$75	4	$300
GIS Post-processing and Mapping	$75	8	$600
Report Completion, Contour Generation	$75	10	$750
TOTAL		49	$4,025

*VLAWMO staff as the second staff for field work will reduce total by $750 to $2,750

Deliverables

Under this proposal the field work, table of plants, BioBase report, and basic maps produced by BioBase will be completed under the not-to-exceed price. In addition, bathymetry, biovolume, and calculations on plant prevalence will be made available in a report.

The Bathymetric Report will include the following as funds allow:

- Description of Methods
- Tables of aquatic plants surveyed
- Bathymetry Map, Biovolume Map, numbered Survey point map to match with aquatic species tables, and shoreline polygons
- Shapefiles including biovolume, 2023 Contour Lines, and Point intercept location layers

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2023 Eurasian Watermilfoil and Curly Leaf Pondweed Delineation, Post Removal Survey, and Turion Survey Proposal Birch and Pleasant Lake

Scope of Services

Delineation Surveys

Delineation surveys will be used to collect data on the abundance of aquatic vegetation, specifically Eurasian Watermilfoil (EWM) and Curly Leaf Pondweed (CLP), using a meandering survey method consistent with DNR requirements for permitting.

Turion Survey

The turion survey will be used to collect data on the abundance of the reproductive vegetative mass of CLP, using a predefined point intercept survey method consistent with DNR protocol. At each point an Ekman dredge will be dropped to take a lake sediment sample. These sediment samples are sifted and turions are separated, tested for viability, and counted.

Bathymetry and Biovolume Surveys (optional)

Bathymetric surveys are completed by connecting a Lowrance unit + transducer to the boat to capture lake bottom depth data. This data is then processed, corrected using physically measured field data points where necessary, and then used to create new contour lines with the BioBase application. It may be completed in conjunction with the delineation survey if desired. SWCD staff members will also use the Lowrance unit and transducer to generate data that produces a biovolume map showing concentration of aquatic vegetation growing in the lake if desired.

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BIRCH LAKE

Eurasian Watermilfoil and Curly Leaf Pondweed Delineation, Post Removal, and Turion Survey

Birch Lake Survey Estimate, May-July 2023

Task	Cost/hr	Hours	Cost
Boat Use	unit	$50/visit X 3 visits	$150
Field Work, 3 days (2 people)*	$75	24	$1,800
GIS Post-processing and Mapping	$75	4	$300
TOTAL		28	**$2,250**

*Total field work cost would be $900 if VLAWMO staff will be second person in the boat. Total survey cost would then be $1,275.

PLEASANT LAKE

Eurasian Watermilfoil and Curly Leaf Pondweed Delineation, Post Removal, and Turion Survey

Pleasant Lake Survey Estimate, May-July 2023

Task	Cost/hr	Hours	Cost
Boat Use	unit	$50/visit X 3 visits	$150
Field Work, 3 days (2 people)*	$75	48	$3,600
GIS Post-processing and Mapping	$75	8	$600
TOTAL		56	**$4,350**

*Total field work cost would be $1,800 if VLAWMO staff will be second person in the boat. Total survey cost would then be $2,550.

Deliverables

The macrophyte report will include:

- Static map, in PDF format, of the delimitation of Eurasian Watermilfoil (EWM) and Curly Leaf Pondweed (CLP) shown as a survey point heat maps with rake density of EWM and CLP at each survey point.
- Shapefiles including EWM and CLP recommended removal area and point location layers
- Turion survey will include survey points and a spreadsheet with amount of viable, partial, and non-viable turions found

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BIRCH LAKE

Bathymetry, Biovolume, & Hybrid Milfoil Genetic Test Survey (optional)

Birch Lake Bathymetry, depth, genetic Survey Estimate, June-July 2023

Task	Cost/hr	Hours	Cost
BioBase Upload	unit	-	$300
GIS Post-processing and Mapping	$75	4	$300
Report/Contour Creation	$75	3	$225
EWM genetic testing	$50/stem	Min 4	$200 min
EWM sample collection, prep, & mail	$75	2	$150
TOTAL		**9**	**$1,175**

PLEASANT LAKE

Hybrid Milfoil Genetic Test Survey (optional)

Pleasant Lake genetic Survey Estimate, June-July 2023

Task	Cost/hr	Hours	Cost
EWM genetic testing	$50/stem	Min 4	$200 min
EWM sample collection, prep, & mail	$75	2	$150
TOTAL		**2**	**$350**

Deliverables

The bathymetry report will include:

- Bathymetry and biovolume map
- Shapefile of 2022 contour lines and biovolume heat map

The genotyping report will include:

- A report with the milfoil name of each sample from the Thum Lab at the University of Montana

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2023 Lake Amelia Area Flowering Rush Treatment

Lake Amelia Area Flowering Rush Treatment Estimate, May-July 2023

Task	Cost/hr	Hours	Cost
Documenting, treatment, and planting	$75	20	$1,500
TOTAL		20	**$1,500**

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Memorandum of Understanding Between Vadnais Lake Area Water 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 Water 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 water quality in Pleasant Lake;

Whereas, residents in North Oaks express concern about aquatic plants in Pleasant Lake;

Whereas, aquatic plants often increase in waterbodies with water quality improvements, and aquatic plants may include both native and invasive species;

Whereas, native aquatic plants are part of a healthy lake in the part of the State and Ecoregion that includes the Vadnais Lake Area Watershed, and native plants, including at least one uncommon species in Minnesota, are abundant in the littoral zone of Pleasant Lake;

Whereas, Pleasant Lake is considered infested by the Minnesota Department of Natural Resources for invasive Curly-leaf pondweed (*Potamogeton crispus*) and invasive Eurasian watermilfoil (*Myriophyllum spicatum*);

Whereas, invasive Curly-leaf pondweed reaches high abundance in Pleasant Lake early in the season and is generally documented to contribute to internal loading of phosphorus when it dies back in large numbers in the early summer, and increased phosphorus in the water column reduces water quality in freshwater lakes by stimulating plant and algae growth;

Whereas, Pleasant Lake is listed as a deep water, impaired lake by the Minnesota Pollution Control Agency for high nutrients, and phosphorus levels are a focal component of the impairment;

Whereas, in past years, chemical treatment was not allowed in Pleasant Lake by the Minnesota Department of Health (MDH) because of a need for baseline data to be collected statewide regarding chemical concentrations, that baseline data collection and analysis was completed by MDH, and MDH has stated a willingness to consider approving possible chemical treatment for invasive aquatic plants in Pleasant Lake;

Whereas, current aquatic plant surveys, with delineated polygons and total area for possible invasive aquatic plant treatment are needed to engage in discussions with MDH;

Whereas, a survey focused early in the season is needed to make recommendations regarding targeted areas and extent for treatment of Curly-leaf pondweed, and a survey later in the season is needed to understand native plant species distribution and abundance in Pleasant Lake;

Whereas, aquatic plant surveys are an important tool in communicating with residents about the status of water quality and the aquatic plant community in Pleasant Lake;

Whereas, NOHOA and VLAWMO are interested in continuing to work together on potential treatment of Curly-leaf pondweed in Pleasant Lake, if such plans are approved by MDH;

Whereas, VLAWMO has received a quote from Ramsey County Soil and Water Conservation Division (RCSWCD) for approximately $4,025 per survey and confirmation that RCSWCD has capacity to complete these surveys during the 2023 growing season;

Whereas, NOHOA (if accurate) and VLAWMO have funds identified in their respective 2023 budgets for surveys in Pleasant Lake, and funds allocated for 2023 surveys are within the allocated funding level;

Whereas, the parties wish to clearly define their respective roles and financial support for aquatic plant surveys in Pleasant Lake in 2023;

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

1. NOHOA. NOHOA agrees to do the following:

    a. Reimburse VLAWMO at the end of the 2023 growing season for survey work completed by RCSWCD for the NOHOA contribution of $XX.
    b. Engage in discussions with MDH, VLAWMO, and possible other partners regarding future chemical treatment, if approved, in Pleasant Lake.
    c. Consider allocating funds for invasive aquatic plant treatment in Pleasant Lake, as appropriate depending upon response received from MDH.

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

    a. Provide for management and oversight of the Pleasant Lake surveys with RCSWCD.
    b. Pay the overall contract with RCSWCD at the end of the 2023 growing season that includes a NOHOA contribution of $XX and VLAWMO contribution of $XX.
    c. Invoice NOHOA for its portion of completed survey work after the invoice for 2023 work has been received from RCSWCD by VLAWMO.
    d. Engage in discussions with MDH, NOHOA, and possible other partners regarding future chemical treatment, if approved, in Pleasant Lake.
    e. Consider allocating funds to cost share with partners for invasive aquatic plant treatment in Pleasant Lake, as appropriate depending upon response received from MDH.

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 invasive plant removal and shoreline restoration 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 surveys with RCSWCD in 2023 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. VLAWMO shall remain responsible for reimbursing NOHOA 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 Water Management Organization

_____
Chairperson

_____
Administrator

Date:_____

North Oaks Home Owners' Association

_____
Authorized Representative

Date:_____

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VLAWMO
Vadnais Lake Area
Water Management Organization

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

To: VLAWMO Board of Directors

From: Lauren Sampedro, Watershed Technician & Program Coordinator

Date: April 17, 2023

Re: **V. F.** East Vadnais Lake Subwatershed Resiliency Study Update

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In January 2023, after the December 14th Board meeting, VLAWMO staff had applied for a MPCA Community Planning Grant for Stormwater Resiliency to complete a study to evaluate opportunities in the East Vadnais Lake subwatershed to reduce chronic flooding and stormwater volume, improve water quality, and protect drinking water for a more resilient subwatershed. Staff received letters of support from the City of Vadnais Heights, Ramsey County, and Saint Paul Regional Water Services for the grant application, which included a proposed commitment to provide part of the local match.

The MPCA responded in mid-March that VLAWMO's application was not selected for the Community Planning grant due to high competition. The received applications asked for $1.3 million, but the MPCA only had $395,000 available for this grant round to distribute across the State. Though the grant application was not successful, the City of Vadnais Heights, Ramsey County, and Saint Paul Regional Water Services provided initial support to continue moving forward with the resiliency study using local match funds.

The proposed local match contributions, based on an estimated study cost of $70,000, include 28.6% from VLAWMO, 28.6% not to exceed $20,000 from the City of Vadnais Heights, 28.6% not to exceed $20,000 from Ramsey County, and 14.3% not to exceed $10,000 from Saint Paul Regional Water Services. Should the total cost of the study be over $70,000, VLAWMO would cover the remaining match.

Staff have completed draft agreements for each of the partners and a draft Request for Services (RFS) that would be provided to engineering consultants. These documents are currently under review by the three partners. Staff anticipate the drafts to be ready for consideration at the June 28th Board of Directors meeting.

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VLAWMO
Vadnais Lake Area
Water Management Organization

800 County Road E E, Vadnais Heights, MN 55127
www.vlawmo.org; Office@vlawmo.org

To: Board of Directors

From: Phil Belfiori, Administrator

Date: February 14, 2023

Re: VI. A. 1. Elections and Appointments (Agenda item was tabled at Feb. Board meeting)

1. **Election of officers.** 2022 Slate: Chair: Jim Lindner; Vice Chair: Dan Jones; Secretary Treasurer: Patricia Youker. Please consider how you might best serve. Officers preside over the meeting (Chair, Vice Chair, Sec-Tres.) and become check signers through US Bank (currently Chair signs check on a monthly basis). Other duties: the Chair reviews and approves Board meeting agendas working with Administrator. Chair may also speak for VLAWMO in public situations. The Treasurer/Secretary may also sign monthly checks, review financial reports and attend annual draft audit review meeting. Vice Chair serves upon absence of Chair.

2. **VLAWMO Subcommittee Assignments.** The VLAWMO Board Subcommittee may meet 2-4 times per year. They make recommendations for Board action as far as budget, project consideration, new policies or policy updates and personnel matters. They also assist with human resources questions and direction as needed. The three Board officers (Chair, Vice Chair and Treasurer/Secretary) have served on the subcommittee in 2022. New this year is that per the VLAWMO Attorney, this Board appointed subcommittee is required to follow the OML. This would mean meeting in-person and noticing the meetings etc.

Technical Commission (TEC) Chair and Officers. The current 2023 TEC Chair Jesse Farrell as recently resigned from his position as Public Works Director at the

City of Vadnais Heights. It is anticipated that new elections for TEC officers will be held at an upcoming TEC meeting. Staff will report the outcome of these elections at the June Board meeting.

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800 County Road E East, Vadnais Heights, MN 55127
www.vlawmo.org

To: VLAMWO Board of Directors

From: Phil Belfiori

Date: April 19, 2023

RE: VI. B. 2022 Financial Report and Audit

Representatives from Clifton, Larson, Allen LLP, Chris Knopik and Ezra Koetz will be present at the meeting with a presentation of the audit materials. The presentation from CLA is included in the Board Packet. To reduce the number of pages of the overall Board packet, the financial statement (along with the Governance letter and internal control letter) can be found at the following link:

VI. B. 1. 3. Full Financial Statement Draft:
https://www.vlawmo.org/index.php/download_file/4449/

VI. B. 1. 4. Internal Control Letter Draft:
https://www.vlawmo.org/index.php/download_file/4451/

VI. B. 1. 5. Governance Letter Draft:
https://www.vlawmo.org/index.php/download_file/4452/

Please feel free to ask questions. These documents will need to be sent to the Board of Water & Soil Resources and the State Auditor's office. VLAWMO also send the financial report to each of our JPA member communities.

Recommendation: Staff recommends the Board accept the 2022 Financial Report and audit documents and direct them to be distributed to the appropriate state and local agencies.

Proposed Motion

> Director _____ moves to approve the 2022 Financial Report and audit documents and direct them to be distributed to the appropriate state and local agencies.

VI. B. 1. 2.

We'll get you there.

CPAs | CONSULTANTS | WEALTH ADVISORS

Vadnais Lake Area Water Management Organization

2022 Audit Presentation

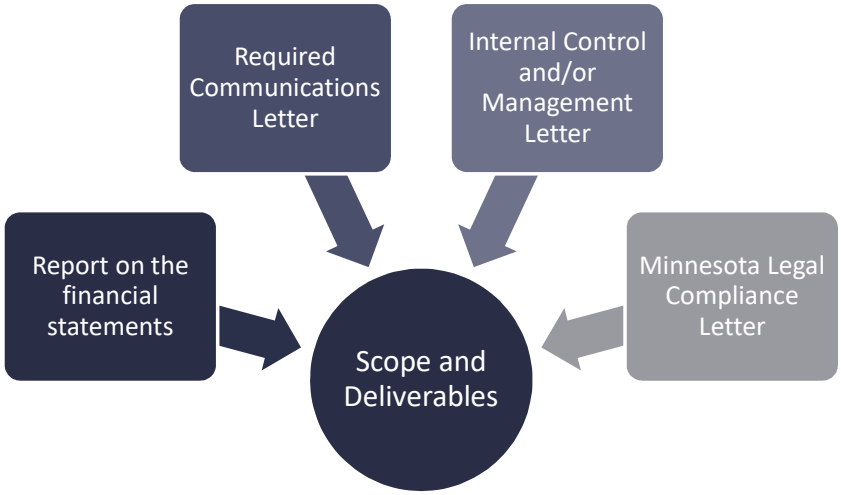
1

Agenda

- Audit Deliverables and Results
- Financial Results
- Required Communications
- Engagement Finalization

2

Audit Scope and Deliverables



Audit Results

Unmodified Opinion

- On the basic financial statement

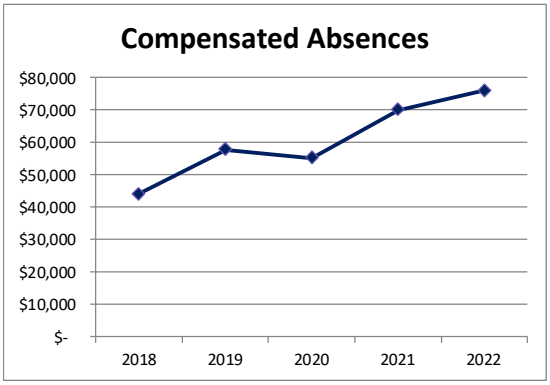
Compliance and Internal Control Over Financial Reporting

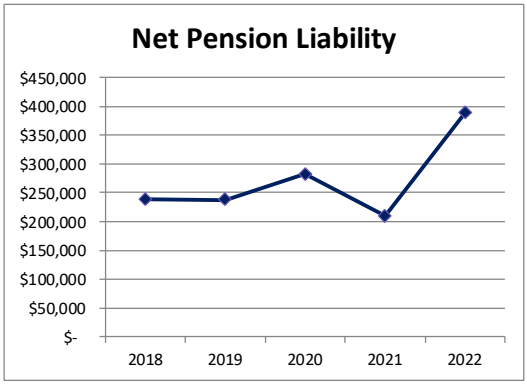
- One material weakness related to internal control (same as previous years):
  - Auditor drafts financial statements and notes
- One management comment:
  - Documentation & review of internal controls

Minnesota Legal Compliance

- No findings

Financial Results – Long Term Liabilities

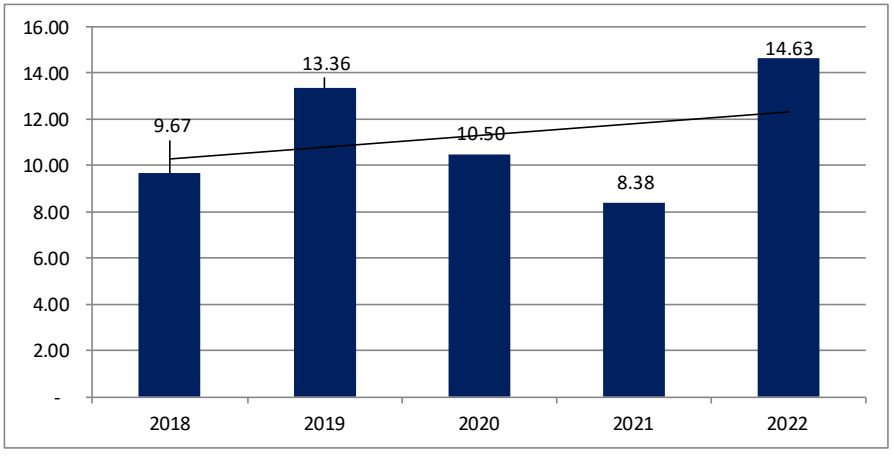




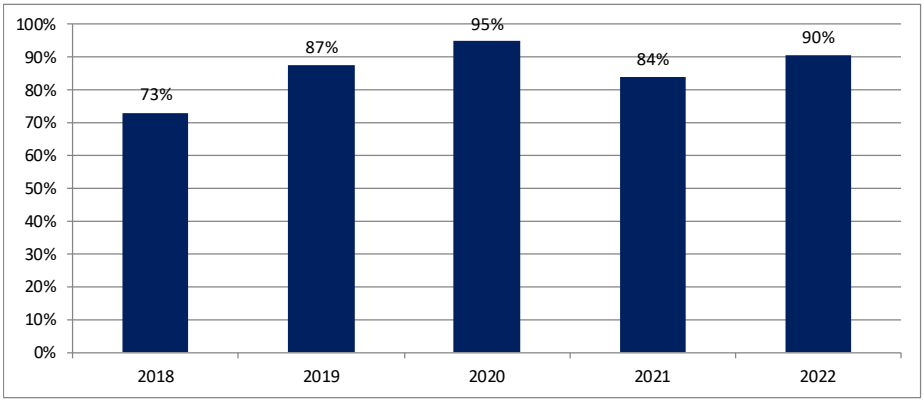
Outstanding Loans Payable in 2022: $327,837

- 0% Interest Payable in payments of $38,569 for 9 years

Financial Results – Months of Reserves



Financial Results – Fund Balance Policy



Unrestricted Fund Balance / Next Year's Budgeted Expenditures

Policy states 35-50% minimum is required

Financial Results – Other

Total Expenditures decreased $429k

- Expenditures related to the loan: $386k in 2021 not present in 2022

Total Revenues increased $38k

- $89k increase in charges for services
- $61k decrease in grants
- $15k increase in interest from investments

Governance Communication Letter

Overall	Estimates	Difficulties	Other
• Purpose is to provide an update on the audit since the planning meeting • No changes in scope of audit • GASB 87 - Leases	• Useful lives • Compensated Absences • Pension Liability • We are comfortable with management's estimates	• No difficulties encountered • No disagreements encountered • No other findings to report	• Audit adjustments made over special assessment receivables, accrued wages, payables, and other receivables

Engagement Finalization

Approval from the Board of Directors

Signed Representation Letter

Chris Knopik, CPA, CFE, Principal
Christopher.Knopik@claconnect.com
612-397-3266

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VLAWMO
Vadnais Lake Area
Water Management Organization
55127

800 County Road E East, Vadnais Heights, MN

www.vlawmo.org; Office@vlawmo.org

To: VLAWMO Board of Directors

From: Dawn Tanner

Through: Phil Belfiori

Date: April 19, 2023

Re: VI. B. 2. 1. Consider resolution 01-2023 for considering approval of: Oak Knoll Pond Spent Lime Demonstration Project Feasibility Study, Scope of Work for Development of Final Plans and Specs and Inspection, MOU with City of WBL, and Authorizing VLAWMO Subcommittee to Consider Final Plans/Specs and Soliciting Quotes

The spent lime feasibility study for Oak Knoll Pond/Wood Lake was completed in mid-April in partnership with the City of White Bear Lake and Barr Engineering. The feasibility study looked at 4 areas of feasibility to address overall feasibility of the project. Those 4 areas were: technical feasibility and lab support analyses, social feasibility including residents living around the pond granting temporary access of a possible project, permitting feasibility with the MPCA, and economical feasibility for a cost-effective demonstration project.

Barr Engineering has concluded that the spent lime demonstration project for Oak Knoll Pond/Wood Lake is feasible across all 4 categories. **The attached feasibility report provides detail on each category**.

The anticipated cost for the project is $83,100 including a 10% contingency, which is recommended especially because of the experimental and innovative nature of the project.

VLAWMO and the City of WBL budgeted for this project in 2023 and have agreed to a 50/50 partnership for financial support for the project (**see attached draft MOU**). The City Council is unable to act on the MOU until May 9th however the contract with Barr Engineering for development of plans /specs and contract documents will be signed by April 28th to allow Barr Engineering the time need to complete work items for the May subcommittee packet.

More detail about the project is included in the **attached ppt** and will be presented during the Board meeting.

Staff Recommendation

Based on project engineers finding that the demonstration project is feasible, staff recommends approval of Resolution 01-2023 authorizing Board approval of: The Oak Knoll Pond Spent Lime Demonstration Treatment Feasibility Study dated April 18, 2023, Approval of the scope of work from Barr Engineering dated April 18, 2023 to complete final project contract documents/solicit quotes and project inspection, Approval of MOU with City of White Bear Lake, and authorizing the VLAWMO subcommittee to consider final design plans/specs and authorize soliciting quotes for the demonstration project.

Proposed Motion

Director _____ moves and Director _____ seconds approval of resolution 01-2023.

Attached:

1. PowerPoint
2. Resolution 01-2023
3. Oak Knoll Pond Spent Lime Demonstration Feasibility Study
4. Scope of Work for Development of Final Plans and Specs and Inspection from Barr Engineering
5. MOU with City of White Bear Lake

Agenda item VI. B. 2

Oak Knoll Pond Spent Lime Demonstration Project -Feasibility Report, Barr Engineering Scope of work, MOU with City of WBL, And Authorize VLAWMO Subcommittee to Consider Final plans/specs/authorize solicit quotes

Dawn Tanner, Phil Belfiori, Greg Wilson
Board Meeting
4/26/2023

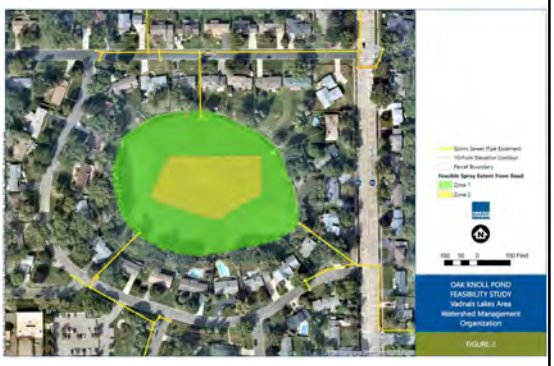
VLAWMO
Vadnais Lake Area
Water Management Organization

- Oak Knoll Pond/Wood Lake in WBL
- Board authorized feasibility study undertaken in 2022
- Expand upon previous small pond experiment to conduct demonstration on larger waterbody

Feasibility study addressed

Barr Engineering, VLAWMO staff, and City of WBL staff worked to determine:

1. Technical feasibility: lab analysis of water and sediment, pH conditions, calculated appropriate dose
2. Social feasibility: presentation to residents, temporary project easement acquisition;10 out of 23 parcels granted access
3. Permitting by MPCA: approved with monitoring requirement
4. Cost Estimate based on Engineering's concluded dosing analysis and number of applications in middle of pond and edge of pond.



- It is important to remember that this is a proposed demonstration project – In addition to important water quality outcomes, the main purpose of the project is to learn what works.

Technical feasibility key details

- pH conditions are suitable in pond (need to maintain a pH below 9.0), a single application of 41,000 gallons could be applied at once without a swing expected, spreading out spent lime delivery is expected to allow the full dose to be applied with pH monitoring ongoing during project
- Calculated dose: 88,000 gallons
- City water treatment can provide 3,600-4,000 gallons of spent lime per day
- 1.5-2 months will likely be needed to deliver and apply full dose

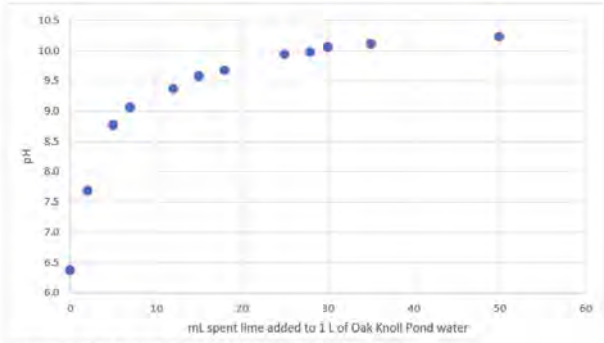


Figure 1. Results of spent lime slurry titration to Oak Knoll Pond.

Social feasibility key details

- Stakeholder meeting and presentation held on Feb. 1, 2023, residents from 8 parcels attended, all voiced support for the project
- Temporary project easement developed with VLAWMO legal counsel
- Letters and request for signed easements mailed to all 23 parcels
- 10 completed easements were received
- Barr Engineering has stated that the location and number of easements received is sufficient for the project to be cost-effective and feasible

Estimated Cost

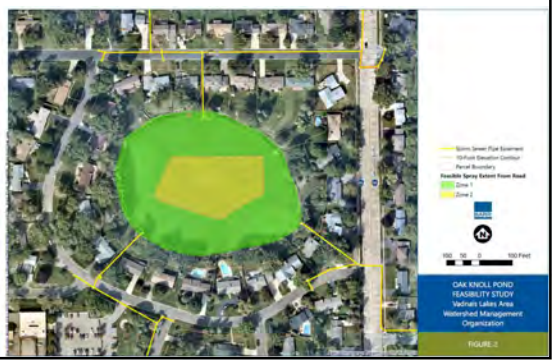
- Feasibility study was completed with 50% cost share with City of WBL
- VLAWMO included project in 2023 approved budget
- City of WBL also included project in 2023 approved budget
- Final cost with contingency is slightly higher than $75,500 total allocated by both parties
- Additional cost is available in subwatershed approved 2023 budget

Table 1. Estimated costs of Oak Knoll Pond spent lime treatment.

Description	Cost
Spent lime treatment contract	$60,500
Engineering and treatment contracting/oversight	$15,000
Contingency (10%)	$7,600
Total	**$83,100**

Timing/ Next Steps

- If scope of work is approved tonight, Barr Engineering will prepare plans and specs /contract docs and request that VLAWMO subcommittee approve soliciting for quotes
- Quotes received and recommendation will be brought for consideration by the VLAWMO Board at the June regular meeting
- The City Council will receive VLAWMO recommendation and request consideration at the early July meeting
- Project will commence following both approvals
- Project will take 1.5-2 months to complete



Requested Board action: Resolution 01-2023

Consideration of Resolution 01-2023:

1. Approval of the Oak Knoll Pond Spent Lime Demonstration Treatment Feasibility Study dated April 18, 2023
2. Approval of the scope of work from Barr Engineering dated April 18, 2023 to complete final demonstration project contract documents, solicit quotes, and inspect project implementation
3. Approval of MOU with City of White Bear Lake, which identifies 50% cost share on Barr Engineering above mentioned scope of work, and
4. The VLAWMO subcommittee to consider final design plans/specs and consider authorize soliciting quotes

800 County Road E East, Vadnais Heights, MN 55127
www.vlawmo.org

RESOLUTION NO. 01-2023
Of the Vadnais Lake Area Water Management Organization (VLAWMO)

A RESOLUTION APPROVING THE FEASIBILITY STUDY FOR SPENT LIME DEMONSTRATION PROJECT FOR OAK KNOLL POND/WOOD LAKE, MOU BETWEEN THE CITY OF WHITE BEAR LAKE AND VLAWMO, SCOPE OF WORK FOR FINAL PROJECT DESIGN /INSPECTION, AND AUTHORIZE VLAWMO SUBCOMMITTEE TO CONSIDER FINAL PROJECT CONTRACT DOCUMENTS AND SOLICT QUOTES

Resolution 01-2023 was moved by Director _____ and second by Director _____.

WHEREAS, Oak Knoll Pond is a public water wetland that functions as a stormwater pond and receives runoff from the surrounding neighborhoods;

WHEREAS, Oak Knoll Pond is located in the Goose Lake subwatershed. East Goose Lake is on the State of Minnesota's Section 303(d) impaired waters list for excess nutrient through the Clean Water Act;

WHEREAS, internal load feasibility study and implementation, detention pond retrofit and maintenance, and emerging technologies demonstrations were identified as Goose Lake nutrient reduction strategies in the 2014 VLAWMO Total Maximum Daily Load (TMDL) Implementation Plan;

WHEREAS, the VLAWMO Board authorized participation in the research project with Barr Engineering and experimental spent lime treatment of Ash Street Pond in Lino Lakes during 2021;

WHEREAS, Barr Engineering reported that internal load was reduced and such reductions were maintained in treatment ponds (~0.5 acres in size) that were part of the spent lime research project that was conducted in 2021;

WHEREAS, the VLAWMO Board authorized the spent lime feasibility study with Barr Engineering to treat a larger waterbody to see if spent lime treatment is a technology for water quality improvement that can be scaled up;

WHEREAS, field samples were collected, monitoring conducted, and lab analyses were conducted to determine that Oak Knoll Pond/Wood Lake is a suitable waterbody for spend lime treatment due to water and sediment chemistry;

WHEREAS, the recently completed feasibility study (attached in the April 26, 2023, Board packet) determined that the Project is socially and technically feasible and cost effective for a spent lime demonstration project on Oak Knoll pond;

WHEREAS, the City of White Bear Lake has been an active participant and financial partner during each step of the spend lime demonstration project development to date and has budgeted for a cost share in the currently proposed demonstration project;

WHEREAS, the attached Feasibility Study and scope of work dated April 18, 2023, from Barr Engineering identifies the anticipated engineering work needed to prepare plans and specs, conduct the solicitation of quotes, provide a recommendation for a contractor to complete the Project, and provide Project development of plans and specs, request for quotes, oversight and inspection in the amount of $15,000 and provides a cost estimate for completion of the Project at an anticipated $60,500, with a recommended 10% contingency;

WHEREAS, VLAWMO and City mutually desire to partner on the spent lime demonstration project in Oak Knoll Pond/Wood Lake that is resulting from the recently completed spent lime feasibility study and have prepared a corresponding MOU (attached) between VLAWMO and the City for 50% payment each of the attached scope of work from Barr Engineering. The City Council is unable to act on the MOU until May 9th however the contract with Barr Engineering for development of plans /specs and contract documents will be signed by April 28th to allow Barr Engineering the time need to complete work items for the May subcommittee packet; and

WHEREAS, the VLAWMO Board desires to move forward with the development of final contract documents and solicitation of quotes for consideration at an upcoming meeting of either the VLAWMO subcommittee or VLAWMO Board.

NOW, THEREFORE, BE IT RESOLVED, by the Vadnais Lake Area Watershed Management Organization Board of Directors that the Board authorizes:

1) Approval of the Oak Knoll Pond Spent Lime Demonstration Treatment Feasibility Study dated April 18, 2023

2) Approval of the scope of work from Barr Engineering dated April 18, 2023, to complete final demonstration project contract documents, solicit quotes, and inspect project implementation

3) Approval of MOU with City of White Bear Lake, which identifies 50% cost share on Barr Engineering above mentioned scope of work, and

4) The VLAWMO subcommittee to consider final design plans/specs and authorize soliciting quotes for the demonstration project

800 County Road E East, Vadnais Heights, MN 55127
www.vlawmo.org

Adopted this 26th day of April 2023 on a vote of __ yeas and __ nays as follows:

	Yea	Nay	Absent
Dan Jones	☐	☐	☐
Ed Prudhon	☐	☐	☐
Rob Rafferty	☐	☐	☐
John Shuman	☐	☐	☐
Katherine Doll Kanne	☐	☐	☐
Jim Lindner	☐	☐	☐

BY THE VLAWMO BOARD

_____
Chairperson

Attest:_____
Administrator

resourceful. naturally.
engineering and environmental consultants

BARR

Technical Memorandum

To: Vadnais Lake Area Water Management Organization (VLAWMO)
From: Greg Wilson, Barr Engineering Co. (Barr)
Subject: Oak Knoll Pond Spent Lime Demonstration Treatment Feasibility Study
Date: April 18, 2023
Project: 23621455.00

Ponds that accumulate particles and phosphorus from stormwater runoff are a standard and widely applied stormwater best management practice. However, just as internal phosphorus loading occurs in lakes during warm summer periods when the potential for oxygen depletion is greatest, aging ponds have the potential to release more phosphorus than is captured during summer months. Spent lime, a water treatment byproduct of lime softening, has been shown to reduce sediment phosphorus release in the lab and in two experimental applications to half-acre ponds that occurred at nearby locations in 2021. Further research needs include the applicability of spent lime treatments for larger water bodies and the long-term cost-effectiveness compared to alum and other phosphorus control options.

The Vadnais Lake Area Water Management Organization (VLAWMO) and the City of White Bear Lake (WBL) hired Barr for completion of an in-pond spent lime demonstration treatment feasibility study for Oak Knoll Pond (also known as Wood Lake), which is a 4.5-acre pond located in White Bear Lake. Oak Knoll Pond has an average depth of 5.7 feet and past monitoring indicates that sediment phosphorus release can limit its stormwater treatment capacity during the summer months. The feasibility study includes pond water sampling and analysis, evaluation of technical and social feasibility of spent lime application, preparation of supporting information for permitting, and completion of this pond treatment feasibility technical memorandum.

1.0 Technical Feasibility

1.1 Pond Water Sampling and Analysis

One component of technical feasibility for this project is the buffering capacity of the pond for pH, due to its water chemistry and sediment composition. Preventing wide swings in pH is important during spent lime treatments, and regular monitoring during treatment is required during a project. Past applications of spent lime slurry to stormwater ponds have, to varying degrees, resulted in increased pH for some time following treatment (as described in the study funded by the Minnesota Stormwater Research Council [MSRC] and the Clean Water Fund). Permit conditions dictate that spent lime applications do not result in pH readings above 9.0 to prevent adverse impacts on aquatic biota in Oak Knoll Pond.

To assist in determining the potential impact that spent lime additions would have on pH in Oak Knoll Pond, VLAWMO staff coordinated water sample collection from Oak Knoll Pond and spent lime slurry sample collection from the WBL water treatment facility during 2022 as part of the feasibility study for spent lime titrations in Barr's lab to gauge the buffering capacity of the pond water. The results of the analysis of the spent lime titrations provide the necessary data to calculate the maximum spent lime dose that could be safely applied to Oak Knoll Pond for the initial phase of treatment. Figure 1 shows the results of the lab testing, which involved incremental additions of spent lime to one liter of water obtained from Oak Knoll Pond, with a starting pH of 6.37. The pH exceeded 9.0 following the addition of 7 mL of spent lime, but it took an additional 23 mL of spent lime (or 30 mL, total) to increase the pH above 10.0.

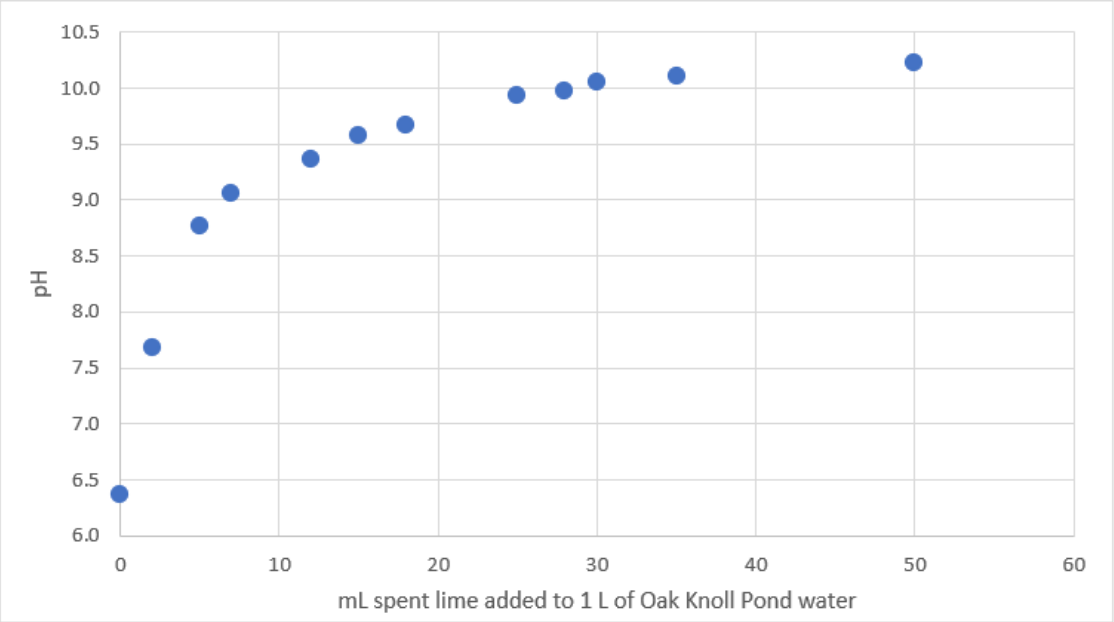


Figure 1. Results of spent lime slurry titration to Oak Knoll Pond.

Since the total water volume of Oak Knoll Pond is nearly 5.9 million gallons at its normal level, it is expected that approximately 41,000 gallons of spent lime slurry addition applied at one time would increase the pond pH to 9.0. The spent lime titration results represent the worst case for pH impacts, as it is expected that contractor application capacity and slurry availability that will only allow ~4,000 gallons to be applied per day over the course of 1.5-2 months, combined with pH changes associated with stormwater inflows, will mitigate the potential pH increases from spent lime additions over time. In addition, pH buffering from the pond sediment and/or atmospheric exchange may also mitigate the pH impacts from spent lime applications. Based on a long-term P8 model simulation of the Oak Knoll Pond watershed inflows, it is expected that the full volume of the pond is displaced by stormwater inflows nearly 3.5 times during an average year (i.e., more than half of the pond volume should be replaced by stormwater inflows during a typical two-month period). As a result, an application of 88,000 gallons of spent lime slurry to Oak Knoll Pond (as prescribed in Section 4) can likely be accommodated without

exceeding a pH of 9.0, as dictated by permit requirements. If the pH does approach 9.0 during spent lime application, the project would be halted and resume once the pH level dropped below 8.5.

1.2 Considerations for Spent Lime Application Contracting

An on-site meeting was arranged with a qualified contractor to review and discuss the options for treatment methods, cost and permit considerations, as well as constraints associated with pond access, hose and spray length, project timing and/or slurry availability, and any staging or chemical storage needs. WBL water treatment staff were also consulted to discuss project timing and spent lime slurry availability. Figure 2 was developed, following the site meeting and consultation with WBL water treatment staff, to further assist with ongoing discussions about the technical and social feasibility of spent lime application(s) to Oak Knoll Pond.

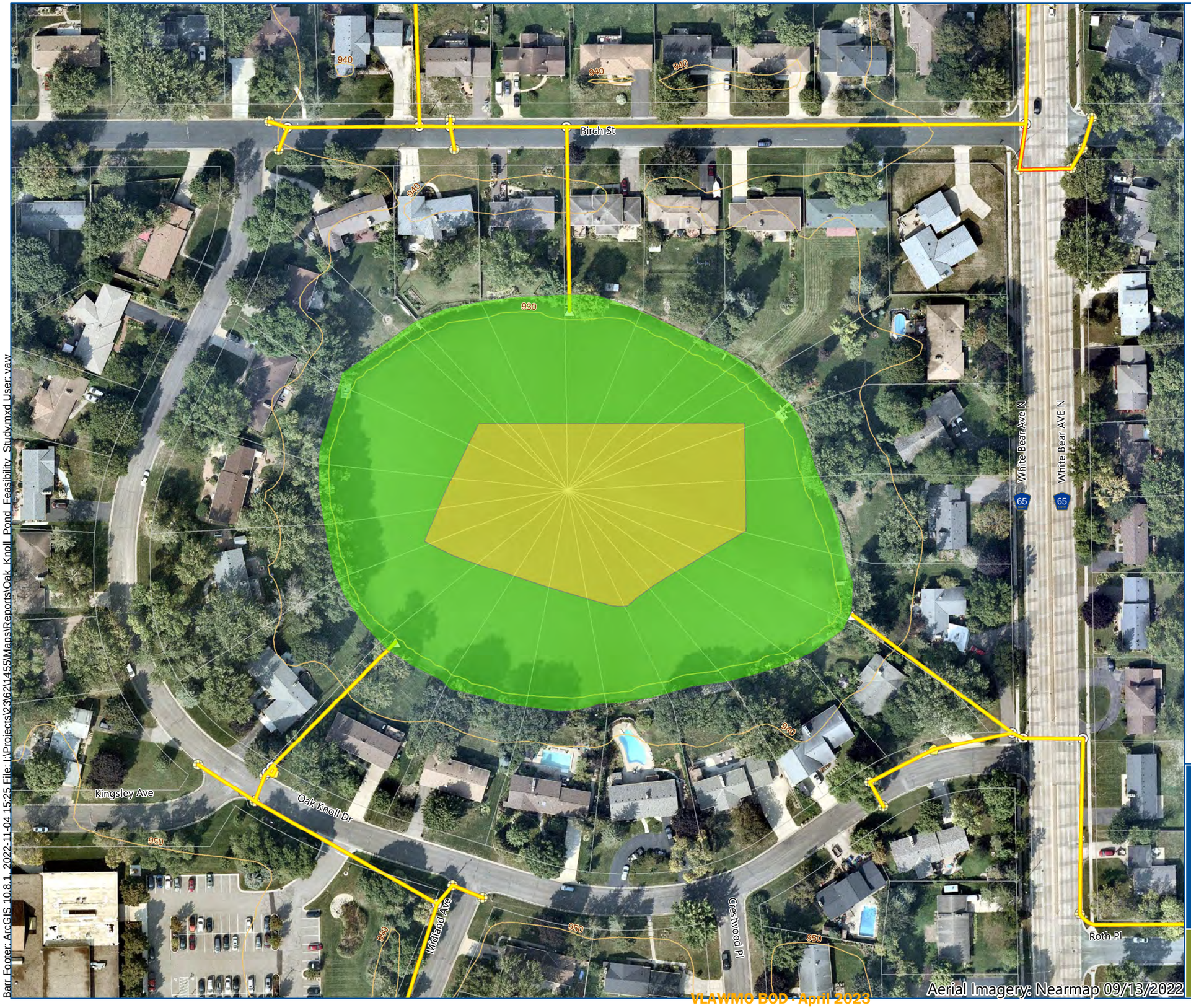
Past applications of spent lime slurry to the smaller stormwater ponds were accomplished with 300 feet of hose attached to a hydroseeder pump. It was determined that the same approach would be feasible for the Treatment Zone 1 area shown in Figure 2, provided that the contractor could get access to the pond shoreline in three to four primary locations (shown in Figure 3). It was further determined that a feasible approach for spent lime application to the Treatment Zone 2 area, shown in Figure 2, would require 100 feet of additional hose, higher pumping capacity and the use of a boat to extend the hose toward the middle of the pond, provided that the contractor could get access to the pond shoreline at the same three to four primary locations.

2.0 Social Feasibility

Since Oak Knoll Pond is surrounded by dense residential development, there are several considerations for technical and social feasibility issues, including permit considerations and pond access constraints or legalities (such as easements).

A community meeting regarding Oak Knoll Pond was held on February 1, 2023. A presentation was given regarding progress to date on the feasibility study for a possible spent lime demonstration partnership project between VLAWMO and WBL for Oak Knoll Pond. The following summarizes the project, as presented at the meeting (slides from the community meeting were also made available for public viewing at: https://www.vlawmo.org/news/spent-lime-demonstration-study/):

> Spent lime slurry would be delivered to the pond/lake from the City of White Bear Lake water treatment facility on a truck. The slurry would be sprayed into the pond using a hose and a small boat to allow access to the middle of the pond. A licensed contractor would do the spraying, and they would need to access the pond from as many locations around the edge as possible. Access on a given property would be by foot traffic only and involve a contractor bringing a hose across the edge of the property to reach the pond multiple times over the course of 1.5-2 months. They may also need to walk a boat down to the pond in key locations.



Storm Sewer Pipe Easement

10-Foot Elevation Contour

Parcel Boundary

Feasible Spray Extent From Road

Zone 1

Zone 2

BARR

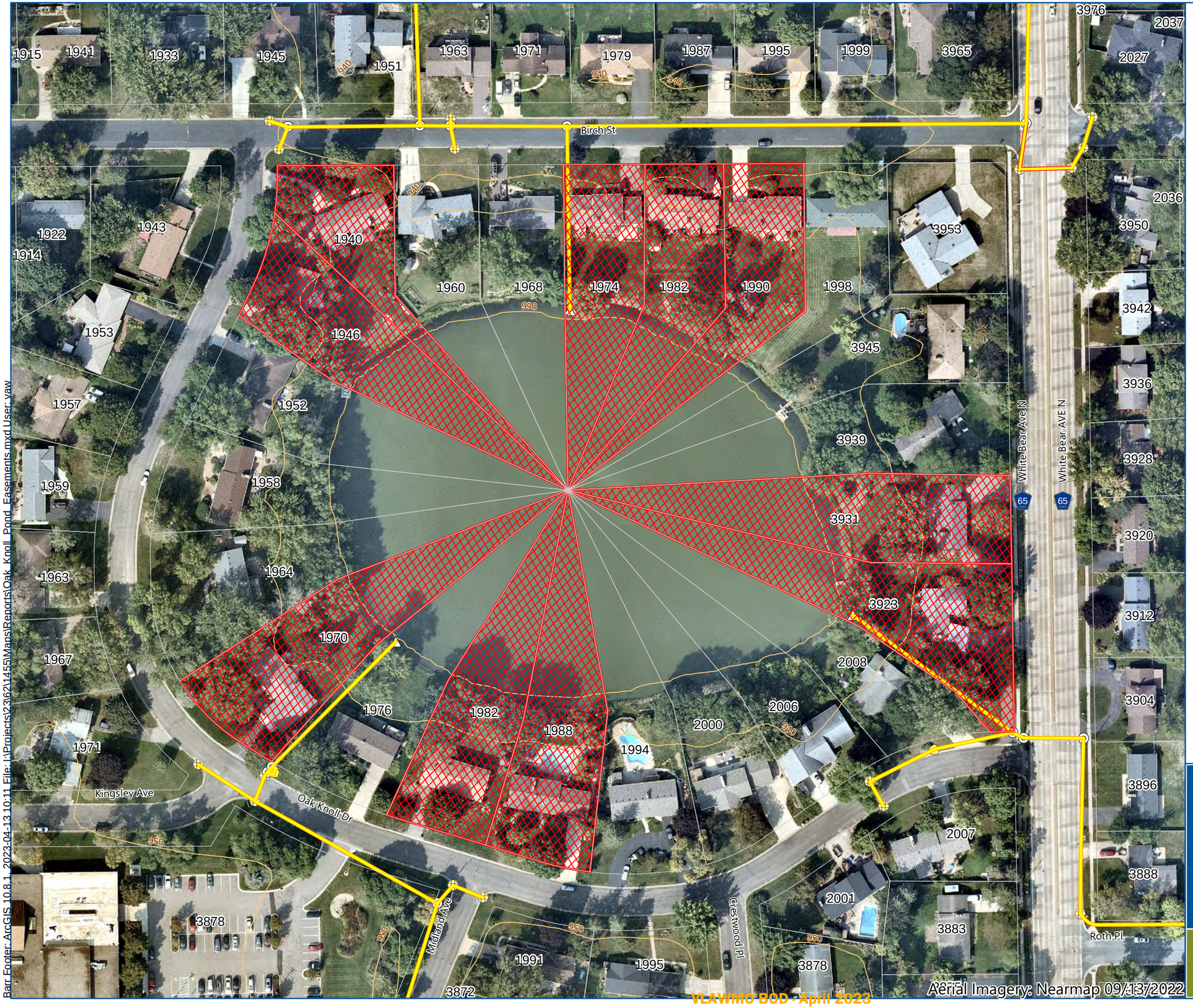
N

100 50 0 100 Feet

OAK KNOLL POND
FEASIBILITY STUDY
Vadnais Lakes Area
Watershed Management
Organization

FIGURE 2

Aerial Imagery: Nearmap 09/13/2022



Storm Sewer Pipe Easement

10-Foot Elevation Contour

Temporary Easement

Parcel Boundary

BARR

N

100 50 0 100 Feet

OAK KNOLL POND EASEMENTS

Vadnais Lakes Area Watershed Management Organization

FIGURE 3

Aerial Imagery: Nearmap 09/13/2022

Barr_Footer: ArcGIS_10.8.1_2023-04-13 10:11 File: I:\Projects\23\62\1455\Mapsl\Reports\Oak_Knoll_Pond_Easements.mxd User: vaw

Residents from 8 parcels around the lake/pond attended the meeting, and all expressed project support. Residents who were unable to attend the meeting were invited to contact VLAWMO or WBL with questions, and if they supported the effort, were requested to sign a temporary easement agreement to ensure future access (if the project goes forward). Figure 3 shows the locations where a temporary easement agreement was obtained, which confirmed that a contractor would gain access to the pond shoreline at the four primary locations that would be needed to successfully apply spent lime slurry to the each of the respective treatment zones shown in Figure 2.

3.0 Permitting

Since Oak Knoll Pond is a public water of the State of Minnesota, a spent lime application requires a permit from the Minnesota Pollution Control Agency (MPCA). MPCA had previously granted a permit for Oak Knoll Pond, on an experimental basis, as a part of the MSRC research study. Since the previous MSRC study budget could not accommodate a spent lime application for Oak Knoll Pond, MPCA was consulted to determine whether they would need to re-issue the permit. MPCA indicated that the existing permit approval letter was still valid and that they can change the dates (if desired) after the treatment timeline is finalized.

The permit conditions call for MnDNR staff and citizens to be notified in advance of the planned treatment to avoid confusion during the application. In addition, MPCA requires monitoring for pH during, and the first 2 weeks after, spent lime application to ensure the pond pH does not exceed 9.0. MPCA would also like to receive any reports that the project partners generate as they continue regular water quality monitoring efforts for surface waters impacted by this treatment.

4.0 Treatment Contracting and Oversight

Considering the permitting requirements and the results of the technical and social feasibility analyses, the spent lime demonstration project is feasible and recommended for implementation to control sediment phosphorus release in Oak Knoll Pond.

Based on the best available science for the spent lime treatment dose (as developed from the MSRC study), and estimated unit costs for application to each treatment zone (shown in Figure 2), it was determined that the optimal spent lime slurry application rates would be 56,000 and 32,000 gallons to Treatment Zones 1 and 2, respectively. These respective spent lime slurry volumes represent approximately 14 and 8 loads of 4,000 gallons each Treatment Zones 1 and 2. Since the WBL water treatment facility is generating between 3,600 and 4,000 gallons of spent lime slurry during each summer day, it is expected that the overall treatment timeframe will take between one and two months, depending on any limitations associated with weather or high pH in the pond.

While the nature of the proposed demonstration project makes it more difficult to estimate the water quality benefit and life span of recommended spent lime dosing, a comparison of the long-term P8 model simulation of the Oak Knoll Pond watershed inflows to VLAWMO's 2017 water quality monitoring data, indicates that water quality should improve by more than 30 percent and the treatment efficiency of the pond should increase by 20 percent, resulting in an increased average annual total phosphorus (TP) load reduction of 16 pounds per year. In addition, comparison of the long-term P8 model simulation of the Oak Knoll Pond watershed inflows to the available sediment phosphorus fractionation data, indicates that the life span of the spent lime application should be 6 years, based on average annual conditions.

Table 1 shows the estimated costs for completing the spent lime treatment of Oak Knoll Pond, which is recommended during the summer of 2023. It is recommended that a 10% contingency cost is applied for the project budget. The engineering and treatment contracting support cost includes development of bidding documents (including plans and specifications), solicitation of quotes from qualified contractors, contractor selection and support throughout the treatment period. Since the estimated contractor costs are between $25K and $175K, making the contract by direct negotiation can be used, whereby the city or watershed must get at least two quotations when possible and keep them on file for at least one year. Treatment support will need to include pH monitoring of Oak Knoll Pond each time that spent lime is applied to assure that the project's permit requirements are met.

Table 1. Estimated costs of Oak Knoll Pond spent lime treatment.

Description	Cost
Spent lime treatment contract	$60,500
Engineering and treatment contracting support	$15,000
Contingency (10%)	$7,600
Total	**$83,100**

5.0 Performance Monitoring Recommendations

Since the proposed project is intended to demonstrate a new water quality management approach at a much larger scale, it is preferable that actual monitoring data get used to estimate the water quality benefit and life span of the recommended spent lime dosing, as opposed to the modeling discussed in Section 4. While one year of water quality and sediment monitoring data exists, it is five years old and before/after monitoring from the same year as the spent lime applications would provide a much better measure of the water quality benefit. In addition, the MPCA permit requires pH monitoring during the treatment. As a result, Table 2 provides more specific recommendations for detailed pre- and post-treatment monitoring location/parameter/frequency between May and October, as well as monitoring during spent lime application, to enable water quality model calibration and/or better assessment of the water quality benefits of the proposed treatment. The continuous pH monitoring during treatment, cited

in Table 2, is best done during, and for one hour following, each spent lime application with the meter in the water near the pond outlet. If the pond is not discharging through the outlet or if there are signs of stress from aquatic life, sample pH from multiple areas surrounding the pond periodically as the application is occurring.

Table 2. Recommended monitoring parameters/frequency for Oak Knoll Pond treatment.

Parameter	Pre-Treatment	During Treatment	Post-Treatment
Pond profile field measurements (DO, temperature, pH, conductivity)	Bi-weekly		Bi-weekly
Pond surface water pH	Bi-weekly	Continuous	Bi-weekly
Pond surface water TP, Secchi, and stage	Bi-weekly		Bi-weekly
Pond bottom water TP	Bi-weekly		Bi-weekly
Pond bottom water Iron	Bi-weekly		Bi-weekly
Southeast storm sewer inlet TP (during flow)	Bi-weekly		Bi-weekly
North storm sewer outlet TP (during flow)	Bi-weekly		Bi-weekly

resourceful. naturally.
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BARR

April 18, 2023

Phil Belfiori
Administrator
Vadnais Lake Area Water Management Organization (VLAWMO)
800 County Road E East
Vadnais Heights, MN 55127

Re: Agreement for Oak Knoll Pond Spent Lime Treatment Engineering Services

Dear Phil Belfiori:

Thank you for the opportunity to submit this agreement to provide engineering services to the Vadnais Lake Area Water Management Organization (VLAWMO) and the City of White Bear Lake (City) for engineering assistance and contractor oversight for spent lime treatment of Oak Knoll Pond.

This engineering estimate includes development of contract documents (including plans and specifications), solicitation of quotes from qualified contractors, contractor selection and support throughout the treatment period. Table 1 summarizes the work items and the estimated cost.

Project Scope

The project includes the following work tasks.

1. Contract documents and administration

After the spent lime treatment is funded by the project partners, Barr will provide project plans, specifications, and contract documents to assist VLAWMO in obtaining contractor quotes. This information will include project timing, the total spent lime quantities to be applied to each treatment zone of the pond, including total acreage to be treated and estimates for the quantity and price of the quote items. Specifications will also include available information about spent lime sourcing, volumes, access routes, temporary easements, permit requirements and limitations on applications due to timing, hours, flow, and weather variables.

We will prepare bidding documents for requesting contractor quotes and subsequent implementation of the project. This task includes preparing technical specifications and incorporating front-end documents for project implementation. Front-end documents will consist of Request for Quotes, Quote Form, Agreement, General Conditions, and Supplementary Conditions. The front-end documents will be based on White Bear Lake's standard construction documents and will be provided by the City. Technical specifications will be prepared using the Construction Specifications Institute (CSI) standard format. The Bidding Documents will provide potential contractors with the necessary information to provide a quote on the project and to perform the work. It is assumed that a single set of bidding documents will be developed and applied to all the work.

Bidding administration will consist of distribution of bidding documents (1 electronic copy assumed) including preparation of request for quotes, preparation of addenda, assistance during bidding period including answering potential proposer's questions, review of contractor qualifications and submitted quote, and an evaluation of the bids to support contract award.

2. Treatment support and project closure

This task includes treatment support and construction administration tasks. Barr will provide on-site observation once per week for up to 6 weeks during treatment activities to ensure that the selected contractor is performing the work consistent with the Bidding Documents. The estimated cost for this work assumes a single phase of spent lime application in Oak Knoll Pond. Our proposed treatment support services include:

- Attendance at a pre-treatment planning meeting and the first day of spent lime application
- Support of the treatment contractor, including review of VLAWMO's field measurements and lab testing, observations (weather, overspray and site disturbance, spent lime coverage, aquatic life stress and photographs) and compilation and evaluation of contractor's daily records
- Clarifying of the Contract Documents to the contractor during the treatment process
- Reviewing payment applications and monitoring reporting for MPCA
- Project close-out, including compilation of project records and submittal to VLAWMO and the City

Estimated Cost and Schedule

The following table summarizes the estimated costs associated with each task described in the scope of services. Our costs assume that a single round of quotes will be fielded for the project. Project changes necessitating additional refinements to the contract documents or oversight of multiple phases of spent lime applications are not included in the estimated cost for this task. The costs for treatment support are dependent on the contractor's schedule, changes in the work and the amount of observation required to ensure that state water quality standards are met during the spent lime application. No other meetings or presentations are included in this work scope other than the pretreatment meeting.

The table also shows the estimated schedule for the completion of the project tasks. The schedule assumes authorization to proceed by VLAWMO no later than April 28, 2023. The actual schedule will be coordinated with VLAWMO staff and will accommodate coordination with the chosen contractor and public and private landowners for pond access, where applicable.

Task	Description of Task	Amount	Estimated Completion
1	Contract documents and administration	$ 10,000	July 2023
2	Treatment support and project closure	$ 5,000	October 2023
	Total Estimated Project Cost	**$ 15,000**	

This Agreement will be effective for the duration of the services, unless earlier terminated by either VLAWMO or us. We will commence work on Task 1 upon receipt of a copy of this letter signed by your authorized representative.

We will inform you of our progress through periodic (e.g., bi-weekly) e-mail updates, telephone calls, invoice details, and other communications.

For the services provided, you will pay us on a lump sum basis, according to the attached Standard Terms. We will bill the VLAWMO approximately monthly. The cost of the services will not exceed $15,000 without prior approval by the VLAWMO. Work beyond the scope outlined above will be billed on a time-and-expense basis in accordance with our fee schedule, following your written permission or otherwise negotiated with you.

We understand you or your designees have the authority to direct us. We will direct communications to you at the 800 County Road E East address. Direction should be provided to Greg Wilson at the letterhead address.

During the term of this Agreement, we will maintain the following insurance coverages:

Worker Compensation	Statutory
Employer Liability	$500K per claim/$500k aggregate
Commercial General Liability	$1M per claim/$2M aggregate, combined single limit
Automobile	$1M combined single limit
Umbrella/excess policy as to above coverages	$10M aggregate
Professional Liability (claims-made)	$5M per claim/$5M annual aggregate

If this Agreement is satisfactory, please sign the enclosed copy of this letter in the space provided and return it to us.

Sincerely yours,
Barr Engineering Co.

By 
Nathan Campeau, P.E.
Vice President

Accepted this ___ day of _____, 2023

Vadnais Lake Area Watershed Management Organization

By _____
Phil Belfiori
Its District Administrator

Attachments
Standard Terms—Professional Services

STANDARD TERMS—PROFESSIONAL SERVICES

Our Agreement with you consists of the accompanying letter or other authorization, Work Orders, and these Standard Terms – Professional Services.

Section 1: Our Responsibilities

1.1 We will provide the professional services ("Services") described in this Agreement. We will use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of our profession practicing in the same locality.

1.2 We will select the means, methods, techniques, sequences, or procedures used in providing our Services. If you direct us to deviate from our selections, you agree to hold us harmless from claims, damages, and expenses arising out of your direction.

1.3 We will acquire all licenses applicable to our Services and we will comply with applicable law.

1.4 Our duties do not include supervising your contractors or commenting on, supervising, or providing the means and methods of their work unless we accept any such duty in writing. We will not be responsible for the failure of your contractors to perform in accordance with their undertakings.

1.5 We will provide a health and safety program for our employees, but we will not be responsible for contractor, job, or site health or safety unless we accept that duty in writing.

1.6 Estimates of our fees or other project costs will be based on information available to us and on our experience and knowledge. Such estimates are an exercise of our professional judgment and are not guaranteed or warranted. Actual costs may vary. You should add a contingency.

1.7 The information you provide to us will be maintained in confidence except as required by law.

Section 2: Your Responsibilities

2.1 You will provide access to property.

2.2 You will provide us with prior reports, specifications, plans, changes in plans, and other information about the project that may affect the delivery of our Services. You will hold us harmless from claims, damages, and related expenses, including reasonable attorneys' fees, involving information not timely called to our attention or not correctly shown on documents you furnish to us.

2.3 You agree to provide us with information on contamination and dangerous and hazardous substances and processes we may encounter in performing the Services and related emergency procedure information.

2.4 You agree to hold us harmless as to claims that we are an owner, operator, generator, transporter, treater, storer, or a disposal facility within the meaning of any law governing the handling, treatment, storage, or disposal of dangerous or hazardous materials.

2.5 Site remediation services may involve risk of contamination of previously uncontaminated air, soil, or water. If you are requesting that we provide services that include this risk, you agree to hold us harmless from such contamination claims, damages, and expenses, including reasonable attorneys' fees, unless and to the extent the loss is caused by our negligence.

2.6 You agree to make disclosures required by law. If we are required by law or legal process to make such disclosures, you agree to hold us harmless and indemnify us from related claims and costs, including reasonable attorneys' fees.

Section 3: Reports and Records

3.1 We will retain analytical data relating to the Services for seven years and financial data for three years.

3.2 Monitoring wells are your property and you are responsible for their permitting, maintenance and abandonment unless we accept that duty in writing. Samples remaining after tests are conducted and field and laboratory equipment that cannot be adequately cleansed of contaminants are your property. They will be discarded or returned to you, at our discretion, unless within 15 days of the report date you give written direction to store or transfer the materials at your expense.

3.3 Our reports, notes, calculations, and other documents, and our computer software, programs, models, and data are instruments of our Services, and they remain our property, subject to a license to you for your use in the related project for the purposes disclosed to us. You may not use or transfer such information and documents to others for a purpose for which they were not prepared without our written approval. You agree to indemnify and hold us harmless from claims, damages, and expenses, including reasonable attorneys' fees, arising out of any unauthorized transfer or use.

3.4 Because electronic documents may be modified intentionally or inadvertently, you agree that we will not be liable for damages resulting from change in an electronic document occurring after we transmit it to you. In case of any difference or ambiguity between an electronic and a paper document, the paper document shall govern. When accepting document transfer in electronic media format, you accept exclusive risk relating to long-term capability, usability, and readability of documents, software application packages, operating systems, and computer hardware.

3.5 If you do not pay for the Services in full as agreed, we may retain reports and work not yet delivered to you and you agree to return to us our reports and other work in your possession or under your control. You agree not to use or rely upon our work for any purpose until it is paid for in full.

Section 4: Compensation

4.1 You will pay for the Services as agreed or according to our then current fee schedules if there is no other written agreement as to price. An estimated cost is not a firm figure unless stated as such and you should allow for a contingency in addition to estimated costs.

4.2 You agree to notify us of billing disputes within 15 days and to pay undisputed portions of invoices within 30 days of invoice date. For balances not paid under these terms, you agree to pay interest on unpaid balances beginning 10 days after invoice date at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law.

4.3 If you direct us to invoice another, we will do so, but you agree to be responsible for our compensation unless you provide us with that person's written acceptance of the terms of our Agreement and we agree to extend credit to that person.

4.4 You agree to compensate us in accordance with our fee schedule if we are asked or required to respond to legal process arising out of a proceeding to which we are not a party.

4.5 If we are delayed by factors beyond our control, or if the project conditions or the scope of work change, or if the standards change, we will receive an equitable adjustment of our compensation.

4.6 In consideration of our providing insurance to cover claims made by you, you hereby waive any right of offset as to payment otherwise due us.

Section 5: Disputes, Damage, and Risk Allocation

5.1 Each of us will exercise good faith efforts to resolve disputes without litigation. Such efforts will include a meeting attended by each party's representative empowered to resolve the dispute. Disputes (except collections) will be submitted to mediation as a condition precedent to litigation.

5.2 We will not be liable for special, incidental, consequential, or punitive damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, loss of financing commitments or fees, or the cost of capital. Each of us waives against the other and its subcontractors, agents, and employees all rights to recover for losses covered by our respective property/casualty or auto insurance policies.

5.3 We will not be liable for damages unless you have notified us of your claim within 30 days of the date of your discovery of it and unless you have given us an opportunity to investigate and to recommend ways of mitigating damages, and unless suit is commenced within two years of the earlier of the date of injury or loss and the date of completion of the Services.

5.4 For you to obtain the benefit of a fee which includes a reasonable allowance for risks, you agree that our aggregate liability will not exceed the fee paid for our services, but not less than $50,000, and you agree to indemnify us from all liability to others in excess of that amount. If you are unwilling to accept this allocation of risk, we will increase our aggregate liability to $100,000 provided that, within 10 days of the date of our Agreement, you provide payment in an amount that will increase our fees by 10%, but not less than $500, to compensate us for the greater risk undertaken. This increased fee is not the purchase of insurance.

5.5 If you fail to pay us within 60 days following invoice date, we may consider the default a total breach of our Agreement and, at our option, we may terminate all of our duties without liability to you or to others.

5.6 If we are involved in legal action to collect our compensation, you agree to pay our collection expenses, including reasonable attorneys' fees.

5.7 The law of the state in which the project site is located will govern all disputes. Each of us waives trial by jury. No employee acting within the scope of employment will have any individual liability for his or her acts or omissions and you agree not to make any claim against individual employees.

Section 6: Miscellaneous Provisions

6.1 We will provide a certificate of insurance to you upon request. Any claim as an Additional Insured will be limited to losses caused by our sole negligence.

6.2 This Agreement is our entire agreement, and it supersedes prior agreements. Only a writing signed by an authorized representative for each of us making specific reference to the provision modified may modify it.

6.3 Neither of us will assign this Agreement without the written approval of the other. No other person has any rights under this Agreement.

6.4 Only a writing may terminate this Agreement. We will receive an equitable adjustment of our compensation as well as our earned fees and expenses if our work is terminated prior to completion.

6.5 We will not discriminate against any employee or applicant for employment because of race, color, creed, ancestry, national origin, sex, religion, age, marital status, affectional preference, disability, status with regard to public assistance, membership or activity in a local human-rights commission, or status as a specially disabled, Vietnam-era, or other eligible veteran. We will take affirmative action to ensure that applicants are considered, and employees are treated during their employment, without regard to those factors. Our actions will include, but are not limited to notifications, hiring, promotion or employment upgrading, demotion, transfer, recruitment or recruitment advertising, layoffs or terminations, rates of pay and other forms of compensation, and selection for training or apprenticeship.

6.6 Neither we nor you, including our officers, employees, and agents, are agents of the other, except as agreed in writing. Except as agreed in writing, nothing in this Agreement creates in either party any right or authority to incur any obligations on behalf of, or to bind in any respect, the other party. Nothing contained herein will prevent either party from procuring or providing the same or similar products or services from or to any third person, provided that there is no breach of any obligations pertaining to confidentiality.

End of Standard Terms

VI. B. 2. 6.

Memorandum of Understanding Between
Vadnais Lake Area Water Management Organization
and City of White Bear Lake

This Memorandum of Understanding ("**MOU**") is made and entered into by and between the Vadnais Lake Area Water Management Organization ("**VLAWMO**") and the City of White Bear Lake ("**City**") each acting by and through its duly authorized governing bodies.

Whereas, VLAWMO and City mutually desire to partner on a project ("**Project**") that is resulting from the recently completed spent lime feasibility study and corresponding MOU between VLAWMO and the City to research spent lime treatment for Oak Knoll Pond in the City of White Bear Lake;

Whereas, Oak Knoll Pond is a public water wetland that functions as a stormwater pond and receives runoff from the surrounding neighborhoods;

Whereas, Oak Knoll Pond is located in the Goose Lake subwatershed. East Goose Lake is on the State of Minnesota's Section 303(d) impaired waters list for excess nutrient through the Clean Water Act;

Whereas, internal load feasibility study and implementation, detention pond retrofit and maintenance, and emerging technologies demonstrations were identified as Goose Lake nutrient reduction strategies in the 2014 VLAWMO Total Maximum Daily Load (TMDL) Implementation Plan;

Whereas, the recently completed feasibility study (attached) determined that the Project is socially and technically feasible and cost effective for a spent lime demonstration project on Oak Knoll pond;

Whereas, the parties wish to clearly define their respective roles in the development and completion of the Project; and

Whereas, the attached agreement scope of work dated April 18, 2023 from Barr Engineering identifies the anticipated engineering work needed to prepare plans and specs, conduct the solicitation of quotes, provide a recommendation for a contractor to complete the Project, and provide Project development of plans and specs, request for quotes, oversight and inspection in the amount of $15,000 and provides a cost estimate for completion of the Project at an anticipated $60,500. In the event that use of a contingency is needed, the partners shall discuss distribution of additional funding based on their approved annual budget;

Now, therefore, the parties hereby agree to enter into this MOU and to comply with the following processes with respect to completing the Project:

1. <u>City Responsibilities</u>. City agrees to do each of the following:

a. Reimburse VLAWMO 50% of the professional services costs with VLAWMO for remaining engineering costs and costs to the contractor to complete the Project.
b. Provide background information or data (if any) necessary for the preparation of the Project.
c. Attend all meetings and events related to the Project.
d. Assist VLAWMO with required notices to affected property owners and other stakeholders as may be necessary.
e. Comply with all applicable legal requirements related to the Project.

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

a. Provide for management and oversight of the Project.
b. Attend all meetings and events related to the Project.
c. Pay the professional services and contractor costs with the City reimbursing VLAWMO 50% of the professional services costs to complete the Project.
d. In partnership with the City, provide required notices to affected property owners and other stakeholders as may be necessary.
e. Comply with all applicable legal requirements related to the Project.

3. Use of Project. The 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 City or VLAWMO. City and the VLAWMO may use, without restriction, the work products of the Project 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 the Project 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.

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	**City of White Bear Lake**
_____	_____
Chairperson	Mayor
_____	_____
Administrator	City Manager

Date:_____ Date:_____

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Agenda item VI. C. 1.

Consideration of 4-year partnership projects table and long range budgeting discussion

Phil Belfiori
VLAWMO Board meeting
April 26, 2023

VLAWMO
Vadnais Lake Area
Water Management Organization

Agenda and Purpose of Today's discussion

- Agenda for this item:
  - Consideration of 4- year partnership projects table -attachment#1
  - Discussion on long range budgeting graphs

Introduction : Discussion on 4-year Partnership Projects Table- See Attachment #1

- Seeking direction from Board Subcommittee today in establishing high level planning for the next 4 years of partnership based projects to provide high level guidance for the upcoming 2024 budget process.
- To start in this table development process staff used the list of possible projects as was discuss as part of the long range project subcommittee discussion one year ago and then updated that previous project list based on input from the stakeholder feedback.
- This first version of the rough draft table was sent to 10 city /partner staff from:
  - City of White Bear Lake (Connie T)
  - City of Vadnais Heights (Jesse F. and Nick O.)
  - City of Gem Lake (Jim L.)
  - City of Lino Lakes (Andy and Mike G.)
  - City of North Oaks (Kevin K.)
  - White Bear Township (Dale R.)

Vadnais Lake Area Water Management Organization

Background : Discussion on Draft 4-year Partnership projects table

  - NOHOA (Kristie E.)
  - St. Paul Water (Jeremy and Justine)
  - Ramsey County Public Works (Molly C.)
  - Ramsey Conservation Division (Ann W.)
- Staff then held separate meetings with each of the above-mentioned staff from March 10-20 and attached rough draft table has incorporated or considered the feedback from these partner staff.
- The attached table also was reviewed and discussed the Board subcommittee on March 28, 2023 and the subcommittee identified that the 4 year table (attachment 1)generally is a good approach for long range partnership planning.
- The focus of the project table is to maintain momentum to implement large scale partnership-based CIP-type regional Projects over the next 4 years and keep the fund balance at required levels per Board policy.

Vadnais Lake Area Water Management Organization

Summary of draft projects included in draft table- see table attachment 1

- In interest of time, staff will not specifically discuss each of the partnership projects listed in attachment 1.
- Does the Board have any questions or wish to discuss any of the partnership projects listed in 4 year table?

  - Gem Lake Subwatershed
  - Lambert Subwatershed
  - Goose Lake Subwatershed
  - Birch Lake Subwatershed
  - Gilfillan-Tamarack-Black-Wilkinson-Amelia
  - Pleasant-Charley-Deep Lakes
  - Sucker-East & West Vadnais Lakes

Summary of draft projects included in draft table

Watershed Wide Partnerships Programs

- VLAWMO cost shares
- Groundwater Quantity cost share program
- Assist MS 4 programming /implementation
- Wetland assessment plan
- 10 watershed management plan (2 years out in Spring 24)
- Maintenance and operation (built projects)
- BWSR WBF grant (match)

Long range budgeting discussion based on 4 year table

The following graphs to further examine long range budget planning /forecasting and to inform the discussion on the 2024 preliminary draft budget (next on this tonight's agenda)

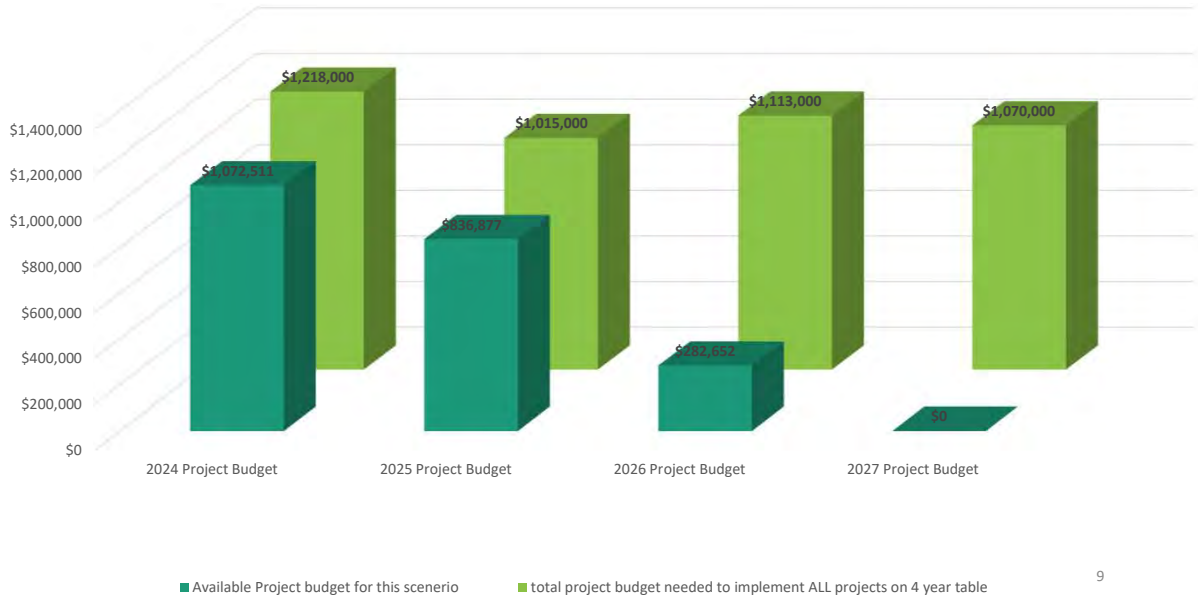
- Graphs identify 5 **Scenarios** which compare project only budgets:
  - **1:** Implement everything on 4 year table (100% of projected project cost per year) at 0% increase in SSU revenue per year.
  - **2:** Implement everything on 4 year table (100% of projected project cost per year) and maintain minimum fund balance as required by board policy (assumed min. of 35% of annual budget). Would requires an apx.20% increase in SSU revenue per year in order to implement all projects.
  - **3:** Implement 2/3rds (66%) of projected project cost per year on 4 year table at 0% increase in SSU revenue per year.
  - **4.** Implement 2/3rds (66%) of projected project cost per year on 4 year table and maintain minimum fund balance. Would requires an apx.5% increase in SSU revenue per year in order to implement 2/3rds of projects.
  - **5.** Implements 2/3rds (66%) of projected projects cost per year on table, maintains minimum fund bal. AND "manages" fund balance to draw down balance in 2024.

Assumptions for Long Range Budgeting Graphs

- Assumes core services and on-going programs level of services stays constant plus inflation.
- 4 year project table lists is brainstormed high level /long range possible projects that have been discussed (at some level) at a staff level and or with partners or boards. "wish list"
  - Project estimated costs and year of implementation are very rough – best available at the time.
  - Is considered VLAWMO dollars only (not grant or partnership funding)
- Implementation of 2/3rds of projects cost on 4 year table scenarios (Scenarios 3-5) may be closer to reality?
- For best review, staff recommends having hard copy of 4 year table in view at the same time as analysis of these graphs

Vadnais Lake Area Water Management Organization

Scenario 1- Implement everything on 4 year table (100% of projected project cost per year) at 0% increase in SSU revenue per year.



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Scenario 2-
Implement everything on 4 year table (100% of projected project cost per year) and maintain minimum fund balance as required by board policy (assumed min. of 35% of annual budget).
Would requires an apx.20% increase in SSU revenue per year

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Scenario 3

Implement 2/3rds (66%) of projected project cost per year on 4 year table at 0% increase in SSU revenue per year. Cannot maintain required minimum fund bal. in all 4 years.

11

Scenario 4- Implement 2/3rds (66%) of projected project cost per year on 4 year table and maintain minimum fund balance. Would requires an apx.5% increase in SSU revenue per year in order to implement 2/3rds of projects.

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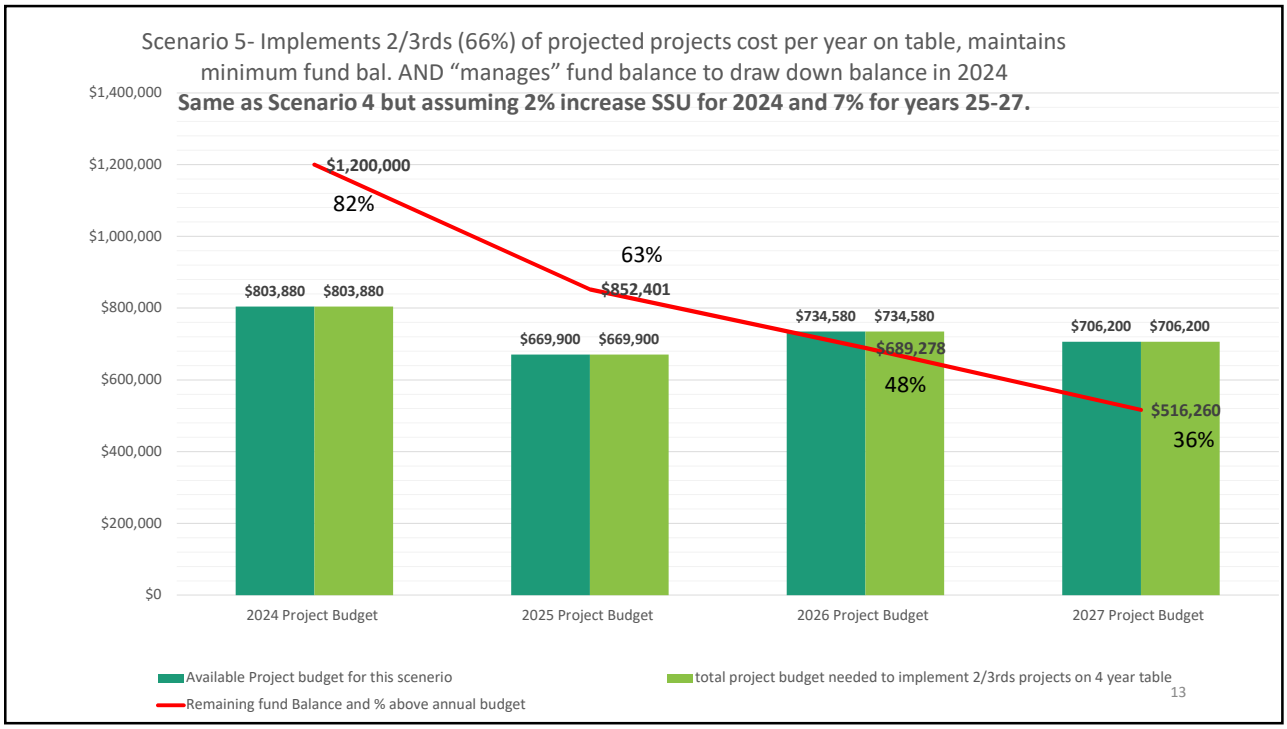


Takeaways from long range budgeting graphs

- *Scenarios that implement all projects on 4 year table*
  - Scenario 1 only implements projects for around 1 or 2 years then run out of money and can only implement a small portion / no projects after that.
  - Scenario 2 identifies implementation of all projects budgeted on 4 year partnership project table but would need apx. 20% SSU increase per year. Not financially /politically realistic?

- *Scenarios that implements 2/3rds(66%) of projects on 4 year table*
  - Scenario 3 implements 2/3rds(66%) of projects budgeted on table for all 4 years at 0% SSU increase per year but cannot maintain fund balance for the 4th year.
  - Scenario 4 implements 2/3rds(66%) of projects budgeted on 4 year table and maintains fund balance for all 4 years. Would need apx. 5% SSU increase per year. Does not draw down fund balance in 2024.
  - Scenario 5 is just like scenario 4 but draws down fund balance at end of 2024 to apx. 63% of annual budget (close to 35-50% required in Board fund balance policy).

Vadnais Lake Area Water Management Organization

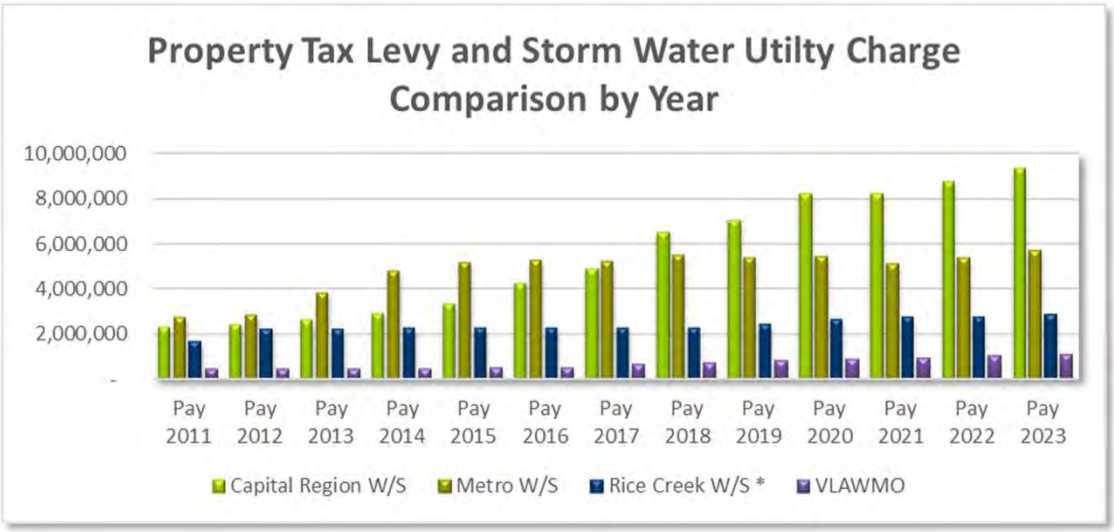
Takeaways from long range budgeting graphs

- From a long range viewpoint, some additional increases in budget on 4 year table maybe needed for possible larger costs partnership projects?:
  - Alum project in Wilkinson Lake and Tamarack Lake in 2024?
  - Pleasant Lake TMDL implementation and related projects?
  - West Vadnais TMDL implementation?
  - Public drainage maintenance and /or repair?
  - Water Reuse /groundwater conservation project implementation ?
  - Repurposing Whitaker Pond experimental wetland system ?
  - Regional project in wetland area west of Vadnais Heights Walmart area?
  - East Goose Lake management projects?
  - Overall inflation in projects bid cost?
  - Gem Lake Commercial District planning or project?

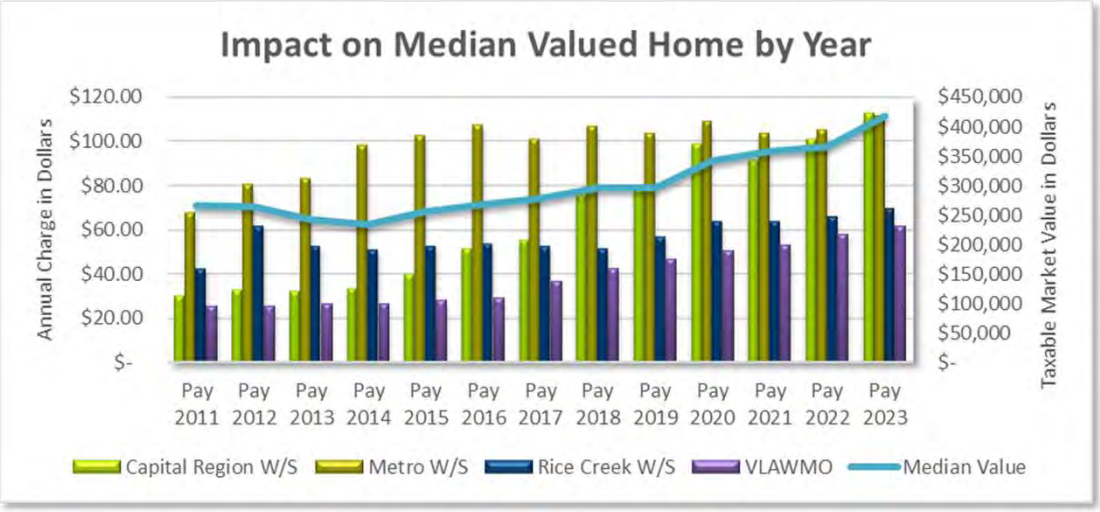
- Project costs in table are considered VLAWMO dollars only (not grant or partnership funding) and in some cases is only a small part of overall project cost estimate.

Vadnais Lake Area Water Management Organization

Comparing Total Tax Levy Income of WD's in Ramsey County to VLAWMO's SSU income



Comparing Tax Levy Rate on Median Value Residential Property in Ramsey County's WDs to VLAWMO's SSU Residential Rate



Requested Board Action

Requested Board Discussion and Action : Staff request that the Board review the attached 4 year partnership project table in preparation of the April 26 meeting discussion and consider that the attached table generally captures a high-level plan for partnership projects for the VLAWMO.

Staff also requests that the Board discuss the long range budgeting graphs and provide staff with input

Proposed Motion: **Director _____ moves to approve that the attached 4 year partnership project table (Attachment 1) generally captures a high-level long range plan for partnership projects for the VLAWMO.**

Vadnais Lake Area Water Management Organization

LONG-RANGE HIGH LEVEL PROJECT PLANNING & BRAINSTORMING. VLAWMO & PARTNERS IMPLEMENTATION 2024-2027

ATTACHMENT #1 For April 26, 2023 VLAMWO Board meetings

For discussion purposes only. ALL $
amounts listed in this table are VLAWMO partnership dollars only

grant & partnership dependent project / activities (would /may not be implemented without grant and or partnership funding)	2024	2025	2026	2027		Possible Proposed Partners &Notes
Subwatershed Activities						
Gem Lake						
Commercial area retrofit project feasibility study	$25,000					City/ County
Commercial area retrofit project implementation		$25,000	$100,000			Cities /County- state grant ?
Golf course water reuse				$75,000		$ amount identified is local match to grant only (assume larg
Lambert Creek						
Whitaker wetland retrofit/repurpose project /RCD 13 subshed	$20,000	$70,000	$20,000			$ amount identified is local match to grant only (assume larg
Debt services on Lambert Sheet Pile Replacement	$40,000	$40,000	$40,000	$40,000		repay loan
Existing Creek project/program maintenance and inspection	$15,000	$15,000	$30,000	$10,000		City
Public drainage associated Water quality /wetland partnership project	$10,000	$30,000	$20,000	$40,000		cost sharing to City. Upstream or on pub drainage systems
Water reuse project (local match for grant)			$30,000	$90,000		$ amount identified is local match to grant only (assume larg
City of WBL water quality (park/public projs) /GW conservation partnerships (also Vadnais /Sucker subshed)	$20,000		$20,000			2 bigger street projects in RCD 13/lambert subshed in 24 ar
City of VH water quality (park/public projs) /GW conservation partnerships (also Vadnais /Sucker subshed)	$20,000	$30,000	$25,000			City, County
Goose Lake						
Spent Lime demonstration project (Oak Knoll Pond)	$30,000	$10,000		$40,000		City
Polar Chev/61 channel restoration and dredging	$40,000		$50,000			MNDOT, City. $ are VLAWMO Only. WBIF grant?
Shoreline restoration? (White Bear Boat Works site; W Goose)		$25,000				city
Bruce Vento trail stormwater treatment opportunities (also Gem Lk. Subshed?)				$50,000		City, County. State grant?
E Goose Lake Management (implementation plan /projects)	$75,000	$75,000	$50,000	$75,000		City (50/50)- Larger $ amount identified is local match to gr
Birch Lake						
water-quality partnership project(IESF pretreatment)	$50,000		$20,000			City , BLID - grant
Subwatershed neighborhood raingarden projects		$10,000		$10,000		City - WBF grant ?
Lake Access project north end of Birch lk.				$10,000		City, BLID
Rotary Park Restoration projects	$5,000	$30,000	$20,000	$20,000		City
Birch Lake AIS partnership	$3,000	$5,000	$5,000	$5,000		City, BLID
Sports Center shoreline rest. Expansion	$15,000					City
Gilfillan-Tamarack-Black-Wilkinson-Amelia						
Local match for 319 small watershed grant project (Wilkinson)	$80,000	$60,000	$113,000	$30,000		$ amount identified is local match to grant only (assume
Feasibility study for Birch outlet channel (upstream of Wilkinson)	$15,000	$15,000				City, grant
CR J & intersection BMP project (Ramsey County street project)	$15,000					$ amount is VLAWMO cost share only. Ramsey County, grant
Ash Street area /North of Wilkinson area partnership study /impl.	$15,000	$50,000				$ amount is VLAWMO cost share only.Anoka County, City, NC

Amelia partnership project (N. of Amelia per 2022 Feas Study)			$50,000			City, state grant?
Internal load/alum Wilkinson	$120,000			$100,000		NOC, City, MS4s, 319 Grant ?
Internal load/alum Tamarack	$80,000			$40,000		MS4, grant ?
Tamarack Park (partnership with County Parks)			$25,000			County Parks, RCD
City/Township partnership water qual /GW conservation projects	$20,000	$25,000	$10,000			Township
Pleasant-Charley-Deep Lakes						
Nutrient /TMDL partnership projects /studies	$30,000	$25,000	$20,000	$25,000		$ amount is VLAWMO cost share only. City, SPRWS, MS 4, Grant?
Carp mgmt implementation (Pleasant)	$30,000	$20,000	$30,000	$10,000		SPRWS, NOHOA
Vegetation mgmt (Pleasant & Deep) shoreline and wetlands	$25,000	$15,000	$10,000			SPRWS, NOHOA
Vegetation mgmt (Pleasant & Deep) AIS	$25,000	$15,000	$25,000			SPRWS, NOHOA
Subwatershed neighborhood raingarden projects	$10,000	$10,000	$10,000	$10,000		NOHOA, City, SPRWS
Partnership on Infrastructure planning and/or Implementation	$30,000	$30,000	$30,000	$30,000		$ amount is VLAWMO cost share only. City, NOHOA, SPRWS,NOC
Sucker-East & West Vadnais Lakes						
?TMDL report and plan development (W Vadnais?)	$20,000					$ amount is VLAWMO cost share only. City, MS4, RWMWD
?TMDL partnership projects (W Vadnais?)		$10,000	$15,000	$20,000		$ amount is VLAWMO cost share only. City, MS4, RWMWD
Vadnais-Sucker Channel vegetation restoration			$20,000			City , SPRWS, RCD
Vadnais-Sucker Lake Park ongoing restoration work	$5,000	$10,000	$10,000			GRG, County, SPRWS
?Sediment study (W Vadnais)?						RWMWD
Edgerton St. & Centerville area(Ramsey County)	$20,000					resiliency grant?
E Vadnais subshed partnership study and projects /City street partner	$55,000	$35,000	$15,000	$35,000		City, County, SPRWS, RCD
Trail and Corridor planning - Vadnais Blvd		$20,000	$20,000	$30,000		City, County
?Internal load mgmt/alum (W Vadnais?)		$50,000		$35,000		RWMWD, MS4 in TMDL
Stormwater study Meadowood area (city of VH)				$20,000		City
Stormwater water quality retrofit on Meadowood				$15,000		City
?Rough fish/AIS management (W Vadnais)	$15,000	$15,000	$15,000	$10,000		$ amount is VLAWMO cost share only. RWMWD
Watershed Wide Partnerships						
VLAWMO cost share program	$70,000	$70,000	$80,000	$90,000		Cities /township/County
Groundwater quantity cost-share program	$20,000	$20,000	$20,000	$20,000		Cities /township/County
Assist MS4 programming/implementation	$5,000	$10,000	$10,000	$10,000		Cities /township/County
Wetland assessment plan	$15,000		$15,000			Cities
Public drainage maintenance and inspection	$60,000	$30,000	$60,000	$25,000		City
Maintenance and operation (built projects & restorations)	$25,000	$30,000	$35,000	$35,000		
Watershed Planning	$40,000	$70,000	$30,000			
BWSR WBF grant (match)	$5,000	$15,000	$15,000	$15,000		Cities /township/County
Subwatershed Activities Total	$1,218,000	$1,015,000	$1,113,000	$1,070,000		<- Dependent on Partner Contribution
	$1,104,000				Average over 4 years	

Agenda item VI. C. 2

Discussion of draft Preliminary 2024 Budget

Phil Belfiori
VLAWMO Board meeting
April 26, 2023

VLAWMO
Vadnais Lake Area
Water Management Organization

Summary of Attached rough draft 2024 budget table See Attachment #1

- Capital Improvement Projects: (summary of some of the anticipated larger Projects or CIPs):
  - Gem Lake Subwatershed: $10,000 - $25,000
    Commercial area retrofit study and or project
  - Lambert Creek Subwatershed: $55,000 - $120,000
    - Whitaker wetland retrofit /repurpose study /project
    - Public drainage Water quality partnership projects (Branches)
    - City partnership on street projects
    - Lambert creek project maintenance (meander /biochar)
    - Sheet pile debt service- $38,568
  - Goose Lake Subwatershed:$90,000 - $160,000
    - Spent Lime demonstration project (Oak Knoll Pond)(assumed 50% partnership with City)
    - Polar Chev Channel study /project
    - E Goose Management studies/ planning. Assume 50% partnership with City and that required approvals from Council

Summary of Attached rough draft 2024 budget table See Attachment #1

- Capital Improvement Projects: (summary of some of the anticipated larger projects):
  - Birch Lake Subwatershed:$58,000 - $83,000
    - Water quality pretreatment project
    - Subwatershed neighborhood raingarden projects.
    - Rotary Park Restoration projects
    - Sports Center shoreline rest. Expansion
  - Gilfillan, Black Tamarack Wilkinson Amelia Subwatershed:$210,000 - $493,000
    - Wilkinson Lake - 319 Grant Project and Related Work (VLAWMO portion only)-
      - VLAWMO cash match in 2024.
    - Tamarack & Wilkinson Alum projects (assuming Feas Study and project ordered by Board)
    - Feasibility study for regional water quality
    - CR J /Ash str. project area study /partnership
    - Partnership project for groundwater conservation

Summary of Attached rough draft 2024 budget table See Attachment #1

- Capital Improvement Projects: (summary of some of the anticipated larger projects):
  - Pleasant Charley Deep Subwatershed:$120,000 - $175,000
    - Carp management project
    - AIS /Veg. Management partnership
    - Subshed BMP's/ shoreline restoration
    - Nutrient /TMDL studies plans partnerships
    - Infrastructural planning partnerships
    - NOHOA partnership lakeshore wetland restorations
  - Sucker Vadnais Subwatershed:$70,000 - $165,000
    - Implementation of resiliency study /plan
    - City Hall firestation /street project partnership
    - ?West Vadnais TMDL items ? Studies and projects?
    - Partnership studies /project Edgerton St. & Centerville drainage area
    - Sucker Vad. Regional park restoration support

Summary of Attached rough draft 2024 budget table

- Programs (ongoing):
  - Ditch Maintenance, ongoing ditch main. and Technical work & assistance w/local partners & past project maintenance program
  - Cost Share
  - WSR WBF Project
  - Cost share (level 1/2 "traditional" and Groundwater conservation)
  - Water quality and Project-based monitoring
  - Start development of 10 watershed management plan (2 years out in Spring 24)
  - Education and Outreach,
  - MS 4 partnerships

- Operations & Administration: this identified amount (ranges) are driven in large part by the Board approved performance based salary adjustment policy and updated employee benefits package.

Summary of Attached rough draft 2024 budget table (continued) See Attachment #1

- Total initial budget expenditures (VLAWMO funding only) identified in attached rough draft 2024 budget table = $1.656,568 Low Estimate - $2,378,068 High Estimate

- Range of Income identified in attached rough draft 2024 budget table is $1.125M - $1.201M (which includes for brainstorming a range of 0%-7% SSU increase – for discussion purposes only (not recommended at this time)

- Identifies a for brainstorming $327,500 (depending when project are constructed?)
  - Includes possible income in 2024 from: BWSR WBF grant, 319 grant implementation, NOC for Wilkinson project design /implementation and City /County/SPRWS (pending City /Board approvals or projects).

Summary of Attached rough draft 2024 budget table (continued) See Attachment #1

- Fund Balances for year end 23 and 24:
- Range for Predicted Fund balance at year end 2023- 12/31/2023 = Apx. $800,000-$1.3M
  - Minimum fund balance required per Board Policy(assume 35%-50%) = $565,000 - $807,000
- Range for Predicted Fund balance at year end 2024- (12/31/2024) = Apx. $600,000 - $1,100,000
  - -Minimum fund balance range required per Board Policy(assume 35%/50%)=$828,000 - $1,186,000

Next Steps: Proposed 2024 Budget Planning and Development Schedule

March 28, 2023 - Subcommittee Discussion – High level long range 4 year project budget planning & rough draft 2024 budget table discussions

April 26, 2023 – Preliminary 2024 budget discussion /direction at the VLAWMO Board meeting

Late May/ Early June 2023 (May 24th At Vadnais City Hall – 6:30pm?) – Board Subcommittee + TEC member Meeting on draft 2024 budget - (Preliminary draft 2024 budget sent out to Board subcommittee + TEC member apx. one week before meeting)

June 28, 2023 – VLAWMO Board consideration of 2024 budget

Aug. 23, 2023 – VLAWMO Board consideration of storm sewer utility rates for 2024

Oct. 25, 2023 - VLAWMO Board consideration of storm sewer utility certification lists for 2024

Dec. 13, 2023 – Consider 2024 fund balances and "working" budget

Vadnais Lake Area Water Management Organization

Requested Board Discussion/ Action

- Discussion on rough draft 2024 budget -**See Attachment #1**
  - Does the Board wish to provide direction regarding priorities to the Board Subcommittee Committee for their upcoming meeting ?

- Would the Board like staff to request participation by a TEC member in subcommittee again this year?
- Possible date for Subcommittee meeting?- In person meeting at Vadnais Heights City Hall – 6:30pm on May 24th?

- <u>Proposed Motion:</u> Board authorizes the Subcommittee to review the draft 2024 budget materials and provide the full Board recommendation(s) at the June 28 meeting.

Vadnais Lake Area Water Management Organization

ATTACHMENT #1 - 2024 Preliminary Rough Draft Budget for April 26, 2023 Board meeting --- For Discussion Purposes ONLY.

	VLAWMO BUDGET 2024 EXPENSE		Approved 2023 "working" Budget	Preliminary Rough Draft 2024 Budget (Rough)	2024 Notes
3.1		Operations & Administration	**$709,883**	**$740,000 - $775,000**	
	3.110	Office	$28,181		
	3.120	Information systems	$33,300		
	3.130	Insurance	$7,571		
	3.141	Consulting -Audit	$9,000		
	3.142	Consulting - Bookkeeping	$1,500		
	3.143	Consulting - Legal	$6,000		
	3.144	Consulting - Eng. & Tech. & HR	$45,000		
	3.150	Storm Sewer Utility	$15,000		
	3.160	Training - staff, board,TEC	$13,250		
	3.170	mileage and noticing	$6,300		
	3.191	Employee payroll	$422,353		salary adjustments based on performance based matrix per Board Policy
	3.192	Employee liability (benefits)	$122,428		
3.2		Monitoring & Studies	**$47,000**	**$75,000 - $85,000**	
	3.210	Lake & creek program lab analysis	$18,000		
	3.220	Equipment	$4,000		
	3.230	Wetland assessment & management	$10,000		
	3.240	Watershed Planning	$15,000		Starting work on 10 year watershed plan
3.3		Education & Outreach	**$38,500**	**$29,000 - $35,000**	
	3.310	Public Education	$6,000		
	3.320	Communication, Outreach and	$24,500		
	3.330	Community Blue education grant	$8,000		
3.4		Capital Improvement Projects and Programs	**$821,067**	**$807,568 - $1,478,068**	
		Subwatershed Activity			
	3.410	Gem Lake subwatershed	$25,000	$10,000 - $25,000	Commercial Distr study and or implementation
	3.420	Lambert Creek subwatershed (Does NOT Include Debt Service)	$55,000	$55,000 - $120,000	Whitaker wetland repurpose /retrofit project, Water quality project on/or upstream of public ditch, City partnership on street projects/environmental initiatives, and Lambert creek projects maintenance (meander /biochar)
	3.421	Lambert Pond Project Loan Debt Service	$38,568	$38,568	thru 2032
	3.425	Goose Lake subwatershed	$92,500	$90,000 - $160,000	Spent Lime demostration implementation, Polar Chev. channel project, and E. Goose management (planning, survey, data coll and /or projects?)
	3.430	Birch Lake subwatershed	$20,000	$58,000 - $83,000	Water quality pretreatment project (upstream of IESF), Subwatershed BMP's, Rotary park partnership, Surveys for AIS support, and Sports center wetland /shoreline res.
	3.440	Gilfillan Black Tamarack Wilkinson Amelia sub	$200,500	$210,000 - $493,000	Wilkinson lk. implementation and related studies/ patnerships, Feas. Study for regional water quality project, Wilkinson /Tamarack Lake alum analysis and /or implementation, CR J /ash street area study/BMP partnership, and Township /City partnership GW conservation /water qual.
	3.450	Pleasant Charley Deep subwatershed	$78,000	$120,000 - $175,000	Carp Management -Pleasant Lake, AIS partnership (survey and project partnership), Subshed BMPs/Shoreline BMPs, Nutrient /TMDL studies/ plans and partnerships, Infrastructural planning /studies /partnerships, and NOHOA partnership on lakeshore wetland restoration
	3.460	Sucker Vadnais subwatershed	$63,000	$70,000 - $165,000	Implementation projects from Resiliency study/plan, Street project(s) /env. Initiatives /city hall partnership, West Vadnais TMDL items- studies and projects?, Parntership Edgerton/Centerville drainage area, and Vad /Sucker park restoration support
	3.48	*Programs*			
	3.481	Soil Health Grant	$8,000	$8,000 - $10,500	
	3.482	Landscape 1 - cost-share	$36,263	$25,000 - $40,000	Includes funding for groundwater conservation cost share
	3.483	Landscape 2	$71,636	$40,000 - $65,000	Includes some of the BWSR WBF grant local match?
	3.484	Project research and MS 4 partnership work	$5,000	$5,000	Assist MS4 programming/implementation
	3.485	Maintenance and operations (Facilities maintenance & Ditch maintenance)	$127,600	$78,000 - $98,000	Public drainage program maintenance and inspection-engineering and implementation, VLAWMO facilities/completed project maintenance
3.5		Regulatory	**$5,000**	**$5,000**	
	3.510	Engineering plan review	$5,000	$5,000	
		Total budget	**$1,621,450**	**$1,656,568 - $2,378,068**	
		INCOME			
5.1					
	5.11	Storm Sewer Utility	**$1,090,887**	**$1,090,887 - $1,167,249**	Range is 0% to 7% increase in SSU
	5.12	Fees for Service	$200	$1,000	
	5.13	Interest	$1,000	$30,000	increased
	5.14	Misc. income - WCA admin grant	$3,000	$3,000	
		Total VLAWMO income	**$1,095,087**	**$1,124,887 - $1,201,249**	
	5.15	TOTAL- Other funding sources - grants, partnerships donations	**$385,284**	**$327,500**	
	BWSR WBF 21 - 23		$46,500	$37,500	BWSR 23-25
	Proposed MPCA 319 Wilkinson Lake BMP		$188,000	$160,000	Proposed MPCA 319 Wilkinson
	NOC per propsed partnership agreement for Will		$64,000	$50,000	NOC
	SPRWS		$19,284		
	City of WBL proposed E Goose ALM partnership?		$67,500	$80,000	Cities/ County/SPRWS
	5.16	Range of predicted use of carry over 2023	**Apx. $100,000 - $400,000**	**Apx. $300,000 - $800,000**	Range of predicted use of carry over 2024
		Range for predicted fund balance at end 23 (12/31/23) - (year end 2022, per Audit is $1,255,431)	**Apx. $800,000- $1,300,000**	**Apx. $600,000 - $1,100,000**	Range for predicted fund balance at end of 2024
		Minimum fund balance required per Board Policy (assume 35% to50%of total general fund budget)	**$565,000-$807,000**	**$828,000 - $1,186,000**	Minimum fund balance required per Board Policy (assume 35% to50%of total general fund budget)