EST 1983
VLAWMO
Vadnais Lake Area
Water Management Organization

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BOARD OF DIRECTORS MEETING AGENDA

7:00 PM FEBRUARY 24, 2021

Meeting will be held by Zoom teleconference. Meeting link:
https://us02web.zoom.us/j/81844224204?pwd=VWI0SnYxdGVTTEpXbzJ2NHRheVcwZz09
Passcode: vlawmo20
Dial by telephone: +1-312-626-6799
Meeting ID: 818 4422 4204 Passcode: 56199449

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

II. **Approval of Agenda**

III. **Approval of December 9, 2020 Board Meeting Minutes** (P. 2)

IV. **Visitors and Presentations**

A. TEC Report and Financial – February – Paul Duxbury (Pgs. 8 & 10)
B. Public visitors – non agenda items

V. **Consent Agenda**

A. Designation of Legal Publication – Press Publications and VLAWMO website (P. 16)
B. Set 2021 Board Meeting Dates (P. 17)
C. Amelia Lake RCSWCD Survey Request (P. 18)
D. 2020 Monitoring Report (P. 22)
E. Project Update Reports (P. 24)

VI. **Business**

A. **Administration**
1. Election of Board, Subcommittee Officers and appointment of TEC chair /officers- Phil (P. 26)
2. Consideration of General Engineering Services for 2021 -22 - Phil (P. 27)
3. City of White Bear Lake 2021-2030 Surface Water Mgmt. Plan- Res. 2021-01-Phil (P. 36)

B. **WCA**
1. Birch Lake Animal Hospital Variance Request – Res. 2021-02 – Brian (P. 40)
2. Island Field Replacement Plan Consideration – Brian (P. 48)

C. **Education and Outreach**
1. 2020 Annual Report 90% Draft Consideration for Approval – Nick (P. 66)

D. **Projects**
1. Lambert Lake Project
a) Project Update and consideration of Pay Request– Dawn/Emily Jennings (P. 77)
b) Consider Modified Biochar BMP Project, 319 Grant Amendment, UMN Contract, SEH Scope for Engineering – Res. 2021-03 – Dawn (P. 79)
2. Consideration of 319 Small Watershed Nine Key Element Document – Dawn (P. 105)
3. Pleasant Lake Internal Loading
a) Carp Management WSB Scope of Work – Dawn (P. 123)
b) Curly-leaf Pondweed Management Cost Share With NOHOA – Dawn (P. 124)
4. 2021 – 2023 BWSR Watershed-Based Imp. Funding (WBIF) Grant (C21-9984) Work Plan & Grant Agreement – Res. 2021-04 – Tyler (P. 132)

VII. **Discussion**

VIII. **Administration Communication**

XI. **Adjourn:** Next regular meeting: April 28, 2021

MINUTES OF THE BOARD OF DIRECTORS – December 2020 REGULAR BOARD MEETING
December 9th, 2020

Attendance		Present	Absent
Jim Lindner, Chair	City of Gem Lake	X	
Marty Long, Vice Chair	City of North Oaks	X	
Rob Rafferty, Secretary-Treasurer	City of Lino Lakes	X	
Ed Prudhon	White Bear Township	X	
Dan Jones	City of White Bear Lake	X	
Patricia Youker	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	
Tyler Thompson	GIS Watershed Tech.	X	

Others in attendance: Paul Duxbury (VLAWMO TEC); Katherine Doll Kanne (VLAWMO CAC); Troy Kunze & Edward Haddon (Vadnais Heights residents); Connie Tailon (City of White Bear Lake).

I. Call to Order

The meeting was called to order at 7:00 pm by Chair Lindner of the Zoom teleconference meeting. A roll call was asked for Director presence. Lindner: present, Long: present, Rafferty: present, Prudhon: present, Jones: present, Youker: present.

II. Approval of Agenda

The agenda for the December 9, 2020 Board meeting was presented for approval, Chair Lindner asked for any additions or corrections. 2 additions- V.B.3. Ditch 14 maintenance, V.B.2. Update on East Goose Lake ALM- no action item.

A motion was made by Long and seconded by Jones to approve the December Board meeting agenda, as amended. Vote: Lindner: aye, Long: aye, Rafferty: aye, Prudhon: aye, Jones: aye, Youker: aye. Motion passed.

III. Visitors and Presentations

A. Public Visitors – non-agenda items

Kunze announced that residents sent a previous SEH ditch study, directed towards VLAWMO staff and asked staff to review the historic report.

B. TEC Report and Financial – November & December

Duxbury gave the Board a briefing on current projects and programs.

Belfiori briefly overviewed the November TEC Report to the Board and November and December (not yet TEC-approved) Finance Reports.

C. Present Watershed stewardship and partnership awards (2)

Voss presented the 2020 VLAWMO Watershed Steward awards to Ceci Shapland, VLAWMO Water Steward, and Connie Tailon of the City of White Bear Lake for their instrumental help with VLAWMO in 2020.

D. Recognition of Director Marty Long

The Board and staff recognized Marty's long time serving, not just on VLAWMO's Board, but with his help in the organization over the years. We all enjoyed having him over the years, and are fortunate to have had him for so long. We wish him well and thank him for his years of public service.

E. Katherine Doll Kanne – WAV/CAC update and annual summary

Doll Kanne gave an update to the Board on VLAWMO's program highlights for 2020.

IV. Consent Agenda

Chair Lindner asked if any Board members wished to speak on the project updates; none.

A. Approval of Minutes: October 28, 2020

The minutes from the October 28th, 2020 Board meeting are placed on the agenda for approval, as presented. No comments from the Directors.

B. Project Reports and Updates

Staff prepared updates for projects and programs in the December Board meeting packet.

1. **Consider Natural Shores combined maintenance contract**
   Summary in December 9, 2020 Board packet.
2. **WBF in Goose subwatershed (Co. Rd F Raingardens)**
   Summary in December 9, 2020 Board packet.
3. **Small Watershed 319 Process (Wilkinson Subwatershed)**
   Summary in December 9, 2020 Board packet.
4. **East Goose Lake: public engagement meeting & fisheries management with MN DNR**
   Summary in December 9, 2020 Board packet.
5. **Ditch 14 maintenance**
   Summary in December 9, 2020 Board packet.
6. **Great River Greening update on Vadnais/Sucker Park restoration**
   Summary in December 9, 2020 Board packet.
7. **Update on Vote for master water steward @ TEC**
   Summary in December 9, 2020 Board packet.
8. **Update on Lambert biochar**
   Summary in December 9, 2020 Board packet.
9. **Interim report available on Pleasant Lake carp project**
   Summary in December 9, 2020 Board packet.
10. **Minnesota Water Stewards selections 2021**
    Summary in December 9, 2020 Board packet.

C. Consider Updated Project Table for FY 20/21 BWSR WBF

Summary in December 9, 2020 Board packet. Staff has updated VLAWMO's section of the 2021-2023 Watershed Based Funding table for BWSR to review and approve. Upon the Board's approval, staff will move forward with submitting a funding request to BWSR and putting together a work plan.

A motion was made by Long and seconded by Youker to approve the December 2020 Board meeting consent agenda, as amended. Vote: Lindner: aye, Long: aye, Rafferty: aye, Prudhon: aye, Jones: aye, Youker: aye. Motion passed. Motion passed.

V. Business

A. Administration

1. **Consider 2021 fund balance and "working" budget – Res. 11-2020**
   Belfiori addressed and presented the 2020 – 2021 fund balance budget carryover, as recommended for approval by the Finance, Policy & Personnel Committee. If the Board

moves to approve, this will be authorized under Resolution 11-2020. Staff is recommending approval.
Discussion: None.

A motion was made by Jones and seconded by Youker to approve Resolution 11-2020, approving VLAWMO's 2020 – 2021 fund balance and "working" budget. Vote: Lindner: aye, Long: aye, Rafferty: aye, Prudhon: aye, Jones: aye, Youker: aye. Motion passed.

RESOLUTION 11-2020

A RESOLUTION FOR COMMITTING THE FUND BALANCE FOR SPECIFIC PURPOSES

Resolution 11-2020 was moved by Director Jones and seconded by Director Youker:

WHEREAS, the Board of Directors of the Vadnais Lake Area Water Management Organization, does hereby find as follows:

WHEREAS, the Governmental Accounting Standards Board's Statement No. 54 defines committed fund balance as amounts that can only be used for specific purposes pursuant to constraints imposed by formal action of the Board,

WHEREAS, Board action is required before year end to formalize the commitment of fund balance to specified purposes,

WHEREAS, those committed amounts cannot be used for any other purpose unless the VLAWMO removes or changes the specified use by taking the same type of action it employed to previously commit those amounts.

THEREFORE, BE IT RESOLVED by the VLAWMO, that the specific portions of fund balance in the identified funds are committed as follows:

Committed

Fund Name and Description	Proposed Carry Over "committed" Funds (into 2021) and Purpose
General Fund - Fund 3.1. Operations and Administration	$14,000 For 2021 Health Benefits package per Finance and Personnel Subcommittee Recommendation, Possible slight increase in cost due to Metro Inet change to JPA and Hardware/software updates planned for 2020.
General Fund -Fund 3.4. Capital Improvement Projects and Programs	$192,840 The approved 2021 budget (approved at the June Board meeting) included utilizing $192,840 of the projected unspent 2020 Capital Improvement Projects and Programs fund to implement 2021 projects and programs including the Lambert Lake Project, Adaptive Lake Management Project at E. Goose Lake, Carp and hydrologic/water quality partnership based projects in both Vadnais and Pleasant Lake, and other 2021 approved project and programs.

The question was on the adoption of the resolution and there were 6 yeas and 0 nays as follows:

	Yea	Nay	Absent
Dan Jones	☐	☐	☐
Ed Prudhon	☐	☐	☐

Rob Rafferty	☐	☐	☐
Marty Long	☐	☐	☐
Patricia Youker	☐	☐	☐
Jim Lindner	☐	☐	☐

James Lindner, Chair Date

VADNAIS LAKE AREA WATER MANAGEMENT ORGANIZATION

I, the undersigned, Administrator of the Vadnais Lake Area Water Management Organization, hereby certify that I have carefully compared and attached the foregoing extract of minutes of a regular meeting of the Board of Directors of said watershed held on the 9th day of December 2020, with the original thereof on file in my office.

WITNESSED BY the Watershed Administrator this 9th day of December 2020.

Phil Belfiori, Administrator

2. Consider Employee benefits package for 2021

Belfiori presented several employee benefit options that were considered by the Finance & Personnel Subcommittee. The Subcommittee recommended Option 3 for 2021 employee benefits.

Discussion: Prudhon asked if other metro Watersheds have similar staff sizes. Belfiori answered that staff capacities vary, though some are similar and VLAWMO's current cost per employee, ancillary coverage and percentage of dependent coverage are on the lower end based on watershed comparison data provided by North Risk Partners.

A motion was made by Rafferty and seconded by Jones to move the approval of the Finance and Subcommittee's recommended option (Option 3) and authorize the Administrator to work with North Risk Partners to implement the necessary program changes. Vote: Lindner: aye, Long: aye, Rafferty: aye, Prudhon: aye, Jones: aye, Youker: aye. Motion passed.

B. Projects and Programs

1. Approve use of Loan Disbursement Request form as expenses are incurred for sheet pile – Lambert Project

Tanner updated that the Lambert Lake sheet pile replacement and meander project is slated to begin construction this winter and the project contract has been fully signed and executed. During construction, change orders may come in and the Board authorized the administrator to sign these, provided they are not over 15% at the October Board meeting. If additional funds are needed through the MPCA, an amendment may be necessary. Staff is requesting an advanced authorization from the Board for the Administrator to amend the MPCA loan, as needed, but not to exceed 15% without further approval from the Board. The request comes as construction will likely occur quickly and time may not be sufficient to wait for approval at the February 2021 meeting.

Discussion: none.

A motion was made by Youker and seconded by Prudhon for the approval of use of the MPCA Loan Disbursement Request Form as expenses are incurred for sheetpile and authorize amendment(s) with MPCA if additional funds are needed. Vote: Lindner: aye, Long: aye, Rafferty: aye, Prudhon: aye, Jones: aye, Youker: aye. Motion passed.

2. Consider East Goose Lake RFQ for Public Engagement Services

Belfiori presented an update to the Board on the East Goose Lake adaptive lake management effort. Hardcopy resident input forms have been sent out to landowners for their input and response.

3. Ditch 14 Maintenance

Corcoran presented the nearly-completed Lower Lambert/Ditch 14 dredging maintenance project.

C. Operations

1. Consider Metro INET JPA and 2021 Budget

Thompson overviewed VLAWMO's background with the Metro-INET IT services, along with the Board's recommendation from the June 2020 meeting to pursue interest in joining an eventual Joint Powers Agreement with Metro-INET and fellow organizations. At their November 13, 2020 meeting, the VLAWMO Technical Commission recommended VLAWMO join into the JPA, and staff is recommending the same.

A motion was made by Prudhon and seconded by Rafferty to authorize entering into the Metro-INET JPA as a participating member with the signing and execution of VLAWMO Resolution 12-2020 with any non-material changes. Vote: Lindner: aye, Long: aye, Rafferty: aye, Prudhon: aye, Jones: aye, Youker: aye. Motion passed.

Resolution 12-2020
of the Vadnais Lake Area Water Management Organization (VLAWMO)
to enter into the Joint Powers Agreement with the North East Metropolitan Area Municipal Internetworking Collaborative (Metro-INET)

Resolution 12-2020 was moved by Director Prudhon and seconded by Director Rafferty:

Whereas, the VLAWMO currently contracts IT services through the existing Metro-INET, and

Whereas, the Metro-INET is seeking to form a Joint Powers Agreement (JPA) "*to provide for an organization that the participating Members may jointly and cooperatively provide for the development and operation of IT Services for the use and benefit of the Members, and others. To the extent permitted by law, the Members will support the establishment of the IT Services and seek to expand the number of participating agencies either as Members or as non-Member LGUs receiving services from Metro-INET*", and

Whereas, VLAWMO is a party to the proposed JPA as a local government unit of the State of Minnesota, and is authorized to enter into this JPA, and

Whereas, this JPA is made and entered into pursuant to Minnesota Statutes, Section 471.59, and

Whereas, VLAWMO will appoint a representative Director and Alternate to represent VLAWMO within the Metro-INET Board of Directors, and shall be a voting member of the JPA, and

Whereas, this JPA shall become effective on January 1, 2021, and

Therefore, be it resolved: The VLAWMO Board of Directors enters VLAWMO into the Metro-INET JPA as a participating member.

The question was on the adoption of the resolution and there were 6 yeas and 0 nays as follows:

	Yea	Nay	Absent
Dan Jones	☐	☐	☐
Ed Prudhon	☐	☐	☐
Rob Rafferty	☐	☐	☐
Marty Long	☐	☐	☐
Patricia Youker	☐	☐	☐
Jim Lindner	☐	☐	☐

_____ Board Chair & Date

_____ Attest & Date

D. Education and Outreach

1. Update on 2020 Education and Outreach Plan, 2020 Summary

Voss presented on the update and summary of the 2020 Education and Outreach Plan (EOP), as well as EOP goals and achievements, and looking at where those goals and programs are going into 2021.

VI. Discussion/Updates

Lindner noted that there is one vacancy for sure in the New Year, and possibly 2 more vacancies.

VII. Administration Communication

A. MAWD Annual meeting

Belfiori noted the MAWD annual meeting will be held electronically.

VII. Adjourn

A motion was made by Rafferty and seconded by Youker to adjourn at 8:41 pm. Vote: all aye. Motion passed.
Minutes compiled and submitted by Tyler Thompson.

TEC Report to the Board
February 2021

Programs & Projects	Effort Level LOW MED HIGH	Completion Date	Comments
Projects			
Lambert Pond /Meander Project		2021/22	Construction of Meander and Sheet Pile ongoing.
East Goose Lk Adaptive Mgnt.		2021- ongoing	Neighborhood meeting with East Goose Lk. Shoreline residents completed 12/1/20. Community Survey will available on apx. 2/10/21 and will be open until 3/31/21.
Ditch 14 Maintenance project		2021/22	Phase I project complete, working to schedule initial "walk thru" on Phase II later in the Winter.
Birch Lake		2017-20	Project complete, with grant closeout complete, along with full grant reimbursement fulfilled.
MPCA 319 Planning		2021	Currently developing 9 element plan and preparing for discussions with partners before submission on draft to EPA.
21-23 BWSR WBF		2023	21-23 BWSR Watershed Based Funding grant workplan under develop and anticipated to be brought to the 2/24/21 Board meeting for consideration
Programs			
Outreach		Feb-April	East Goose Lake Community Engagement Survey live. East Goose shoreline homeowners response forms collected, analyzing taking place for summary report. Social media Jan-March highlighting neighborhood cost-share spotlights and Lambert Pond and Meander construction.
Education		April	2020 Annual report and water monitoring summary in progress. New MS4 programming underway in collaboration with neighborhing watersheds.
Website		March	Working to build East Goose Lake ALM Web Hub resources within the VLAWMO Website. Lambert Lake project page updated monthly. New projects pages for Lambert Creek dredging, Co Rd F raingardens. 2021 cost-share program reflected on grants page and under news.
WAV		Jan-May	WAV Planning meeting March 17th. MN Water Stewards engaging in training with Freswater (2). Community-engaged U of MN volunteers beginning in March.
Cost Share		ongoing	Continue to plan with municipalities for 2021 grant projects. 2020 grant extensions in process, along with 2021 landowner site visits beginning.
GIS		ongoing	Working to provide data to Ramsey County stormwater reuse inventory process
Monitoring		ongoing	Data analysis and report complete
WCA		ongoing	administering WCA as needed

TEC Report to the Board
February 2021

Administration & Operation			
Audit		2021	Working with Auditors on 2020 Audit - Will be brought to April Board meeting for consideration.
Budget		2020-21	High level 2022 budget discussion with the VLAWMO Board will begin in March /April with the final 2022 budget consideration at the June Board meeting.
Personnel		Oct 2020	Ongoing administrative work to update benefits paperwork based on December Board approval
SSU		ongoing	Parcel redefinitions have been reviewed as they are submitted.
Administration/ HR		ongoing	Year end employee performance review have been completed.

FINANCIAL SUMMARY as of 2/1/2021		
4M Account (1.10)	4M Plus (1.23)	Total
$519,538	$324,104	$843,642

CD's	4M Term Series	
	Maturity	Rate
Term series		

Budget Summary	Actual Expense YTD	2021 Budget amended	Remaining in Budget	% YTD
Operations	*$83,939*	*$656,040*	*$572,101*	13%
CIP	*$36,482*	$492,340	*$455,858*	7%
Total	$120,421	$1,148,380	$1,027,959	10%

February-21		Actual 2/1/21	Actual to Date	2021 Budget	2020 carry over/Grants	Remaining in Budget	2021 Available	Act vs. Budget
BUDGET #	**INCOME**							
5.11	Storm Water Utility	$20,739	$20,739	$935,340	$0	$914,601	$935,340	2%
5.12	Service Fees	$0	$0	$200	$0	$200	$200	0%
5.13	Interest + mitigation acct	$23	$46	$3,000	$0	$2,954	$3,000	2%
5.14	Misc. income - WCA admin & other	$0	$0	$3,000	$0	$3,000	$3,000	0%
5.15	Other Income Grants/loan	$0	$0	$894,679	$0	$894,679	$894,679	0%
5.16	Transfer from reserves	$0	$0	$192,840	$14,000	$206,840	$206,840	0%
	TOTAL	$20,762	$20,785	$2,029,059	$14,000	$2,022,274	$2,043,059	1%
	EXPENSES							
3.1	**Operations & Administration**							
3.110	Office - rent, copies, post tel supplies	$2,004	$4,017	$26,214	$0	$22,197	$26,214	15%
3.120	Information Systems	$1,660	$2,619	$22,365	$4,000	$23,746	$26,365	10%
3.130	Insurance	$0	$0	$7,000	$0	$7,000	$7,000	0%
3.141	Consulting - Audit	$0	$0	$7,728	$0	$7,728	$7,728	0%
3.142	Consulting - Bookkeeping	$0	$0	$1,500	$0	$1,500	$1,500	0%
3.143	Consulting - Legal	$0	$398	$4,000	$0	$3,602	$4,000	10%
3.144	Consulting - Eng. & Tech.	$0	$0	$30,000	$0	$30,000	$30,000	0%
3.150	Storm Sewer Utility	$0	$4,686	$13,000	$0	$8,314	$13,000	36%
3.160	Training (staff/board)	$0	$0	$8,750	$0	$8,750	$8,750	0%
3.170	Misc. & mileage	$347	$462	$6,300	$0	$5,838	$6,300	7%
3.191	Administration - staff	$26,616	$53,232	$370,307	$0	$317,075	$370,307	14%
3.192	Employer Liability	$8,511	$16,187	$102,376	$10,000	$96,189	$112,376	14%
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	$0	$78	$3,000	$0	$2,922	$3,000	3%
3.230	Wetland assessment & management	$0	$0	$0	$0	$0	$0	#DIV/0!
3.3	**Education and Outreach**							
3.310	Public Education	$2,000	$2,000	$8,500	$0	$6,500	$8,500	24%
3.320	Marketing	$260	$260	$7,500	$0	$7,240	$7,500	3%
3.330	Community Blue Ed Grant	$0	$0	$10,000	($4,500)	$5,500	$5,500	0%
Total Core functions: Ops, Monitoring, Education		*$41,398*	*$83,939*	*$646,540*	*$9,500*	*$572,101*	*$656,040*	*13%*
Capital Improvement Projects and Programs								
3.4	**Subwatershed Activity**							
3.410	Gem Lake	$0	$0	$0	$0	$0	$0	
3.420	Lambert Creek	$6,562	$18,312	$222,100	$0	$203,788	$222,100	8%
3.425	Goose Lake	$0	$1,125	$124,200	$0	$123,075	$124,200	1%
3.430	Birch Lake	$637	$637	$0	$0	($637)	$0	#DIV/0!
3.440	Gilf Black Tam Wilk Amelia	$0	$0	$16,000	$0	$16,000	$16,000	0%
3.450	Pleasant Charley Deep	$0	$0	$22,500	$0	$22,500	$22,500	0%
3.460	Sucker Vadnais	$15,488	$16,408	$12,500	$0	($3,908)	$12,500	131%
3.48	**Programs**							
3.480	Soil Health Grant	$0	$0	$4,500	$0	$4,500	$4,500	0%
3.481	Landscape 1	$0	$0	$16,000	$0	$16,000	$16,000	0%
3.482	Landscape 2	$0	$0	$28,000	$0	$28,000	$28,000	0%
3.483	Project Research & feasibility	$0	$0	$0	$0	$0	$0	#DIV/0!
3.485	Facilities Maintenance	$0	$0	$46,540	$0	$46,540	$46,540	0%
3.5	**Regulatory**							
3.510	Engineer Plan review	$0	$0	$0	$0	$0	$0	#DIV/0!
	Total CIP & Program	*$22,687*	*$36,482*	$492,340	$0	*$455,858*	*$492,340*	*7%*
	Total of Core Operations & CIP	**$64,084**	$120,421	$1,138,880	$9,500	**$1,027,959**	$1,148,380	**10%**

Fund Balance		1/1/2021	2/1/2021
4M Account		$558,445	$519,538
4M Plus Savings		$324,091	$324,104
Total		$882,536	$843,643

Restricted funds		2/1/2021
Mitigation Savings		$21,036
Term Series		$0

Vadnais Lake Area Water Management Orga

10:37 AM

Profit & Loss

02/03/2021

January 9 through February 12, 2021

Cash Basis

	Jan 9 - Feb 12, 21
Ordinary Income/Expense	
Income	
Mitigation Interest	0.17
5.1 · Income	
5.11 · Storm Water Utility	20,738.97
5.13 · Interest	22.54
Total 5.1 · Income	20,761.51
Total Income	20,761.68
Gross Profit	20,761.68
Expense	
3.1 · Administrative/Operations	
3.110 · Office	
Copies	15.22
Phone/Internet/Machine Overhead	290.00
Postage	35.45
Rent	1,615.00
Supplies	48.17
Total 3.110 · Office	2,003.84
3.120 · Information Systems	
GIS web hosting	254.26
IT Support	1,203.91
Website & email hosting	201.38
Total 3.120 · Information Systems	1,659.55
3.170 · Misc. & mileage	346.69
3.191 · Employee Payroll	
payroll	26,616.04
Total 3.191 · Employee Payroll	26,616.04
3.192 · Employer Liabilities	
Admin payroll processing	44.92
Administration FICA	1,924.03
Administration PERA	1,996.20
Insurance Benefit	4,546.05
Total 3.192 · Employer Liabilities	8,511.20
Total 3.1 · Administrative/Operations	39,137.32
3.3 · Education and Outreach	
3.310 · Public Education	2,000.00
3.320 · Marketing	260.40
Total 3.3 · Education and Outreach	2,260.40
3.4 · Capital Imp. Projects/Programs	
3.420 · Lambert Creek Restoration	
LL VLAWMO cash match	6,561.51
Total 3.420 · Lambert Creek Restoration	6,561.51
3.430 · Birch Lake	

4th & Otter project	637.07
Total 3.430 · Birch Lake	637.07
3.460 · Sucker Vadnais	15,488.00
Total 3.4 · Capital Imp. Projects/Programs	22,686.58
Total Expense	64,084.30
Net Ordinary Income	-43,322.62
Net Income	**-43,322.62**

Vadnais Lake Area Water Management Organization
Check Detail
January 9 through February 12, 2021

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Check	**eft**	**01/23/2021**	**Reliance Standard**		**Checking - 1987**		**-202.29**
					Insurance Benefit	-202.29	202.29
TOTAL						-202.29	202.29
Check	**eft**	**01/25/2021**	**Reliance Standard**		**Checking - 1987**		**-88.50**
					Insurance Benefit	-88.50	88.50
TOTAL						-88.50	88.50
Check	**eft**	**02/05/2021**	**further**		**Checking - 1987**		**-5.00**
					Insurance Benefit	-5.00	5.00
TOTAL						-5.00	5.00
Check	**5084**	**02/12/2021**	**City Of Roseville**		**Checking - 1987**		**-1,203.91**
					IT Support	-1,203.91	1,203.91
TOTAL						-1,203.91	1,203.91
Check	**5085**	**02/12/2021**	**Dawn Tanner**		**Checking - 1987**		**-31.36**
					3.170 · Misc. & mileage	-31.36	31.36
TOTAL						-31.36	31.36
Check	**5086**	**02/12/2021**	**Brian Corcoran**		**Checking - 1987**		**-28.42**
					3.170 · Misc. & mileage	-28.42	28.42
TOTAL						-28.42	28.42
Check	**5087**	**02/12/2021**	**Tyler J Thompson**		**Checking - 1987**		**-66.53**
					3.170 · Misc. & mileage	-66.53	66.53
TOTAL						-66.53	66.53
Check	**5088**	**02/12/2021**	**Innovative Office Solutions**		**Checking - 1987**		**-48.17**
					Supplies	-48.17	48.17
TOTAL						-48.17	48.17
Check	**5089**	**02/12/2021**	**Ramsey County - Plato**		**Checking - 1987**		**-15,488.00**
					3.460 · Sucker Vadnais	-15,488.00	15,488.00
TOTAL						-15,488.00	15,488.00

Check	**5090**	**02/12/2021**	**Kennedy & Graven, Chartered**	**Checking - 1987**	**-238.80**
			LL VLAWMO cash match	-238.80	238.80
TOTAL				-238.80	238.80
Check	**5091**	**02/12/2021**	**Metro WaterShed Partners**	**Checking - 1987**	**-2,000.00**
			3.310 · Public Education	-2,000.00	2,000.00
TOTAL				-2,000.00	2,000.00
Check	**5092**	**02/12/2021**	**Press Publications**	**Checking - 1987**	**-220.38**
			3.170 · Misc. & mileage	-138.54	138.54
			3.170 · Misc. & mileage	-81.84	81.84
TOTAL				-220.38	220.38
Check	**5093**	**02/12/2021**	**City of White Bear Lake**	**Checking - 1987**	**-35,722.78**
			payroll	-26,616.04	26,616.04
			Administration FICA	-1,924.03	1,924.03
			Administration PERA	-1,996.20	1,996.20
			Insurance Benefit	-4,250.26	4,250.26
			Admin payroll processing	-44.92	44.92
			4th & Otter project	-637.07	637.07
			GIS web hosting	-254.26	254.26
TOTAL				-35,722.78	35,722.78
Check	**5094**	**02/12/2021**	**HDR Engineering, Inc.**	**Checking - 1987**	**-201.38**
			Website & email hosting	-201.38	201.38
TOTAL				-201.38	201.38
Check	**5095**	**02/12/2021**	**SEH**	**Checking - 1987**	**-6,322.71**
			LL VLAWMO cash match	-1,169.06	1,169.06
			LL VLAWMO cash match	-5,153.65	5,153.65
TOTAL				-6,322.71	6,322.71
Check	**5096**	**02/12/2021**	**City of Vadnais Heights**	**Checking - 1987**	**-1,955.67**
			Rent	-1,615.00	1,615.00
			Phone/Internet/Machine Overhead	-290.00	290.00
			Postage	-35.45	35.45
			Copies	-15.22	15.22
TOTAL				-1,955.67	1,955.67

Vadnais Lake Area Water Management Organization

10:32 AM

Custom Transaction Detail Report

02/03/2021

December 1, 2020 through February 2, 2021

Accrual Basis

	Type	Date	Num	Name	Memo	Account	Clr	Split	Amount	Balance
Dec 1, '20 - Feb 2, 21										
	Credit Card Charge	12/02/2020		Google*SVCAPPS_VLAWM		US Bank CC	√	WEB	36.00	36.00
	Credit Card Charge	12/09/2020		adobe *photography plan		US Bank CC		Software	9.99	45.99
	Credit Card Charge	12/10/2020		mn Department of Agriculture	pest 2021 license	US Bank CC		3.160 · Training (staff/board)	10.22	56.21
	Credit Card Charge	12/14/2020		Galeton	hard hats	US Bank CC		3.220 · Equipment	77.62	133.83
	Transfer	12/22/2020			Funds Transfer	US Bank CC		Checking - 1987	-347.55	-213.72
	Credit Card Charge	12/28/2020		Adobe "Creative Cloud		US Bank CC		Software	32.20	-181.52
	Credit Card Charge	12/28/2020		Zoom	subscription	US Bank CC		3.320 · Marketing	16.09	-165.43
	Credit Card Charge	12/29/2020		Galeton	hard hat	US Bank CC		3.220 · Equipment	11.85	-153.58
	Credit Card Charge	01/04/2021		Google*SVCAPPS_VLAWM		US Bank CC		WEB	36.00	-117.58
	Credit Card Charge	01/19/2021		Survey Monkey	survey monkey premium	US Bank CC		3.320 · Marketing	260.40	142.82
Dec 1, '20 - Feb 2, 21									**142.82**	**142.82**

To: Board of Directors

From: Phil Belfiori, Administrator

Date: February 17, 2021

Re: V.A. Board Consideration of Designation of Legal Publication

Legal Publication

Recommendation: that VLAWMO continue to use Press Publication and the VLAWMO website for public notices to our jurisdiction and VLAWMO will advertise in League of MN Cities publication as appropriate.

To: Board of Directors

From: Phil Belfiori, Administrator

Date: February 17, 2021

Re: V. B. Board Consideration of 2021 VLAWMO regular Board meeting dates

The following dates are offered for the regular VLAWMO Board meeting in 2021. They follow the pattern established in previous years:

February 24

April 28

June 23

August 25

October 27

December 8

Staff Recommendation: approval.

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

To: VLAWMO Board of Directors
From: Dawn Tanner
Date: February 24, 2021

Re: V. C. Amelia Lake RCSWCD Survey Request

Amelia Lake Surveys

VLAWMO staff requested a quote from RCSWCD for Amelia survey work consistent with Sustainable Lake Management Plan (SLMP) needs for 2021. The quote includes bathymetry, a macrophyte survey, and delineation for Flowering rush, which is an invasive species that has been documented in Amelia Lake previously by USGS and MN DNR. The total for that work is $5,750. The quote is included in the packet.

Staff received a recommendation from the TEC to the Board to fund this survey work for 2021.

Staff request authorization from the Board to proceed with this survey work with RCSWCD for 2021.

2021 VLAWMO Lake & Flowering Rush Delineation Proposals

Lake Amelia

November 10, 2020

Prepared for:
Vadnais Lake Area Water Management Organization

Prepared by:
Ramsey County Parks & Recreation, 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. RC-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 + 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 ArcGIS software. It may be completed in conjunction with Macrophyte surveys when there is a clear enough sonar signal in the lake.

Flowering Rush Delineation

Invasive Flowering Rush will be delineated across the entire shoreline utilizing visual searches. A map of the zones will be created along with submission into EDDMaPS and any treatment entered into ISMTrack. Extent of the infestation and any treatment will be included in the final report.

LAKE AMELIA

Bathymetry and Macrophyte Survey

Lake Amelia Macrophyte & Bathymetry Survey Estimate, Summer 2021

Task	Cost/hr	Hours	Cost
Boat Use	unit	-	$50
BioBase Upload	unit	-	$300
Lake Survey Prepwork	$72	11	$792
Field Work, 2 days (2 people)	$72	32	$2,304
Data entry (Species & Depths)	$72	5	$360
GIS Post-processing and Mapping	$72	8	$576
Report Completion, Contour Generation	$72	10	$720
TOTAL		**66**	**$5,102**

Flowering Rush Survey

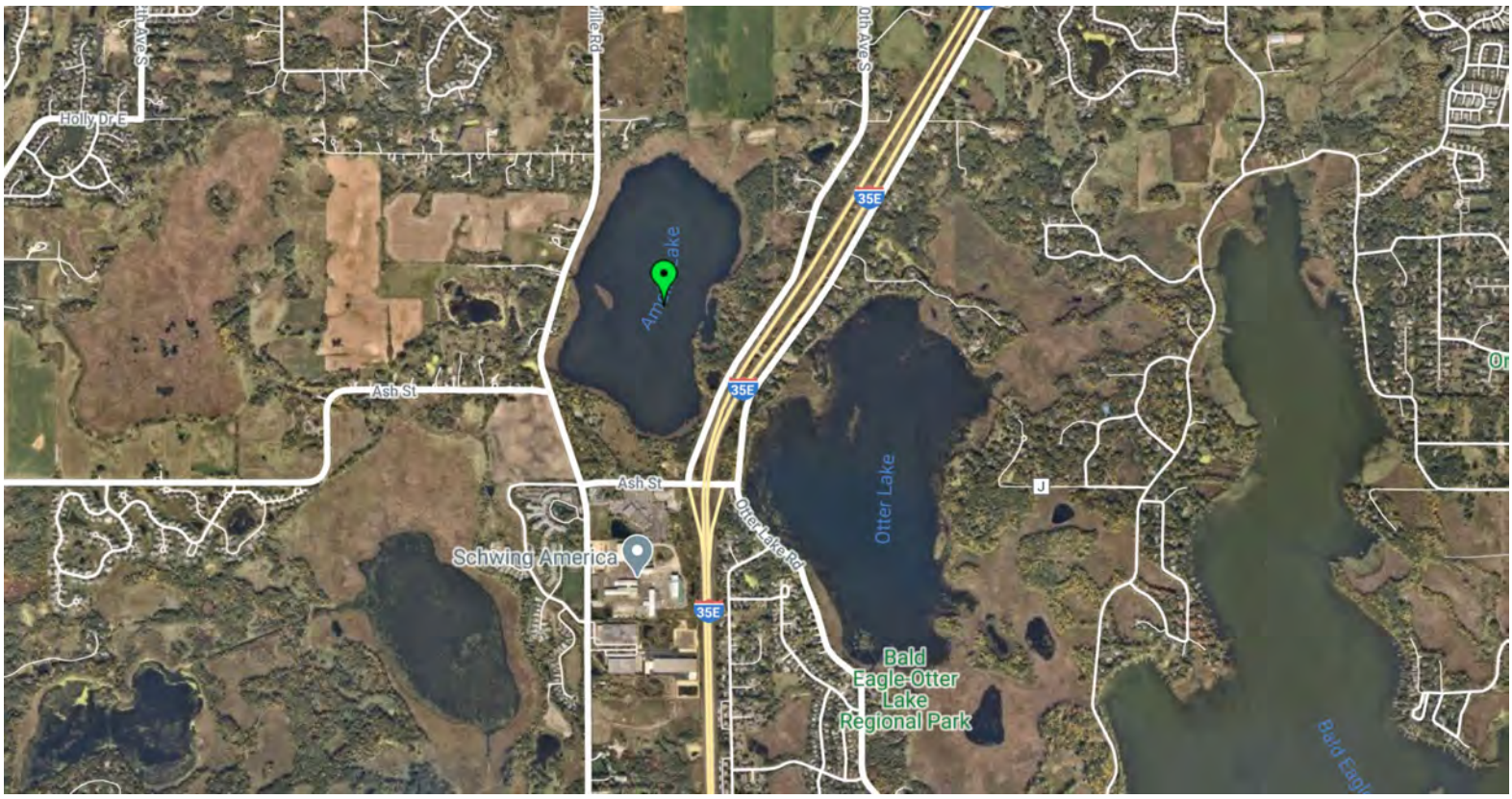
Lake Amelia flowering rush delineation Estimate, Summer 2021

Task	Cost/hr	Hours	Cost
Field survey	$72	5	$360
GIS Post-processing and Mapping	$72	2	$144
Report Completion	$72	2	$144
TOTAL		**76**	**$648**

Deliverables

The report will include:

- Description of Methods
- Tables of aquatic, emergent, and Flowering Rush detected
- Bathymetry Map, BioVolume Map, numbered Survey Point map to match with aquatic species tables, and shoreline polygons of flowering rush
- Shapefiles including Biovolume, 2021 Contour Lines, Point Intercept Location layers, and Flowering Rush polygons


Holly Dr E
Ash St
Ash St
Schwing America
35E
35E
35E
Otter Lake
Otter Lake Rd
J
Bald
Eagle-Otter
Lake
Regional Park

To: The Board of Directors

From: Brian Corcoran

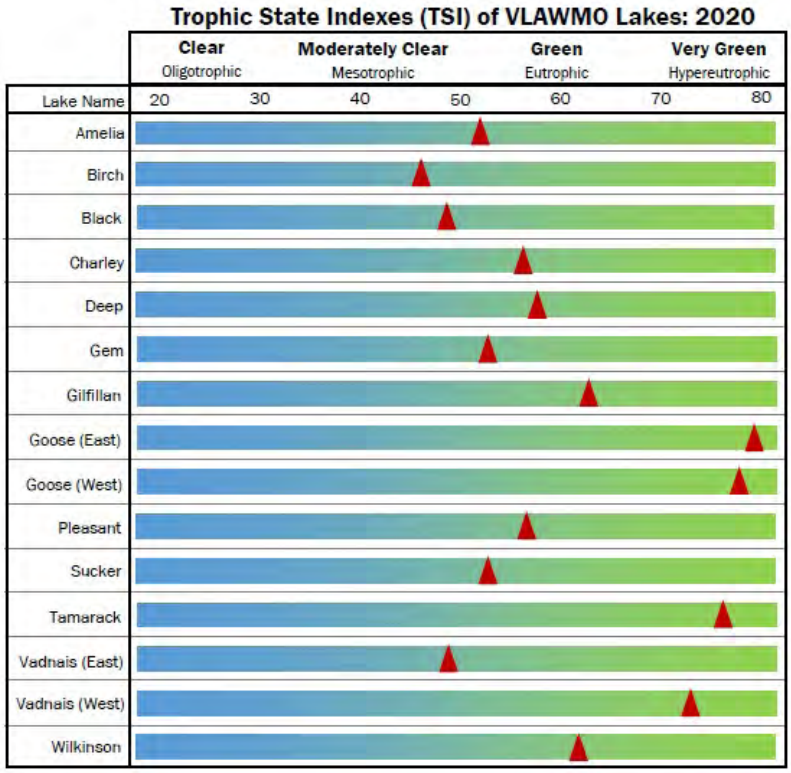
Date: February 24, 2021

Re: V. D. 2020 Monitoring report

The 2020 VLAWMO monitoring report and monitoring report summary is complete and available on the VLAWMO website:

https://www.vlawmo.org/resources/reports/

VLAWMO samples 15 lakes and 6 sites on Lambert Creek (Ditch 14) for many variables including nutrient's, chloride, flow, Lake level and dissolved oxygen to name a few. Each year the Monitoring report is sent to BWSR along with the VLAWMO Annual Report. The monitoring data is used for multiple subshed studies and grant applications as well as building a long-term trend database for our waterboidies. Monitoring results are also used to guide local water policies and management, and to help prioritize and locate future water quality projects such as raingardens, underground retention basins, and shoreline restorations. Below is the 2020 Trophic State Indexes (TSI) of the VLAWMO Lakes.


Trophic State Indexes (TSI) of VLAWMO Lakes: 2020
Clear
Oligotrophic
Moderately Clear
Mesotrophic
Green
Eutrophic
Very Green
Hypereutrophic
Lake Name
20
30
40
50
60
70
80
Amelia
Birch
Black
Charley
Deep
Gem
Gilfillan
Goose (East)
Goose (West)
Pleasant
Sucker
Tamarack
Vadnais (East)
Vadnais (West)
Wilkinson

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

To: VLAWMO Board of Directors
From: VLAWMO Staff
Date: February 24, 2021

Re: V. E. Project Update Reports

1. Great River Greening, Sucker-Vadnais Regional Park Update – Dawn

VLAWMO is coordinating with Great River Greening, Ramsey County Parks/SWCD, and SPRWS to continue early planning for the funded restoration in Vadnais-Sucker Park. VLAWMO was notified by Great River Greening during November 2020 that the restoration project grant (45 acres in Vadnais-Sucker Park) is fully authorized and signed. The restoration work for the project is being funded under a 5-year grant with Outdoor Heritage funds. Additional elements of this restoration were also included in the portfolio of projects to the Environment and Natural Resources Trust Fund (ENRTF) that was not voted on by the legislature during 2020. Additional funds and plantings with a pollinator focus may be allocated to this project if approved by the Legislature in 2021. We are delighted to have this level of restoration support at this important park that supports the drinking water supply for St. Paul and surrounding communities.

2. Otter Project Update – Dawn

Remote-camera monitoring has been going on continuously since mid-July at the Lambert project site. Live trapping was completed during Sept. and Oct. Live trapping was not successful due to many constraints at the site. Information gained was valuable and is shared on a new Otter Spotter StoryMap and watershed-wide reporting and mapping resource. To continue learning about otters and monitoring their use of wetland habitats in the watershed, we used the Otter Spotter model from The River Otter Ecology Project in Northern California. We included otter sightings reported and photos from residents in the StoryMap and feature a map of otter activity. This is a site that we can continue to update over time as VLAWMO staff encounter otter sign in the field and when we receive reports from residents. The site has been popular and had over 200 visits in the first week it was posted.

A report on the project was submitted to MN DNR and to the MN Zoo. The MN Zoo was a funding partner on this project.

Feel welcome to share the Otter Spotter StoryMap with educators and others. VLAWMO Education and Outreach also shared this new resource via social media outlets in January 2021.

3. Cost Share Program Update – Tyler

Staff continues to work with our municipalities to coordinate street reconstruction projects to implement stormwater retrofit projects using Landscape Level 2 funds. Thompson attended the 2/10/21 Vadnais Heights street reconstruction open house and the Program received some interest. Program flyers will be mailed out with the City of WBL's street reconstruction landowner mailings. There have been several site visits this season, and it's anticipated to be another busy year for projects. The TEC approved VLAWMO's first Soil Health Grant application at their February meeting, and another application has been submitted for March TEC meeting. Staff anticipates Soil Health Grant fund of $4,500 in 2021 will be depleted this spring.

4. Sucker & East Vadnais Lakes Shoreline Survey Results – Dawn

RCSWCD competed reports for the shoreline surveys that were completed in 2020 for East Vadnais and Sucker Lakes. The surveys are linked here and available on the VLAWMO website. These surveys along with the wetland inventory for the park have been shared with ecologists at Great River Greening to provide important information to support restoration efforts.

5. Pleasant Lake Carp Solutions report - Dawn

Carp Solutions provided an interim report on the carp project that includes details about biomass estimation and movement between Pleasant and Deep Lakes. It is very interesting and linked on the VLAWMO website.

6. Phragmites check and update - Dawn

A site on private property with suspected invasive Phragmites was detected by VLAWMO staff on the edge of the Lambert construction and restoration area during photographic surveys that were part of the construction preparation process. VLAWMO, RWSWCD, and UMN conducted site visits during January to visit that suspected site, other possible sites along Centerville Road, and 3 sites that had been reported by Barr as part of their Wilkinson feasibility study. Coordination was provided by North Oaks Company for the Wilkinson sites. The Centerville Road and Wilkinson sites were all native Phragmites. The County Road F site was confirmed to be invasive. So far, it has not spread into Lambert Lake. While onsite, we were able to meet with the landowner, pick up a signed landowner agreement for treatment, and RCSWCD has added this site to the list for treatment during 2021. The EDDMapS entry has also been updated so this site is visible in the database.

This photo shows the invasive Phragmites stand on the edge of Lambert Lake (wetland complex). Notice the “sea” of native Phragmites in the distance. Detecting this site at this time and working with the landowner to treat it is especially important because the invasive strain would otherwise likely expand into Lambert and be a much larger issue to treat in the future. We appreciate the involvement of local residents and their willingness to work with us on these kinds of invasive-species issues.

7. White Bear Lake High School Expansion EAW Update – Brian

VLAWMO has received the White Bear Lake Independent School District (ISD) #624 High School Expansion Project Environmental Assessment Worksheet (EAW) and is currently in the review process. Comment deadline is Friday, March 5th, 2021. EAW can be found here: https://resources.finalsite.net/images/v1611768711/whitebeark12mnus/uc8xaeuzad95wptex4da/ISD624_EAW_FINAL.pdf

To: Board of Directors

From: Phil Belfiori, Administrator

Date: February 17, 2021

Re: VI.A.1. Elections and Appointments

1. **Election of officers.** 2020 Slate: Chair: Jim Lindner; Vice Chair: Marty Long; Secretary Treasurer: Rob Rafferty. Please consider how you might best serve. Officers preside over the meeting (Chair, Vice Chair, Sec-Tres.) and become check signers through US Bank. Other duties: the Chair may speak for VLAWMO in public situations, Review draft board meeting agenda, and the Sec- Treasurer is a member of the Finance committee.

2. **Subcommittee Assignments.** Finance, Policy & Personnel Subcommittee may meet 2-4 times per year. They make recommendations for Board action as far as budget, new policies or policy updates and personnel matters. They also assist with human resources questions and direction as needed. Three Board members have served on the committee in 2020.

3. **Technical Commission (TEC) Chair and Officers.** VLAWMO process requires appointment of the TEC Chair by the Board. The TEC has recommended Gloria Tessier, commissioner from Gem Lake as its Chair. Other Officers appointed by the TEC at their January 8, 2021 meeting include Jesse Farrell as Vice Chair, Bob Larson as Treasurer, and Paul Duxbury as Board Liaison. Treasurer Larson requested to have more of an understanding of his role as TEC Treasurer. Based on these comments at the January TEC meeting, the Administrator then met with Treasure Larson before the Feb. TEC meeting to review the Feb. Financial report and the Feb. Bills. Treasure Larson would like to confirm that the Board is aware and supportive of him meeting with the administrator before each TEC meeting to review the Month's financial report /bills.

VLAWMO
Vadnais Lake Area
Water Management Organization

To: Board of Directors

From: Phil Belfiori, Administrator

Date: February 17, 2021

Re: VI.A.2. General Engineering Services Proposals and Recommendation

Pursuant to Minnesota Statute 103B.227, staff noticed and advertised a Request for Proposal (RFP) for general engineering services for 2021 and 2022. The General Engineering fund was approved by the VLAWMO Board two years ago for the purpose of establish a dedicate fund to provide smaller cost /limited scope general technical services by an qualified engineering firm on an as needed basis when specific engineering expertise is needed. The selected firm would enter into a contract for a 2-year period. The general engineering fund includes $30,000 in the 2021 approved budget and the funding levels for 2022 would be determined by the Board as part of the 2022 budgeting process.

The advertisement for the RFP was placed in the Legal of MN Cities marketplace from January 6-13, in the White Bear Press on January 6 and 13, noticed at the offices and placed on the VLAWMO web page. Closing date was to receive proposes was January 22, 2021.

The RFP identified work that might include civil or water resource engineering, modeling, analysis, surveying or water resource science. Six proposals were received from Barr Engineering, Houston Engineering, S.E.H., Resilience Resources, LimnoTech, and Young Environmental. The staff was asked to review all the proposals, score and comment. Scoring was based on the following experience factors: familiarity with VLAWMO, stormwater BMPs, feasibility studies, project design, grant knowledge and assistance, stormwater standards knowledge. The billing rates vary by job classification and is difficult to get equivalent comparison. VLAWMO has had some contact will all of the firms at some time in the past.

Staff review identified two firms as the highest scoring based experience factors: Houston Engineering and SEH. More recently, SEH has served in this position for the last two years and have been the lead Design Engineer for the Lambert Lake Meander and Sheet Pile Maintance Project. Houston Engineering have worked on larger technical studies for Ditch 14 and have been very response with staff and follow-up. Houston Engineering also had a comprehensive approach in their proposal. Staff identified that either firm has the potential to deliver on the requested services in the RFP.

SEH scored the highest given they have performed well on the projects and studies performed under the general engineering program over the last two years. They also have performed well and have been very responsive in provide services and when contacted to answer technical questions. SEH also has significant familiarity with VLAWMO through our municipalities.

The two proposals from SEH and Houston Engineering can be found at the following link:

https://www.vlawmo.org/files/6916/1358/7033/HEI_For_VLAWMO_2021-2022.pdf

https://www.vlawmo.org/files/2916/1358/7140/SEH_Proposal_for_Professional_Engineering_Services.pdf

Board Subcommittee Recommendation

At their meeting on February 10, 2021, the VLAWMO Policy and Personnel Subcommittee discuss the 2021 /22 General Engineering Services and upon further discussion reached a consensus recommendation to the full VLAWMO Board to recommend S.E.H.

Staff Recommendation

Based on the review of the proposals, also staff recommends Board approval of S.E.H. to continue as the VLAMWO engineer to provide general engineering services in 2021 and 2022 and authorize staff to sign the attached supplemental letter agreement dated Feb. 24, 2021 with Exhibits.

attached:
Supplemental letter agreement dated Feb. 24, 2021 with Exhibits.

Note: the 2021 -22 Legal Services RFP is currently on notice and advertised in the VLAWMO web site, at LMC website and in the WB Press newspaper. It is anticipated that this item will be brought forward for Board consideration at the April 28 Board meeting.

Supplemental Letter Agreement

In accordance with the Master Agreement for Professional Services between Vadnais Lake Area Watershed Management Organization ("Client"), and Short Elliott Hendrickson Inc. ("Consultant"), effective February 28, 2019, this Supplemental Letter Agreement dated February 24, 2021 authorizes and describes the scope, schedule, and payment conditions for Consultant's work on the Project described as: General Engineering Services.

Client's Authorized Representative: Phil Belfiori, Administrator
Address: 800 County Road E
Vadnais Heights, MN 55127
Telephone: 651.204.6073 email: Phil.Belfiori@vlawmo.org

Project Manager: Emily Jennings
Address: 3535 Vadnais Center Drive
St Paul, MN 55110
Telephone: 651.302.7669 email: ejennings@sehinc.com

Scope: The Basic Services to be provided by Consultant:

A. General

1. General engineering services as requested will be provided on an hourly basis using current SEH billing rates.
2. SEH will provide scope and fee proposals to the Client for approval on an individual project basis at the request of the Client.
3. Typical services provided include:
   (a) Stormwater management consultation
   (b) Feasibility studies
   (c) Design assistance
   (d) Engineering assistance with grant applications
   (e) Meeting attendance or presentations with the Board, Technical Commission or stakeholders as requested.
   (f) Stormwater management review and comment on development applications as requested.

B. Payment

1. The estimated fee is subject to a not-to-exceed amount of $30,000 including expenses and equipment.
2. The Client shall pay Consultant for general engineering services, expenses, and equipment rendered on an hourly plus reimbursable expenses in accordance with Exhibit A-1. Services that have a definable scope will be paid for on an hourly plus reimbursable expenses and equipment in accordance with Exhibit A-1, or on a lump sum basis in accordance with Exhibit A-3.
3. Engineering services related to individual or complex construction projects and major reports and studies shall be subject to a separate Supplemental Letter Agreement. The Supplemental Letter Agreement will identify a scope of services and set forth a fee for those services. The Client shall pay Consultant for services and expenses rendered in accordance with Exhibit A-1 or A-3. Construction phase services,

staking, and observation services which depend on a contractor's progress and weather conditions will usually be paid for on an hourly basis in accordance with Exhibit A-1.

Other Terms and Conditions: Other or additional terms contrary to the Master Agreement for Professional Services that apply solely to this project as specifically agreed to by signature of the Parties and set forth herein:

The Client may hire other consultants as it determines is appropriate to provide the same or similar service.
General Conditions of the Agreement for Professional Services:

Section I.D.4. DELETE "including charges for expenses and equipment costs then due and all termination expenses."

Section IV.C.1 DELETE in its entirety and insert the following:

1. The Client hereby agrees that to the fullest extent permitted by law, Consultant's total liability to the Client for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to the Project or this Agreement from any cause or causes including, but not limited to, Consultant's negligence, errors, omissions, strict liability, breach of contract or breach of warranty to the limits of the Consultant's insurance coverage at no extra expense to the Client.

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Short Elliott Hendrickson Inc.	Vadnais Lake Area Watershed Management Organization
By: _____	By: _____
Robert L. Ellis	
Title: Commercial Director	Title: _____

Exhibit A-1
to Supplemental Letter Agreement
Between Vadnais Lake Area Watershed Management Organization (Client)
and
Short Elliott Hendrickson Inc. (Consultant)
Dated February 24, 2021

Payments to Consultant for Services and Expenses Using the Hourly Basis Option

The Agreement for Professional Services is amended and supplemented to include the following agreement of the parties:

A. Hourly Basis Option

The Client and Consultant select the hourly basis for payment for services provided by Consultant. Consultant shall be compensated monthly. Monthly charges for services shall be based on Consultant's current billing rates for applicable employees plus charges for expenses and equipment.

Consultant will provide an estimate of the costs for services in this Agreement. It is agreed that after 90% of the estimated compensation has been earned and if it appears that completion of the services cannot be accomplished within the remaining 10% of the estimated compensation, Consultant will notify the Client and confer with representatives of the Client to determine the basis for completing the work.

Compensation to Consultant based on the rates is conditioned on completion of the work within the effective period of the rates. Should the time required to complete the work be extended beyond this period, the rates shall be appropriately adjusted.

B. Expenses

The following items involve expenditures made by Consultant employees or professional consultants on behalf of the Client. Their costs are not included in the hourly charges made for services and shall be paid for as described in this Agreement but instead are reimbursable expenses required in addition to hourly charges for services:

1. Transportation and travel expenses.
2. Long distance services, dedicated data and communication services, teleconferences, Project Web sites, and extranets.
3. Lodging and meal expense connected with the Project.
4. Fees paid, in the name of the Client, for securing approval of authorities having jurisdiction over the Project.
5. Plots, Reports, plan and specification reproduction expenses.
6. Postage, handling and delivery.
7. Expense of overtime work requiring higher than regular rates, if authorized in advance by the Client.
8. Renderings, models, mock-ups, professional photography, and presentation materials requested by the Client.
9. All taxes levied on professional services and on reimbursable expenses.
10. Other special expenses required in connection with the Project.
11. The cost of special consultants or technical services as required. The cost of subconsultant services shall include actual expenditure plus 10% markup for the cost of administration and insurance.

The Client shall pay Consultant monthly for expenses.

C. Equipment Utilization

The utilization of specialized equipment, including automation equipment, is recognized as benefiting the Client. The Client, therefore, agrees to pay the cost for the use of such specialized equipment on the project. Consultant invoices to the Client will contain detailed information regarding the use of specialized equipment on the project and charges will be based on the standard rates for the equipment published by Consultant.

The Client shall pay Consultant monthly for equipment utilization.

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Exhibit A-3
to Supplemental Letter Agreement
Between Vadnais Lake Area Watershed Management Organization (Client)
and
Short Elliott Hendrickson Inc. (Consultant)
Dated February 24, 2021

Payments to Consultant for Services
Using the Lump Sum Plus Expenses Option

The Agreement for Professional Services is amended and supplemented to include the following agreement of the parties:

A. Lump Sum Plus Expenses Option

The Client and Consultant may select Lump Sum Plus Expenses for payment for services provided by Consultant. During the course of providing its services, Consultant shall be paid monthly based on Consultant's estimate of the percentage of the work completed. The Lump Sum amount includes compensation for Consultant's services and the services of Consultant's Consultants, if any, for the agreed upon Scope of Work. Appropriate amounts have been incorporated in the initial Lump Sum to account for labor, overhead, and profit, The Client agrees to pay for other additional services, equipment, and expenses that may become necessary to complete Consultant's services at their standard rates.

B. Expenses

The following items involve expenditures made by Consultant employees or professional consultants on behalf of the Client and shall be paid for as described in the Agreement and this Exhibit.

1. Transportation and travel expenses.
2. Long distance services, dedicated data and communication services, teleconferences, Project Web sites, and extranets.
3. Lodging and meal expense connected with the Project.
4. Fees paid, in the name of the Client, for securing approval of authorities having jurisdiction over the Project.
5. Plots, Reports, plan and specification reproduction expenses.
6. Postage, handling and delivery.
7. Expense of overtime work requiring higher than regular rates, if authorized in advance by the Client.
8. Renderings, models, mock-ups, professional photography, and presentation materials requested by the Client.
9. All taxes levied on professional services and on reimbursable expenses.
10. Other special expenses required in connection with the Project.
11. The cost of special consultants or technical services as required. The cost of subconsultant services shall include actual expenditure plus 10% markup for the cost of administration and insurance.

C. Equipment Utilization

The utilization of specialized equipment, including automation equipment, is recognized as benefiting the Client. The Client, therefore, agrees to pay the reasonable cost for the use of such specialized equipment on the project.

Consultant invoices will contain detailed information regarding the use of specialized equipment on the project when it is to be reimbursed by the Client. Charges will be based on the standard rates for the equipment published by Consultant.

SEH Hourly Billable Rates – 2021

Classification – Office Staff	Billable Rate[1]
Principal	$170 - $270
Project Manager	$140 - $240
Senior Project Specialist	$135 - $220
Project Specialist	$100 - $175
Senior Professional Engineer I	$115 - $180
Senior Professional Engineer II	$140 - $225
Professional Engineer	$105 - $165
Graduate Engineer	$85 - $135
Senior Architect	$125 - $210
Architect	$110 - $150
Graduate Architect	$85 - $110
Senior Landscape Architect	$115 - $170
Landscape Architect	$95 - $125
Graduate Landscape Architect	$85 - $100
Senior Scientist	$130 - $170
Scientist	$90 - $135
Graduate Scientist	$80 - $105
Senior Planner	$130 - $210
Planner	$100 - $150
Graduate Planner	$90 - $120
Senior GIS Analyst	$110 - $175
GIS Analyst	$100 - $120
Project Design Leader	$120 - $185
Lead Technician	$105 - $170
Senior Technician	$90 - $135
Technician	$65 - $115
Graphic Designer	$90 - $145
Administrative Professional	$55 - $130

Classification – Field Staff	Billable Rate[1]
Professional Land Surveyor	$110 - $160
Lead Resident Project Representative	$95 - $155
Sr. Project Representative	$90 - $135
Project Representative	$75 - $125
Survey Crew Chief	$85 - $135
Survey Instrument Operator	$60 - $95

(1) The actual rate charged is dependent upon the hourly rate of the employee assigned to the project.

The rates shown are subject to change.

Effective: January 1, 2021
Expires: December 31, 2021

Emily Jennings $138

SEH Schedule of Expenses – 2021

Vehicle Mileage Rates

2021 IRS rate of 56 cents per mile

Vehicle Allowance Costs

Resident Project Representative $16.00/day
Survey and Field Vehicle ..... $4.50/hour + 56 cents/mile

Survey Equipment

Robotic Total Station $30.00/hour
Global Positioning System (GPS) $30.00/hour

Computer Equipment

Computer Charges per Direct Hour of Labor $3.00/hour

Other Equipment Expenses

SEH uses many different types of equipment, such as traffic counters; flow meters; air, water, and soil sampling kits; inspection cameras; density meters; 3-D printers; drones, and many others. Our equipment is frequently upgraded to utilize current technology.

You will be charged for equipment usage per your agreement with SEH.

Rates are subject to change.

Identifiable Reproduction and Reprographic Costs (1) (2)

Item	8½x11	11x17	Large Format	Per Item
Black/White Copy (3)	0.07	0.24	0.95 + 0.50/sq. ft.	
Color Copy (3)	0.46	1.02	0.95 + 2.55/sq. ft.	
Mylar			5.00	
CD Copy				3.00
Lamination	2.00	3.50	3.50/sq. ft.	
Laminated Foamcore – up to 30"x 42" – larger than 40"x 60"			 40.00 75.00	
3-Ring Binder *size*	1”	2”	3”	4”
cost	3.20	4.80	5.60	7.24
Machine Folding				0.02
Binding wire comb				 3.60 3.20
Covers custom blank				 0.15 0.03
Tabs (white)				0.20
Mailing/Processing				UPS or USPS rates

(1) prices include operator time
(2) prices denote single-sided printing
(3) standard stock, white paper used for pricing

Prices are subject to change and may not be accompanied by immediate notification.

To: The Board of Directors

From: Phil Belfiori, Administrator

Date: February 24, 2021

Re: VI. A. 3. City of White Bear Lake 2021-2030 Local Water Management Plan

The local water plan update for White Bear Lake have been received and reviewed by VLAWMO staff. VLAWMO staff had a review meeting with the City Water Resources Engineer on Feb. 9, 2021 and the subsequent Local Water Management Plan (as included in link below) has now been revised per the preliminary plan review comments provided by VLAWMO staff. A copy of the revised plan along with response to comments can be found on the VLAWMO website. https://www.vlawmo.org/news/white-bear-lake-surface-water-management-plan-review-period/

Attached:

Page 1 and 2 of response to comments table from the City.

Recommendation: Staff recommends the Board approve with non-material changes the White Bear Lake Local Water Management Plan as consistent with the VLAWMO Water Management Plan and meeting state requirements. **Res. 2021-01**

SWMP Section	Topic	Comment	Response
Metropolitan Council Comments			
1.1	MS4 Permit	According to section 1.1, “this SWMP serves to further define the goals of the City’s NPDES MS4 Permit and associated Stormwater Pollution Prevention Program (SWPPP) by merging these similar yet separate programs into one document.” The MPCA re-issued the MS4 General Permit in November, 2020. The city’s SWPPP and this plan should be reviewed to determine is any changes are needed to meet the conditions of the reissued permit.	Revised. Chapter 4, Chapter 5, and the implementation table (previously Table 24, now Table 26) have been revised to meet the conditions of the reissued MS4 General Permit.
5.2.6	Regulatory Program	Regulatory program states that the city has adopted engineering design standards for stormwater management. These standards (or a summary of them) should be included in the plan.	Revised. A web link to the City's municipal code and Engineering Design Standards for Stormwater Management document was added to section 5.2.6.
5.4	Implementation	Table 24 includes actions corresponding to the objectives identified in Chapter 4. (Issues, Goals, and Objectives). According to the plan, the table is a comprehensive list of implementation activities that may or may not be budgeted, depending on available funding. This table provides a good foundation for plan implementation, but Minnesota Rules Chapter 8410 requires a capital improvement program in local water plans that extends through the term of the plan. The city’s larger comprehensive plan update includes a 5-year (2019-2023) Capital Improvement Program (CIP). This CIP includes projects listed under the heading “Surface Water Fund.” The city should consider adding these projects, and the highest priority implementation actions for the subsequent five years, to the plan to form the CIP required for this SWMP. We realize it may be difficult or unrealistic to plan so far in advance, but technically this is what is required by the Rule. High priority projects included in the CIP, even if funding has not been approved or identified for them, likely have a better chance of being implemented if additional funds become available at some point.	Revised. A capital improvement plan table (Table 27) was added to Chapter 5, section 5.4. The CIP in the Comprehensive Plan will be replaced with the latest CIP that includes the Surface Water Fund items in Table 27.
VLAWMO Comments			
2.3.4	Intercommunity Flows	Table 2: Discharge Rates to Neighboring Communities: would data from VLAWMO’s automated samplers along Lambert Creek be useful in updating missing data in this table? https://monitormywatershed.org/browse/	The automated samplers do not appear to tie storm events (2-, 10-, and 100-yr events) to flows; therefore, missing data in Table 2 is not able to be updated at this time.
5.2.2	Lake, Stream, and Wetland Management	High quality lakes are specified, and Goose Lake is specified under impaired waters, but could also be accompanied with the phrase of "identified problem area" to match the category of identifying problem areas outlined in the MN statute.	Revised. The first paragraph in Chapter 4 has been revised to be consistent with the language in MN Rule Part 8410.0160.
5.2.6	Regulatory Program	The City’s stormwater ordinance and corresponding Engineering Design Standards for Stormwater Management, adopted in 2015, regulate erosion control and stormwater management for land disturbing activities. The City’s design standards define requirements for: VLAWMO updated our water management policy in 2016 and was adopted by each of our cities and township, because VLAWMO is not a permitting agency, are the Cities Stormwater rules and adopted official controls consistent with the VLAWMO 2016 update?	Revised to include WMO plans. Language was also included in section 3.2.4, objectives 6.1 and 6.2 in Table 20 (Chapter 5) and Table 26.
4.1.3	Stormwater Runoff Management Past Projects	For the public works building green roof, VLAWMO contributed grant funds in partnership with WBL for this project, in addition to the funding that is listed.	Revised. Language has been added to include the VLAWMO grant.
4.7.1	Pollution Prevention, Operations, and Maintenance Polices, Goals, and Objectives	Table 19: Concerning Central Middle School maintenance, VAC truck cleaning is a foundational part of the ongoing maintenance and would be a welcome addition in this part of the table.	Revised. Language has been added to clarify that the City's maintenance role is to maintain the sumps and underground pipe using the vac truck.
Chapter 5	Implementation	As related to the Birch Lake subwatershed, consider including additional funding to pursue subwatershed raingarden projects or other stormwater runoff projects to proactively protect Birch Lake in partnership with VLAWMO. This could be including (but not limited to) partnership with VLAWMO's Cost share program and /or exploring a possible partnership with Ramsey County and VLAWMO related to the proposed Otter Lake Road project.	Revised. Added objective 2.13 "Birch Lake subwatershed retrofit projects" has been added to Table 15 (Chapter 4) and Table 26 (Chapter 5)
Chapter 5	Implementation	As related to the Ditch 13 subwatershed, consider partnership to investigate the feasibility of retrofitting the Whitaker Park wetland stormwater treatment facility.	Revised. Objective 2.9 "Partner with VLAWMO to investigate the feasibility of retrofitting the Whitaker Park wetland stormwater treatment facility" has been added to Table 15 (Chapter 4) and Table 26 (Chapter 5)

SWMP Section	Topic	Comment	Response
Chapter 5	Implementation	As related to the Goose Lake Subwatershed, the City and VLAWMO are currently partnering on implementation of East Goose Lake ALM stakeholder engagement and planning activities. Depending on timing for completion and consideration of the ALM engagement and planning work, the City may wish to consider additional "placeholder" funding for item 2.2 in table "Collaborate with VLAWMO on the implementation of adaptive lake management programs and projects". This additional funding could be considered a "placeholder" until the completion and Council consideration of the East Goose ALM engagement and planning phase. As was presented to the Council in Oct. 2020, the rough draft 3-5 year estimated range of costs for possible City partnership for implementation of the four ALM management category is $207,000 - $355,000 (which does not assume partnership on fish management).	Revised. See objective 2.1 and 2.2, Table 15 (Chapter 4) and Table 26 (Chapter 5)
4.2.1	Impaired waters	Table 10. Gem Lake was delisted; this could be updated in the impaired waters table (Note it is updated in Table 11)	Revised. A footer was added to Table 10 noting that Gem Lake was delisted in 2018.
2.7.1	Lakes and Wetlands	VLAWMO data shows Birch Lake with a max depth = 7.4 ft, surface area = 125 acres, and subcatchment area = 647 acres. VLAWMO data for East Goose shows East Goose as 120 acres (surface area) and West Goose as 25 acres (surface area). If this information is updated in the final version of the plan, it should also be updated in Table 5 on p. 31.	Revised
2.8.2	Rare Plants and Animals	Table 7: Additional species reported in WBL include: Mussels: Pyganodon grandis, Lampsilis siliquoidea, Pyganodon lacustris; and a Caddisfly: Limnephilus secludens	Revised.
4.3.2	Natural Resources Management and Recreation - Polices, Goals, and Objectives	Table 15: Upland habitat restoration projects with potential could include Rotary Park Nature Preserve on Birch Lake. Amur maple and Honeysuckle control could be added, and maintenance of previous prairie species would improve existing habitat. (Maintenance plan included in section 3.11)	Revised. Added Rotary Nature Preserve to objective 3.5 in Table 17 (Chapter 4) and Table 26 (Chapter 5)
4.3.2	Natural Resources Management and Recreation - Polices, Goals, and Objectives	Table 15: Consider adding ongoing support for invasive species removal maintenance with VLAWMO at 4th and Otter.	Revised - added objective 3.10 and 3.17 in Table 17 (Chapter 4) and Table 26 (Chapter 5)
Chapter 4	Public Education	Table 17: A component of the new November, 2020 permit that isn't apparent in the draft WBL water plan is "consideration should be given to low-income residents, people of color, and nonnative English speaking residents." The MPCA provides an environmental justice resource for helping to identify these areas. Documents to help review new permit guidelines are available through VLAWMO or MPCA.	Revised. Language was added to objective 5.1 in Table 19 and Table 26.

Resolution 2021-01

Of the Vadnais Lake Area Water Management Organization (VLAWMO

Consideration of the White Bear Lake Local Water Management Plan

Resolution 2021-01 was moved by Director _____ and seconded by Director _____:

Whereas, the VLAWMO is charged the responsibility of reviewing local water plans as identified in Minnesota Statute, Ch. 103B.235, Subd. 3, and

Whereas, the Board of the Vadnais Lake Area Water Management Organization has considered the updated White Bear Lake Local Water Management Plan (WBL LWMP) available on the VLAWMO website, and

Whereas, the VLAWMO review has found the updated WBL LWMP to be consistent with the VLAWMO Water Management Plan,

Therefore be it resolved that the White Bear Lake Local Water Management Plan, dated February 16, 2021 is approved with non-material changes for consistency with the VLAWMO Comprehensive Local Water Management Plan by the Vadnais Lake Area Water Management Organization Board of Directors.

The question was on the adoption of the resolution and there were __ yeas and __ nays as follows:

	Yea	Nay	Absent
Dan Jones	☐	☐	☐
Ed Prudhon	☐	☐	☐
Rob Rafferty	☐	☐	☐
Tom Watson	☐	☐	☐
Patricia Youker	☐	☐	☐
Jim Lindner	☐	☐	☐

_____ Board Chair Date

_____ Attest Date

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

Date: February 24, 2021

Re: **VI. B. 1. Birch Lake Animal Hospital Buffer Variance Request**

VI. B. 1. Birch Lake Animal Hospital Buffer Variance Request

Birch Lake Animal Hospital in the City of White Bear Lake is requesting a wetland buffer variance to expand their parking lot to better suit their clients and reduce the amount of on-street parking. They are requesting to add 6 additional stalls and relocate the trash/recycling enclosure. The City of White Bear Lake has reviewed and accepted the additional stalls pending the buffer variance decision from the watershed.

As part of the parking stall addition, the client is adding an infiltration basin in the front of their building to capture runoff to reduce overall drainage to the wetland.

The wetland on site is a Manage 2 wetland. Buffer setback for a Manage 2 wetland is 30ft with minimum of 24ft. A delineation was approved on 10/12/2020 identifying the wetland boundary. A retaining wall is proposed just outside of the wetland line to reduce grading issues. Trash and recycling enclosure will be approximately 5ft off of wetland line. Dashed lines on plan indicate 30Ft and 24Ft setbacks from wetland line.

Staff & TEC recommend approval of wetland buffer variance request for the parking stall addition contingent on installation of infiltration basin, a native buffer planting and buffer monument, and an O&M agreement through the City of White Bear Lake for the project BMP and native buffer Res. 2021-02.

Attached:

- Plan sheets
- Birch Lake Animal Hospital Variance Request Q&A

Birch Lake Animal Hospital Variance Request Q&A

- I will need any of the documents of approval that you have from White Bear Lake for this project. Is there a required maintenance agreement for the infiltration basin? Who is responsible for the maintenance? Is the City aware of the proposed retaining wall and does it meet their specifications?

The owner has received Approval for the project from the city of White Bear Lake contingent on Watershed Approval. The owner shall be taking care of the maintenance of the infiltration basin, but the city has not specified a maintenance agreement. Per the plans the owner shall maintain and replace any plantings through the first 2 years of the establishment period. The city is aware of the addition of the wall, and because the wall is under 4' tall, no permit is required.

- what is the square ft of the proposed parking lot addition?

The proposed parking lot is an additional 1725sf

- What is the square ft of the infiltration basin?

The proposed Infiltration basin is 1024sf. The holding capacity is 575 cubic feet.

- How much runoff is the addition generating and how much runoff is the infiltration basin collecting for storm events?

The additional added impervious to the site is 2260sf and the, and the amount of impervious being captured from the roof drains is 2300sf.

- Runoff from the lot addition will not be draining east to the wetland correct?

This is correct, the additional impervious pavement is draining west to mimic the rest of the existing pavement.

- Is there a way to add a drain to the parking lot to direct some of the parking lot runoff to White Bear Pkwy into the infiltration basin?

The existing drainage pattern for the parking lot drains from the building to the center of the drive isle. There would not be enough slope to capture the water from the drive lane back to the infiltration basin. Also the bottom of the basin is at the same elevation as the bottom of curb on the north side of the parking lot.

- How tall is the proposed retaining wall?

The proposed wall will be a maximum of 4' tall. If the wall is over 4' tall the city of White Bear requires a permit and engineered drawings.

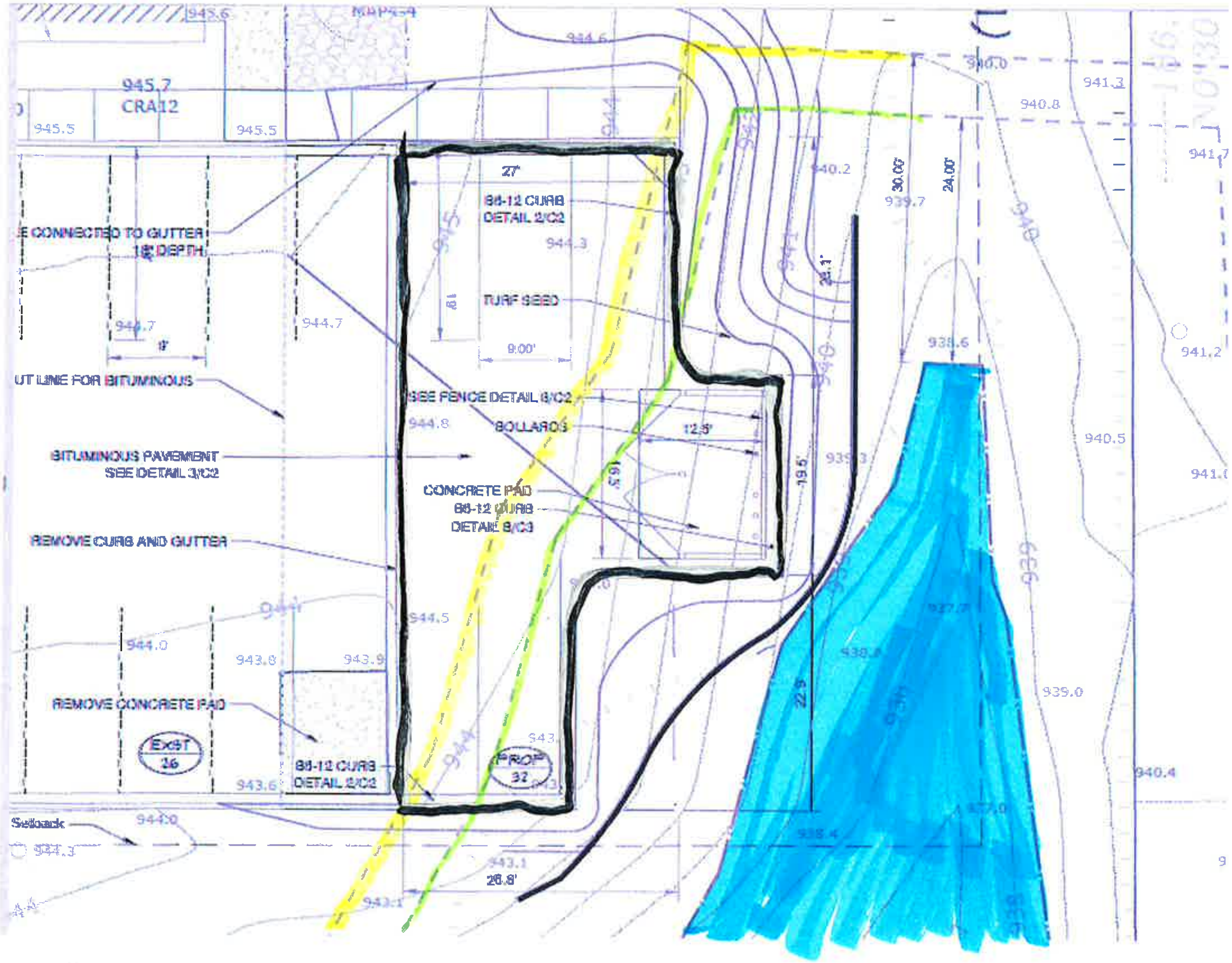
- Where is the current on street parking you mentioned in your memo that has initiated the parking lot expansion?

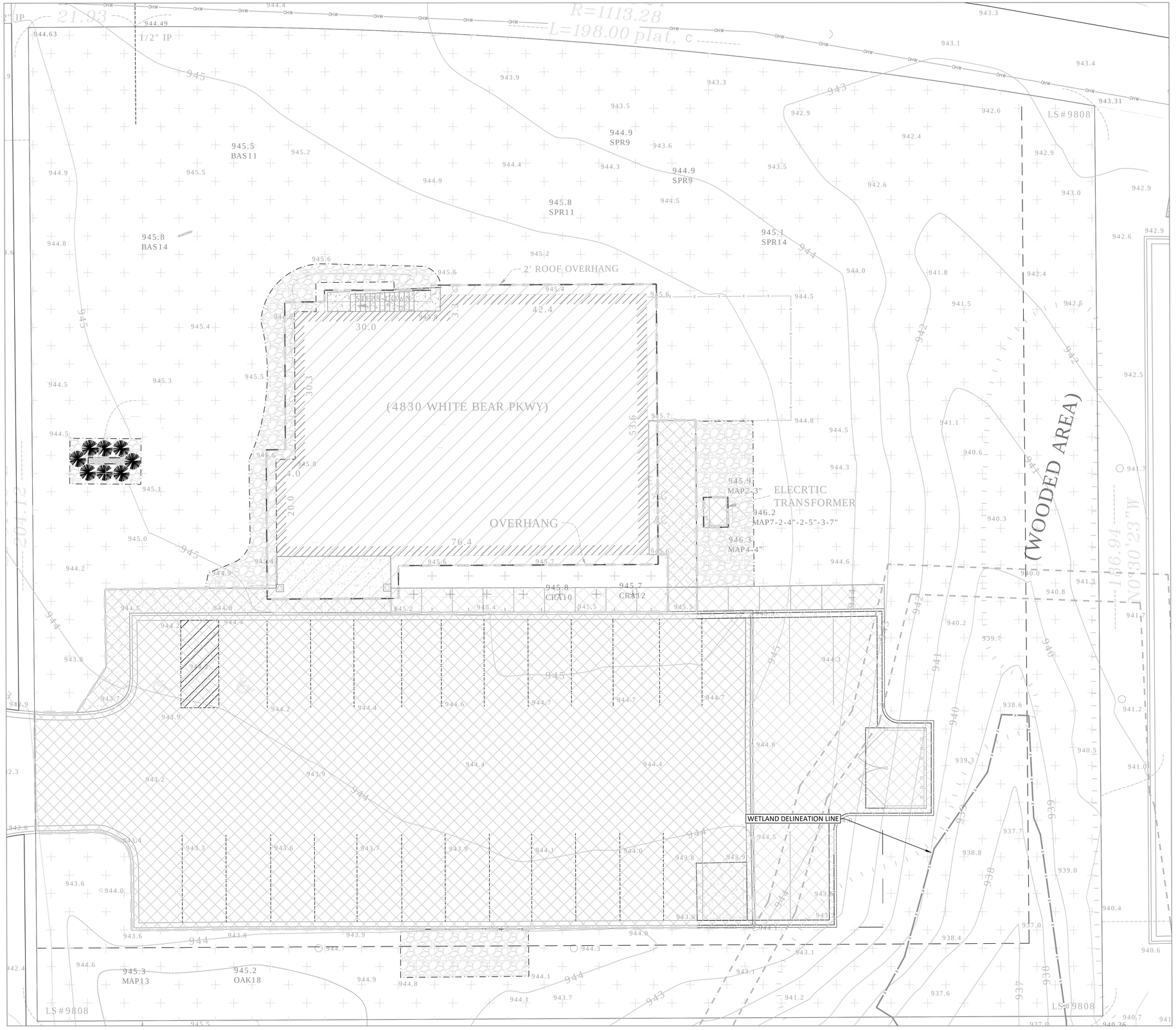
I believe that customers currently utilize on-street parking even though Birch Lake Boulevard and White Bear Parkway are not designed or intended for on-street parking.

- more clear plans showing distance of retaining wall from wetland edge, Show drainage directions. Show 30ft buffer line and 24ft buffer line. Show lot drainage to infiltration basin if that option is possible. Use multiple plan sheets showing this information so it is clear and easy to read when presented to the TEC & Board.

Please see the updated Site Plan C2, and Grading Plan C3

The parking lot expansion at Birch Lake Animal Hospital has gone through the city approval process and was deemed a viable addition in the eyes of the city. The only item the city was concerned about was if the lowland adjacent to the proposed parking lot was a wet area. We Had an environmental professional review the site and he did find wetland characteristics to the area. We believe this project will not affect the low area in a negative way and ultimately reduce the area currently flowing toward the east. With the proposed infiltration basin we feel the we are being good neighbors to the area by creating an area that is both aesthetically pleasing and functional.


945.7
CRA12
CONNECTED TO GUTTER
18" DEPTH
UT LINE FOR BITUMINOUS
BITUMINOUS PAVEMENT
SEE DETAIL 3/C2
REMOVE CURB AND GUTTER
REMOVE CONCRETE PAD
B6-12 CURB
DETAIL 2/C2
TURF SEED
SEE FENCE DETAIL 6/C2
BOLLARDS
CONCRETE PAD
B6-12 CURB
DETAIL 8/C3
EXIST
26
PROP
32
Setback
27'
9.00'
12.5'
19.5'
22.5'
26.8'
30.00'
24.00'



EXISTING CONDITIONS

EXISTING IMPERVIOUS SURFACE CALCULATIONS

TOTAL LOT AREA (ABOVE OHWL) .....43,561 S.F.

EXISTING BUILDING ..... 4,626 S.F.
EXISTING PARKING/WALK .....9,465 S.F.
EXISTING SIGN .....9 S.F.
EXISTING ELECTRIC PAD.....31 S.F.
TOTAL IMPERVIOUS SURFACE ..... 14,131 S.F.
PERCENT IMPERVIOUS 32.4%

PROPOSED SITE PLAN

PROPOSED IMPERVIOUS SURFACE CALCULATIONS

TOTAL LOT AREA (ABOVE OHWL) .....43,561 S.F.

EXISTING BUILDING..... 4,626 S.F.
PROPOSED PARKING/WALK .....11,900 S.F.
EXISTING SIGN .....9 S.F.
EXISTING ELECTRIC PAD.....31 S.F.
TOTAL IMPERVIOUS SURFACE ..... 16,566 S.F.
PERCENT IMPERVIOUS 38.0%

SF OF IMPERVIOUS OVER 30%..... 3484sf

NORTH

GRAPHIC SCALE
10 0 5 10 20
1 INCH = 10 FEET

BUILDING/SIGN IMPERVIOUS SURFACE

PARKING IMPERVIOUS SURFACE

PERVIOUS SURFACE

PARKING CALCULATIONS

BUILDING FINISHED FLOOR..... 3,728 S.F.
1 STALL PER 200SF OF FINISHED FLOOR AREA
3,728 / 200 = 18.64 .....19 STALLS
1 ACCESSIBLE STALL PER 25 STALLS

DreamScapes
Landscaping & Design, Inc.
7087 20th Ave S.
Centerville, MN 55038
651.451.1000
www.DreamScapesMN.com

I hereby certify that this plan or report was prepared by me or under my direct supervision and that I am a duly licensed landscape architect under the laws of the State of Minnesota.
James A. Kalkes, RLA ASLA
Date: 04/08/2020 License No. 45071

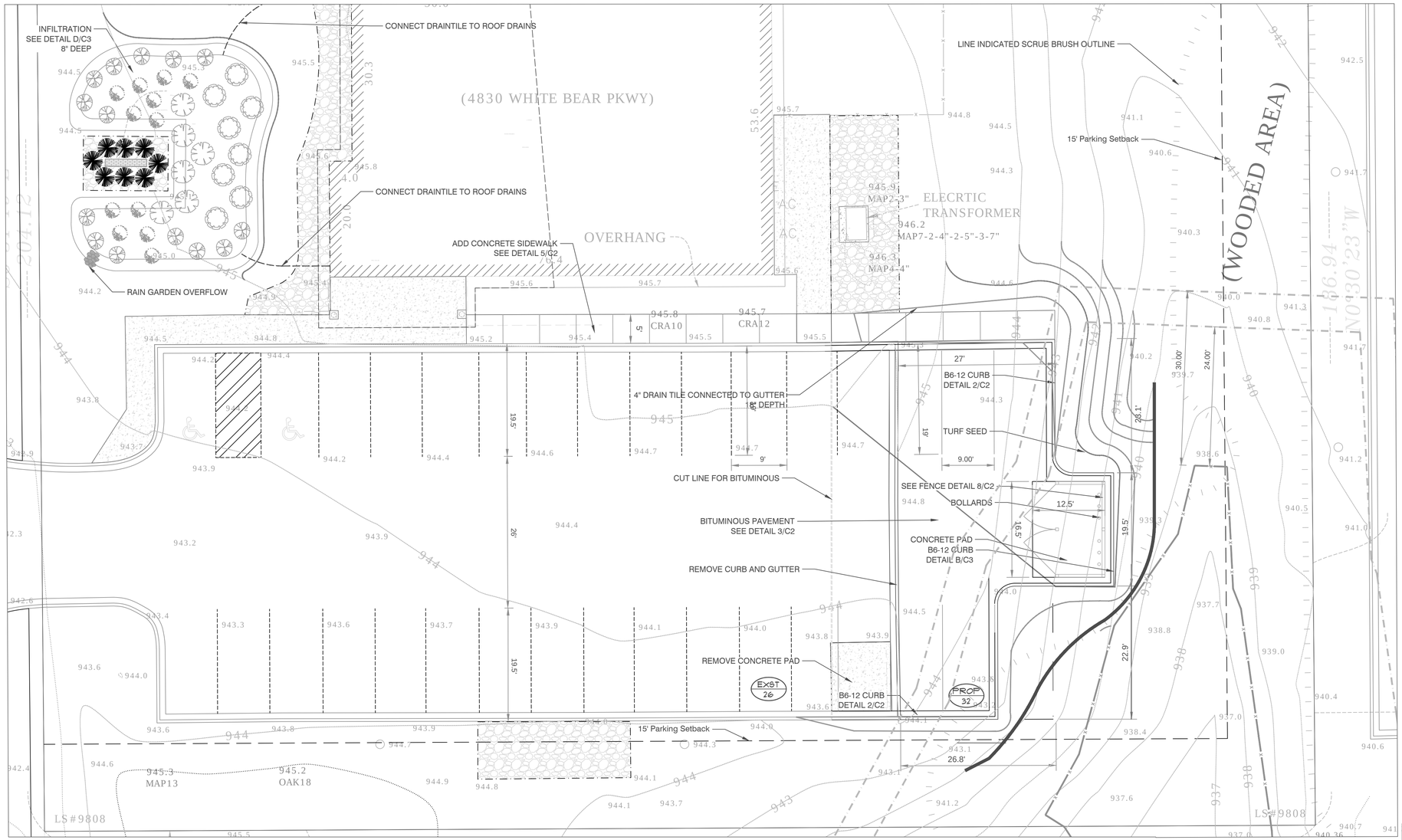
BIRCH LAKE ANIMAL HOSPITAL
4830 WHITE BEAR LAKE PKWY
WHITE BEAR LAKE, MN 55110

NO.	DATE	DESCRIPTION	BY
1	04/08/20	PARKING LOT EXPANSION	JAK
2	05/12/20	CITY SUBMITTAL	JAK
3	06/18/20	CITY COMMENTS	JAK
4	07/15/20	CITY COMMENTS	JAK
5			
6			
7			

DRAWN BY: JAK
CHECK BY: JAK
FIELD CREW: Rude & Sons
JOB NO: 20-0011
DATE: 04/03/20

EXISTING / PROPOSED IMPERVIOUS

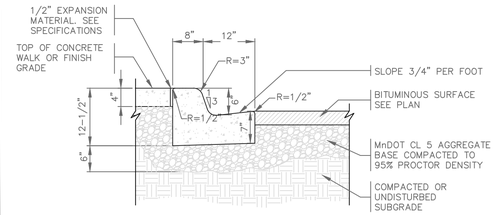
C1



1 C2 BIRCH LAKE ANIMAL HOSPITAL - SITE PLAN

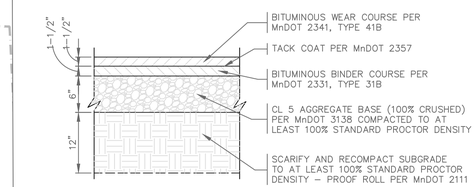
0 10 20 30
SCALE 1" = 10'

NORTH

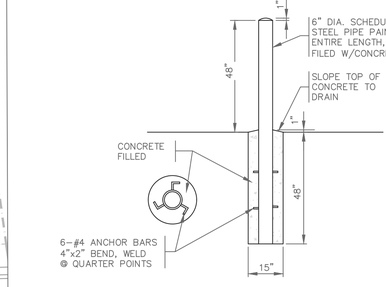


NOTE:
DIRECTION OF TRANSVERSE GUTTER SLOPE TO MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE.

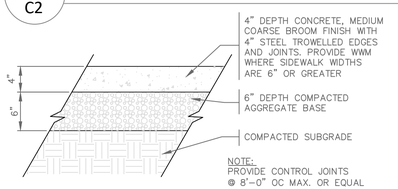
2 C2 CONCRETE CURB AND GUTTER
B6-12 TYPE CURB



3 C2 BITUMINOUS PAVEMENT
MEDIUM DUTY

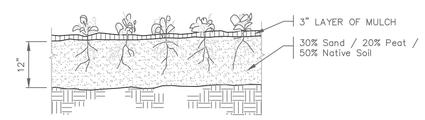


4 C2 STEEL BOLLARD



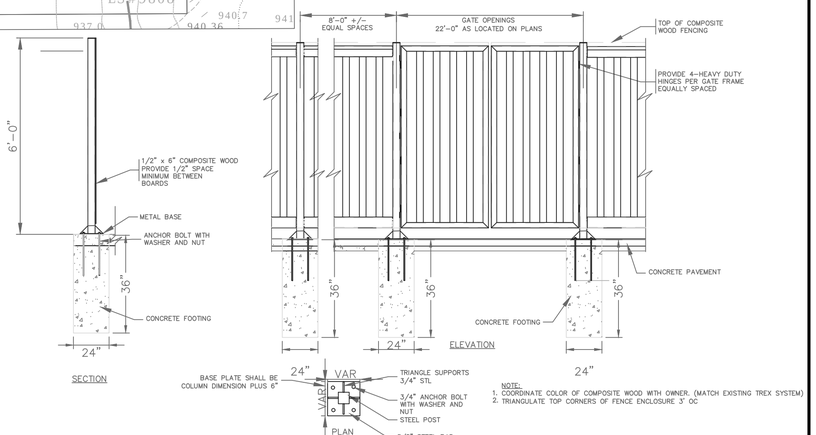
NOTE:
PROVIDE CONTROL JOINTS @ 8'-0" OC MAX. OR EQUAL TO SIDEWALK WIDTH (TYP)

5 C2 CONCRETE SIDEWALK



6 C2 INFILTRATION

7 C2 WASTE ENCLOSURE TO MATCH EXISTING FENCE
ON-SITE FENCE (TREX FENCE)



NOTE:
1. COORDINATE COLOR OF COMPOSITE WOOD WITH OWNER. (MATCH EXISTING TREX SYSTEM)
2. TRIANGULATE TOP CORNERS OF FENCE ENCLOSURE 3' OC

8 C2 WASTE ENCLOSURE DETAIL
MATCH FENCE AT DOG RUN
S-0010a

DreamScapes
Landscaping & Design, Inc.
7087 20th Ave S.
Centerville, MN 55038
651.451.1000
www.DreamScapesMN.com

GOODMANSON CONSTRUCTION SINCE 1971
www.GoodmansonConstruction.com

I hereby certify that this plan or report was prepared by me or under my direct supervision and that I am a duly licensed Landscape Architect under the laws of the State of Minnesota.

James A. Kalkes

James A. Kalkes, RLA ASLA
Date: 04/08/2020 License No. 45071

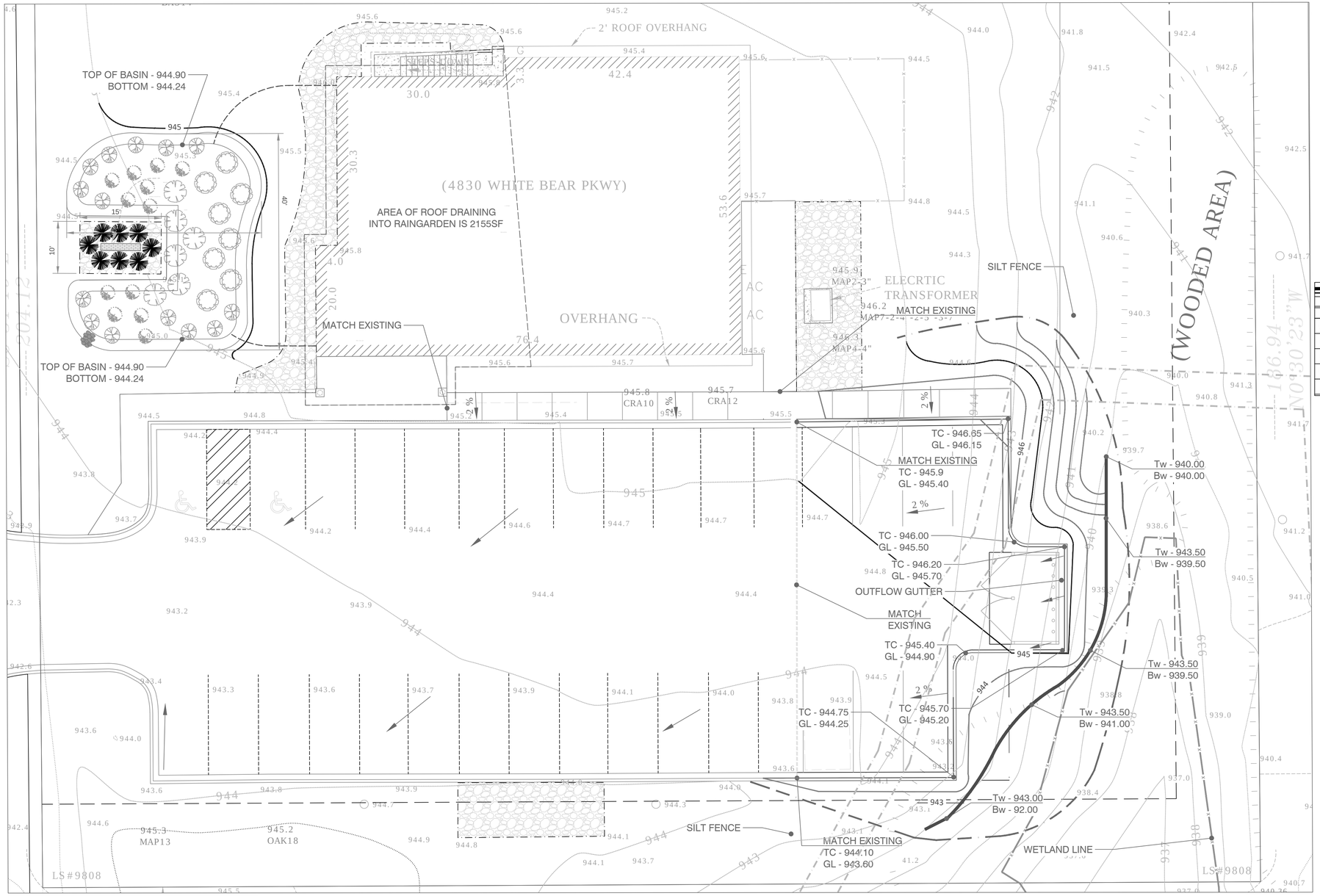
BIRCH LAKE ANIMAL HOSPITAL
43830 WHITE BEAR LAKE PKWY
WHITE BEAR LAKE, MN 55110

NO.	DATE	DESCRIPTION	BY
1	04/08/20	PARKING LOT EXPANSION	JAK
2	05/12/20	CITY SUBMITTAL	JAK
3	06/10/20	CITY COMMENTS	JAK
4	07/13/20	CITY COMMENTS	JAK
5			
6			
7			

DRAWN BY: JAK
CHECK BY: JAK
JOB NO: 20-0011
FIELD CREW: Rude & Sons
DATE: 04/03/20

DEMOLITION / LAYOUT

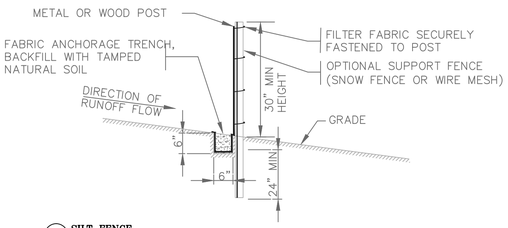
C2



1 C3 BIRCH LAKE ANIMAL HOSPITAL - GRADING PLAN

SCALE 1" = 10'

NORTH



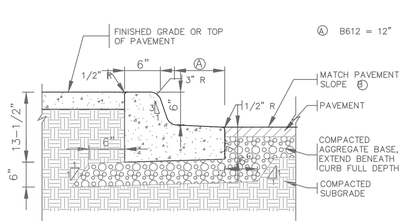
A SILT FENCE
NOT TO SCALE

LANDSCAPE LEGEND

KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	QTY.	INSTALL HEIGHT	MATURE HEIGHT
	SHRUBS						
DBW	Salix purpurea 'Nana'	DWARF BLUE ARCTIC WILLOW	#5	CONT.	6	1'	3'x4'
RTD	Cornus Sericea 'Bailey'	RED TWIG DOGWOOD	#5	CONT.	8	1.5'	5'x5'
BCB	Aronica melonocarpa elata	BLACK CHOKEBERRY	#5	CONT.	5	1.5'	4'X4'
JDW	Ilex verticillata 'Jim Dandy'	JIM DANDY WINTERBERRY	#5	CONT.	14	1.5'	3'X3'
RSW	Ilex verticillata 'Red Sprite'	RED SPRITE WINTERBERRY	#5	CONT.	12	1.5'	3'X3'

SOD / SEED MIX LEGEND

SYM.	TYPE	SEED MIX
	NATIVE WET PRAIRIE	MN SEED MIX ***34-271*** (OLD BWSR W2)
	COMMERCIAL TURF - SOD	HIGHLAND SOD



NOTE:

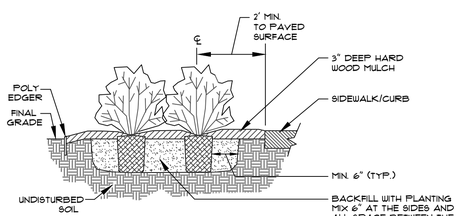
B DIRECTION OF TRANSVERSE AND LATERAL GUTTER SLOPE TO MATCH ADJACENT PAVEMENT SLOPE.

PROVIDE EXPANSION JOINTS @ 30'OC MAX.

PROVIDE CONTRACTION JOINTS @ 10'OC OR MATCH ADJACENT WALK.

ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.

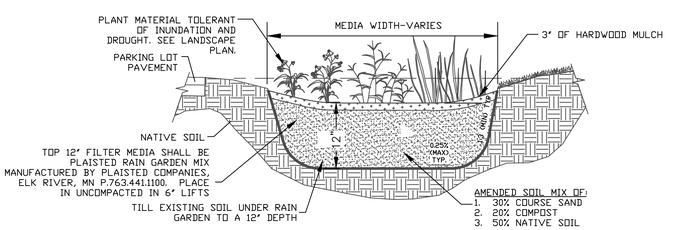
B DESIGN "B6-12" CURB W/OUTFALL GUTTER
NOT TO SCALE



C SHRUB & CONTAINER PLANTING DETAIL
NOT TO SCALE

Raingarden Calculation

- Maximum depth for rain garden is 8"
- The surface area required to meet requirements ---------- 958sf
- The surface area provided to meet requirements ---------- 964sf
- 3,484 x (1.1/12) x 2 = 638 CF @ 8" Depth
- Soil is in the Hydrolic Soil Group "B" - Hayden Fine Sandy Loam



*** THE BOTTOM OF THE RAINGARDEN SHALL BE GRADED FLAT AT AN ELEVATION OF 942.33

*** PROTECT THE RAINGARDEN FROM COMPACTION. IF COMPACTION OCCURS, THE INFILTRATION AREA SHALL BE UNCOMPACTED TO A DEPTH NECESSARY TO ALIVE THE COMPACTION

D INFILTRATION BASIN DETAIL
NOT TO SCALE

DreamScapes
Landscaping & Design, Inc.
7087 20th Ave S.
Centerville, MN 55038
651.451.1000
www.DreamScapesMN.com

I hereby certify that this plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

James A. Kalkes
James A. Kalkes, RLA #ASLA
Date: 04/08/2020 License No. 45071

BIRCH LAKE ANIMAL HOSPITAL
4830 WHITE BEAR LAKE PKWY
WHITE BEAR LAKE, MN 55110

NO.	DATE	DESCRIPTION	BY
1	04/08/20	PARKING LOT EXPANSION	JAK
2	05/12/20	CITY SUBMITTAL	JAK
3	06/18/20	CITY COMMENTS	JAK
4	07/15/20	CITY COMMENTS	JAK
5			
6			
7			

DRAWN BY: JAK
CHECK BY: JAK
FIELD CREW: Rods & Scott
JOB NO: 20-0011
DATE: 04/03/20

GRADING PLAN

C3

Resolution 2021-02
Of the Vadnais Lake Area Water Management Organization (VLAWMO)
Buffer Variance Birch Lake Animal Hospital

Resolution 2021-02 was moved by Director _____ and seconded by Director _____:

Whereas, the Board of the Vadnais Lake Area Water Management Organization has considered the buffer variance request for the Birch Lake Animal Hospital as presented by VLAWMO staff. The variance request and documents are attached to this Resolution, and

Whereas, Birch Lake Animal Hospital would like to expand their parking to better suit their clients and reduce the amount of on-street parking. They are requesting to add 6 additional parking stalls and relocate their trash / recycling enclosure. A portion of the parking stalls and the trash/recycling enclosure will be within the 30ft wetland buffer required by VLAWMO. The city of White Bear Lake has reviewed and accepted the additional stalls pending a site wetland analysis. A Manage 2 wetland is adjacent to the proposed parking. Buffer impact has been reduced by adding a retaining wall, and

Whereas, Per the City's and VLAWMO's request an infiltration BMP will be added in the front of the building that will capture runoff reducing the overall drainage to the manage 2 wetland, a buffer monument and native buffer planting are required, an O&M agreement will be required through the City of White Bear Lake for the project BMP and native buffer, and

Therefore be it resolved that the Buffer Variance for Birch Lake Animal Hospital, dated 2-24-2021 is approved.

The question was on the adoption of the resolution and there were __ yeas and __ nays as follows:

	Yea	Nay	Absent
Dan Jones	☐	☐	☐
Ed Prudhon	☐	☐	☐
Rob Rafferty	☐	☐	☐
Tom Watson	☐	☐	☐
Patricia Youker	☐	☐	☐
Jim Lindner	☐	☐	☐

_____ Board Chair Date

_____ Attest Date

To: The Board of Directors

From: Brian Corcoran

Date: February 24, 2021

Re: VI. B. 2. Island Field Replacement Plan Consideration

North Oaks Company is proposing a 21.94-acre multi-family residential development that will include two buildings of condominiums known as Island Field. The project will include a street and utilities. The site does not include any existing structures. Stormwater management practices will provide treatment of runoff before discharge to wetlands after development.

Island Field will require 0.1757 acre of permanent impact to one wetland. The need for a safe, efficient and functional site access street consistent with land use guidance and accepted engineering practices renders proposed wetland impacts unavoidable. The project has been designed to minimize wetland impacts to the extent practicable and includes construction practices to reduce or eliminate secondary wetland impacts. Permanent wetland impacts will be replaced by withdrawing 0.3514 acre of wetland credit from the North Oaks Company wetland bank, Account #170. This wetland bank is owned by the Applicant and located within the same County, Major Watershed, and Bank Service Area as the wetland impact.

Some areas of buffer will be disturbed with project grading activities. A 5 year disturbed buffer plan has been submitted.

Staff & TEC recommends approval of the Island Field Replacement Plan of proposed impacts of 0.1757 acre of permanent wetland impact and replacement at 2:1 via wetland bank credits at 0.3514 acres

Attached:

Replacement Plan Addendum & Disturbed Buffer Plan

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Providing Sound, Balanced, Comprehensive Natural Resource Solutions

Memorandum

Date: January 26, 2021

To: Brian Corcoran, VLAWMO
Eric White, U.S. Army Corps of Engineers (USACE)

From: Melissa Barrett, Kjolhaug Environmental Services Company (KES)

CC: Gary Eagles, North Oaks Company
Eric Johnson, Sathre-Berquist

Re: Replacement Plan Addendum & Disturbed Buffer Plan
Island Field Project, North Oaks, MN
KES#2020-198; MVP-2018-03631

This memo provides information regarding revised wetland impacts and the revised replacement plan for the Island Field project. This memo also provides a seeding and management plan for buffers areas disturbed with construction.

Wetland Impact

The originally submitted wetland permit application proposed a total of 6,296 sf (0.1445-ac) of impact to Wetland 1 (**Figure 1**) for the site access roadway.

In discussions with the project engineers, it was determined that due to poor soil conditions where the roadway and underlying utilities are to be installed, wider roadway side slopes (15-foot along each side) will be needed to provide a stable base for the proposed roadway materials.

With the revised plan (**Figure 2**), fill has been minimized to the extent possible by creating 3:1 side slopes along the edge of wetland fill while still meeting engineering needs of 15-ft wide roadway shoulders. Revised proposed wetland fill totals 7,655 sf (0.1757-ac) requiring 0.3514 acres/credits of mitigation.

Revised Mitigation Plan and Supplemental Information

The primary comment from the TEP regarding the originally submitted replacement plan application was to provide information regarding wetland hydrology post-development for the wetland area that was to be restored (**Wetland 1a – Figure 1**). This information is included in **Attachment A**. In summary, post-development HWLs do not change significantly from pre-

project HWLs; therefore, no changes to wetland hydrology are expected with the proposed development (no secondary/indirect impacts will occur).

However, these numbers do not indicate that wetland hydrology could be significantly increased (restored), even with the implementation of a ditch plug/berm as previously proposed. Therefore, to meet mitigation obligations the applicant proposes to replace wetland impacts via the debiting of 0.3514 credits from the North Oaks Wetland Bank (#170) located in the same major watershed and Bank Service Area (BSA7) as the proposed project.

Table 1. Wetland Bank and Credit Summary – Island Field

Bank #	County & Major Watershed	BSA	Credit Subgroup	Credit Type	Credit Amount
170	Ramsey & 20	7	B	Type 4	0.3514
Total					**0.3514**

Disturbed Buffer Plan

Some areas of wetland buffer will be disturbed with project grading activities. Disturbed buffer areas are illustrated on **Figure 2**, and details regarding seeding and management of disturbed buffer areas are included in **Attachment B**.

Requested Approval

Attachment C of this memo includes a revised Joint Application Form for Activities Affecting Water Resources in Minnesota, which is includes the revised wetland impact amount and wetland banking details.

This memo requests WCA wetland replacement plan approval from the VLAWMO, and approval under Nationwide Permit (NWP) 29 – Residential Development – from the U.S. Army Corps of Engineers (USACE).

Thank you.

Figure 1 - Existing Conditions

N

0 200 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MNGEO Spatial Commons

Island Field Project (KES 2020-198)
North Oaks, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

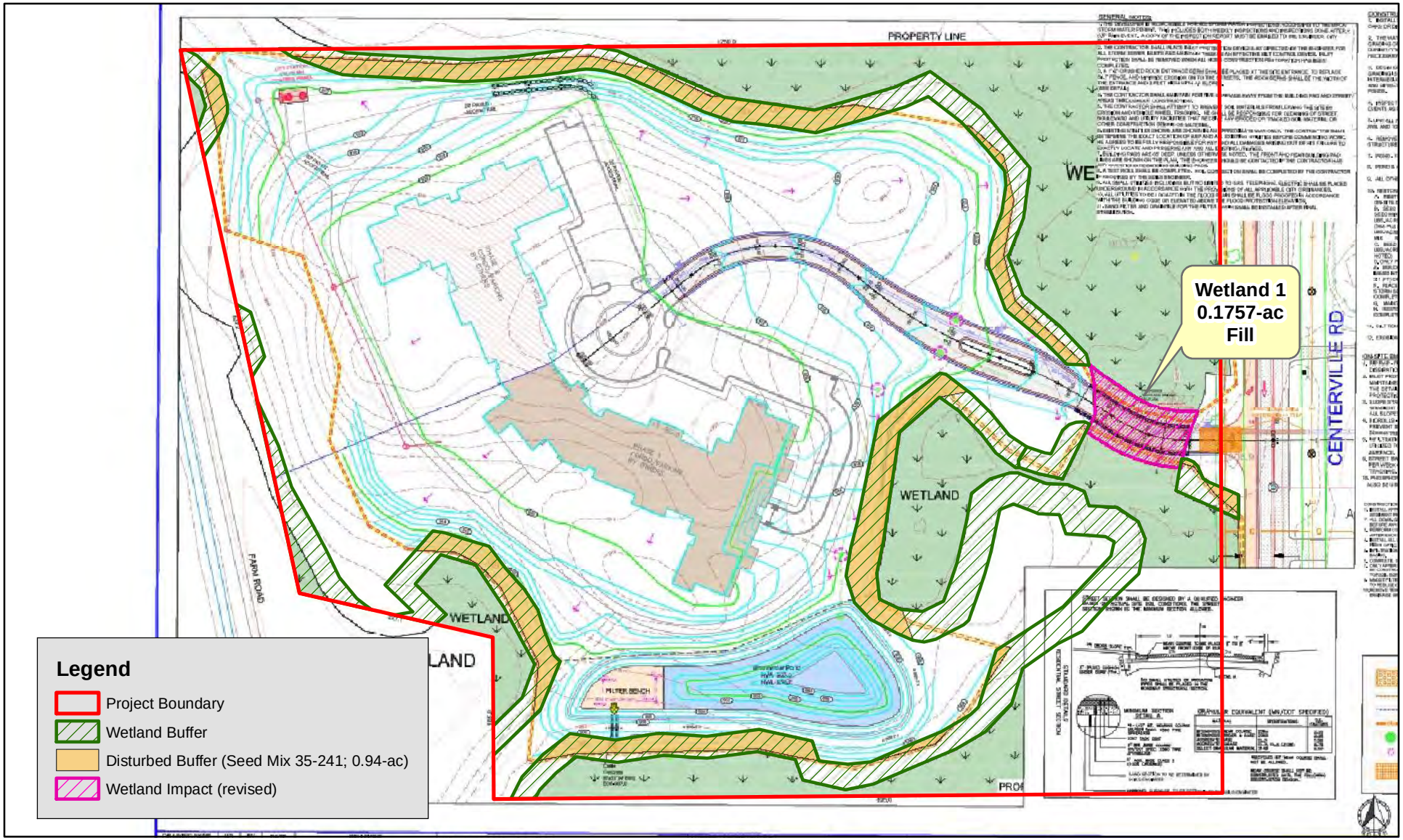


Figure 2 - Revised/Final Wetland Impact and Disturbed Buffer Areas

N

0 250 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MNGEO Spatial Commons

Island Field Project (KES 2020-198)
North Oaks, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Replacement Plan Addendum & Disturbed Buffer Plan
Island Field Project, North Oaks, MN

ATTACHMENT A

Wetland 1a - Hydraulic Review Summary Tables, Island Field, North Oaks

Table 1. 1-year Storm Event Comparison for Wetland

Scenario	NWL	HWL	Inflow rate (cfs)	Inflow Volume (af)
Existing	904.0	904.7	1.4	0.13
Proposed	904.0	904.5	1.6	0.10
Change	**0**	**-0.2**	**+0.2**	**-0.03**

Table 2. 2-year Storm Event Comparison for Wetland

Scenario	NWL	HWL	Inflow rate (cfs)	Inflow Volume (af)
Existing	904.0	904.8	1.9	0.18
Proposed	904.0	904.6	2.0	0.12
Change	**0**	**-0.2**	**+0.1**	**-0.06**

Table 3. 10-year Storm Event Comparison for Wetland

Scenario	NWL	HWL	Inflow rate (cfs)	Inflow Volume (af)
Existing	904.0	905.3	4.8	0.38
Proposed	904.0	904.9	3.6	0.21
Change	**0**	**-0.4**	**-1.2**	**-0.17**

Table 4. 100-year Storm Event Comparison for Wetland

Scenario	NWL	HWL	Inflow rate (cfs)	Inflow Volume (af)
Existing	904.0	905.7	13.9	1.00
Proposed	904.0	905.4	7.9	0.44
Change	**0**	**-0.3**	**-6.0**	**-0.66**

Replacement Plan Addendum & Disturbed Buffer Plan
Island Field Project, North Oaks, MN

ATTACHMENT B

Seeding & Vegetation Management/Maintenance for Island Field Disturbed Buffer Areas

Construction

1. Silt fence shall be installed prior to construction and maintained until viable cover has established. Silt fence shall be removed upon final acceptance by the engineer.
2. Silt fence that is initially installed above wetland areas for grading shall be moved and reinstalled at the limits of the buffer after buffer areas are graded (where applicable) and accepted. Any soil ridge left at the initial silt fence location shall be removed.
3. Contractor shall verify or confirm graded elevations within disturbed buffer areas prior to initiating seeding.
4. Excess excavated soil shall be disposed of outside of wetlands.

Seed Mixture Suppliers and Approval

1. Contractor shall submit seed tags or written certification of seed mix contents and suppliers for approval by the wetland consultant prior to installation.
2. Substitutions of seed mixes or seed mix components must be approved by the wetland consultant.

Seedbed Preparation

1. After completion of final grading, soils will be decompacted to a depth of 18 inches, and organic matter will be incorporated into soils.
2. Prior to seeding, the contractor shall kill and plow or disc vegetation that covers more than 20 percent of the ground in the area to be seeded.
3. Areas of existing vegetation that are not plowed or disced should be killed by spraying 2 quarts/acre of glyphosate herbicide and 1-2 quarts/acre of 2,4-D herbicide.
4. The seedbed shall be prepared by loosening topsoil to a minimum depth of 3 inches.
5. Seeding shall not be conducted between June 30 and October 15.

Seeding Methods

1. A map of disturbed buffer areas is attached.
2. Seed mixes shall be installed in accordance with the Minnesota Board of Water and Soil Resources Native Vegetation Establishment and Enhancement Guidelines (2016, http://www.bwsr.state.mn.us/native_vegetation/seeding_guidelines.pdf).
3. Seed mixes (http://www.bwsr.state.mn.us/native_vegetation/state_seed_mixes.pdf) shall be acquired from a reputable native seed supplier and the native seed supplier shall be subject to approval by the wetland consultant.
4. Seed mixes shall be installed at the rate intended for each particular mix, as listed in the seed mix tables provided in BWSR guidance.

5. Seed mix 35-241 (Mesic Prairie General) or similar may be broadcast or seeded with a native grass drill, seeded by hand or by use of a mechanical "cyclone" seeder, or hydroseeded.
6. All seeded areas shall be firmed with a rolling-type packer within two days after seeding. Packing will be considered adequate when only a slight footprint is left in the soil after walking across the area.
7. Seeded areas shall be mulched with MN/DOT Type 3 (MICA certified weed free grain straw) mulch at a rate of 2 tons per acre and the mulch shall be anchored with a disc or tackifier.

2. VEGETATION MANAGEMENT

Disturbed upland buffer areas will be seeded with seed mixes as specified (or similar) in this document. Disturbed buffer areas will be assessed during multiple annual monitoring site visits for the presence of noxious weeds and invasive species. If noxious weeds and/or invasive species are identified within the buffer areas, efforts will be made to control these species using appropriately timed herbicide applications or other methods. The following steps will be considered for treatment of invasive species during the five years after seeding, with the intention of developing plant communities with a predominance of non-invasive species.

Year 1 Maintenance

1. Where possible, the seeded buffer areas shall be mowed at a height of 4 to 6 inches a minimum of two times during the first growing season and before September 30.
2. Purple loosestrife shall be pulled by hand if it comprises less than 5% of cover, and spot sprayed with Rodeo herbicide during late August or September if it covers 5% or more.
3. Invasive species in the buffer shall be spot sprayed twice annually at times that are particularly effective given the problem species.
4. Stands of reed canary grass in buffer areas shall be treated with Rodeo or Roundup herbicide in late October and again early the following spring before desirable species emerge.
5. Herbicide treatments shall be applied according to label instructions.

Year 2 Maintenance

1. Areas of invasive species such as reed canary grass and thistles shall be treated with herbicide early in spring prior to the emergence of desirable species.
2. Where possible, the seeded buffer areas shall be mowed to a height of 6 to 8 inches between June 1 and July 15 to allow for light penetration to seeded species and prevent seed set on weedy species.
3. Purple loosestrife shall be pulled by hand if it comprises less than 5% of cover, and spot sprayed with Rodeo herbicide during late August or September if it covers 5% or more.

4. Other invasive species in buffer areas shall be spot sprayed twice annually at times that are particularly effective for problem species.
5. Stands of reed canary grass in any buffer area shall be treated with Rodeo or Roundup herbicide in late October.
6. Herbicide treatments shall be applied according to label instructions.

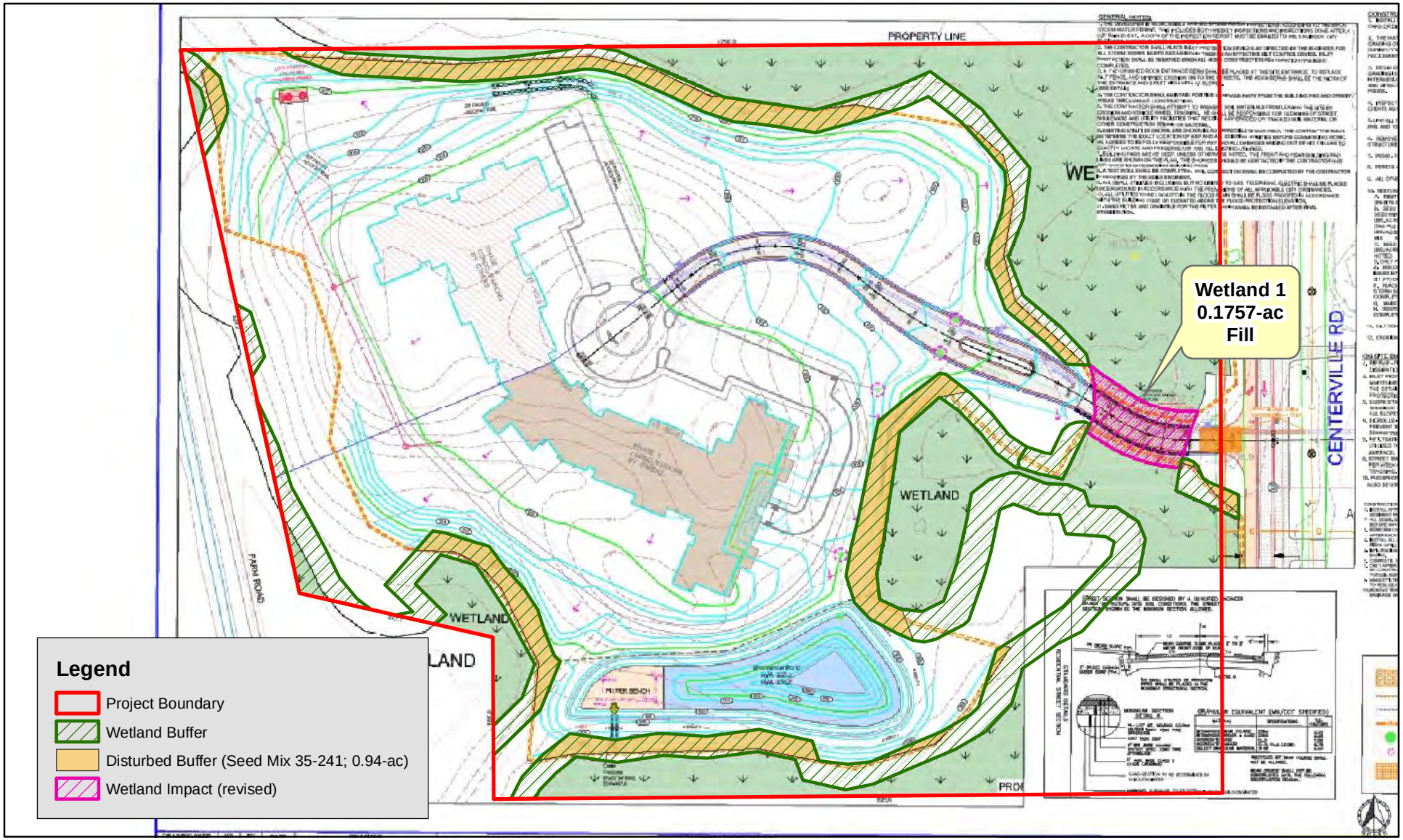
Year 3 to 5 Maintenance

1. Areas of bare ground or dead vegetation of more than 20 square feet shall be reseeded (Year 3 only).
2. Spot spray perennial weeds as necessary.
3. Patches of problem species that represent more than 5% cover of buffer areas should be spot mowed to prevent seed set and treated with herbicide at an appropriate time.
4. If possible and reasonably feasible, a controlled burn should be conducted once between the third and fifth year.

3. MONITORING

The applicant will submit an annual Wetland Buffer Inspection Report to VLAWMO for up to 5 years following vegetation establishment. The report shall include:

1. A site plan with locations of disturbed buffer areas;
2. Areas of bare or eroded soils;
3. Areas of invasive/noxious vegetation;
4. Location and type of encroachments on the buffer;
5. Color photos of the disturbed buffer areas taken during the growing season;
6. Description of the buffer vegetation including a list of dominant species and their estimated percent cover, and a comparison of the species present to the approved planting/seeding plan.
7. If necessary, the monitoring report will include management strategies that will be utilized to manage invasive species, improve percent vegetation cover and species diversity, and/or mitigate encroachment on the buffer.



Disturbed Buffer Areas

N

0 250 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MNGEO Spatial Commons

Island Field Project (KES 2020-198)
North Oaks, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Replacement Plan Addendum & Disturbed Buffer Plan
Island Field Project, North Oaks, MN

ATTACHMENT C

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Gary Eagles, North Oaks Company LLC
Mailing Address: 5959 Centerville Road, Suite 200, North Oaks MN 55127
Phone: 651-484-3361
E-mail Address: gary@northoaks.com

Authorized Contact (do not complete if same as above):
Mailing Address:
Phone:
E-mail Address:

Agent Name: Adam Cameron
Mailing Address: 2500 Shadywood Road #130, Orono MN 55331
Phone: 952-401-8757 Ext. #106
E-mail Address: Adam@kjolhaugenv.com

PART TWO: Site Location Information

County: Ramsey **City/Township: North Oaks**
Parcel ID and/or Address: 093022240004
Legal Description (Section, Township, Range): S:9 T:30N R:22W
Lat/Long (decimal degrees): -
Attach a map showing the location of the site in relation to local streets, roads, highways.
Approximate size of site (acres) or if a linear project, length (feet): 20.7

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

Please see attached permit narrative regarding the Island Field Residential Development Project.

Project Name and/or Number: Island Field Residential Development Project

PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	**Aquatic Resource Type** (wetland, lake, tributary etc.)	**Type of Impact** (fill, excavate, drain, or remove vegetation)	**Duration of Impact** Permanent (P) or Temporary (T)[1]	**Size of Impact**[2]	**Overall Size of Aquatic Resource** [3]	**Existing Plant Community Type(s)** in Impact Area[4]	**County, Major Watershed #, and Bank Service Area #** of Impact Area[5]
Wetland 1	Wetland	Fill	P	0.1757	N/A	Type 2 PEM1Bd	Ramsey, 20, 7

[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

North Oaks Company LLC

Signature: Gary M. Eagle VP Date: 12/10/2020

I hereby authorize Kjolhaug Environmental to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

[1] **The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.**

Attachment C
Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

Please reference the attached wetland permit application narrative.

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

Please reference the attached wetland permit application narrative.

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

Please reference the attached wetland permit application narrative.

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

N/A

Attachment D
Replacement/Compensatory Mitigation

Complete this part ***if*** your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Bank Service Area #	Credit Type (if applicable)	Number of Credits
170	Ramsey	20	7	Type 4	0.3514

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit[1]	Corps Mitigation Compensation Technique[2]	Acres	Credit % Requested	Credits Anticipated[3]	County	Major Watershed #	Bank Service Area #

[1]Refer to the name and subpart number in MN Rule 8420.0526.
[2]Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.
[3]If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile……) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
  - Previously restored or created under a prior approved replacement plan or permit
  - Drained or filled under an exemption during the previous 10 years
  - Restored with financial assistance from public conservation programs
  - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative: Title:

Signature: _____ Date:

To: Board of Directors

From: Nick Voss, Education and Outreach Coordinator

Date: February 16, 2021

Re: VI. C. - 2020 Annual Report

A copy of the 2020 Annual Report is ready for review, containing all of the components except for the 2020 financial information, which is pending on the 2020 audit.

An excerpt of the report is included in this Board packet, containing the 2020 review table and the 2021 work plan table.

The full Annual Report document (in the traditional format resembling the past year's format) is available online at the link below:

https://www.vlawmo.org/files/6716/1359/1631/2020_Annual_Report_Feb_BOD_-_No_Finance.pdf

The new features of the 2020 Annual Report include:

- Spotlight sections on Lambert Creek ditch maintenance, Lambert Lake Pond and Meander, and the Birch Lake Sand-iron Filter
- Introduction of Phil as new VLAWMO Administrator
- Cost-share program 2020 summary
- Updated water monitoring section with new graphs and lake data expressions
- An updated thanks and partners list reflecting 2020 efforts
- 2020 remote camera wildlife photos

Attached:

- 2020 review table and the 2021 work plan table.

Staff Recommendation

Staff proposes approval of the 2020 Annual Report in its current format. Upon completion of the 2020 audit, financial information which will be updated into the document for a final submission to the Board of Water and Soil Resources (BWSR) by their April, 2021 deadline. At this time the complete report including finances will be sent to VLAWMO Board and Technical Commission members.

CAPITAL IMPROVEMENT PROJECTS

Review of 2020 Work Plan

Project Name	Description	Goal: Going into 2020	Goal: 2020 Result
East Goose Lake Adaptive Lake Management	The East Goose Lake Adaptive Lake Management effort is a partnership between VLAWMO and the City of White Bear Lake. The process is an adaptable planning effort that seeks to balance the needs of the lake, local stakeholders, and City and VLAWMO responsibilities in improving local water quality.	Construction of Co Rd F raingardens with City and Ramsey County Complete limited access boat launch Begin East Goose Lake ALM public engagement process	Complete Complete Complete
Oak Knoll Pond Spent Lime Study	Partner with Barr Engineering for spent lime treatment and monitoring on Oak Knoll Pond (tributary to Goose Lake). VLAWMO staff will assist in monitoring efforts, supported by homeowner and City coordination.	Complete study	Study and project delayed until Spring, 2021 Anticipated completion Fall, 2021
Birch Lake: 4th & Otter Lake Road Project Development	VLAWMO will work with a consultant to assess the options for BMPs at the 4th and Otter Lake Rd site. Conceptual designs of best possible projects will be completed and VLAWMO will work with its partners Ramsey County and the City of White Bear Lake (WBL) to finalize design and secure funding for 2019 installation.	Complete installation Invasive species removal and vegetation restoration near filter to optimize function	Installation, operations and maintenance complete Vegetation management complete with City of WBL
Lambert Lake Pond and Meander	Replace sheet pile at Lambert Lake, meander a portion of ditch, add bio char treatment cells for bacteria and nutrient removal. Partnership with SEH, City of Vadnais Heights, University of Minnesota, and various contractors.	Grant signed, designs, construction, and lab study	Grant signed, EAW complete, permitting in place, bid process complete, construction contract signed, and erosion control/prep for construction underway at the end of the year
Pleasant Lake Carp Removal	Partnership with Carp Solutions to PIT tag, track, and remove carp.	Begin invasive carp removal in Pleasant Lake	Second year movement study completed. Removal on hold due to COVID with prep work underway for 2021

Review of 2020 Work Plan

GRANT PROGRAMS

CORE ACTIVITY #	Project Name	Description	Goal: Going into 2020	Goal: 2020 Result
3.4	**Landscape Level 1**	Establish relationships and provide grants to property owners within the watershed to install water quality enhancement projects.	Install 2 target priority zone funding projects, award 75% of LL1 funds. Identify and confirm 4 cost-share spotlights	2 TPZ grants awarded, 1 installed. 100% of LL1 funds awarded. 3 spotlights conducted.
3.4	**Landscape Level 2**	Landscape Level 2 assists landowners with implementing larger BMP projects within the watershed. Preference for projects that have high visibility, educational value and/or local citizen support.	Fund 2 LL2 projects and achieve .5 lbs of annual TP phosphorus removal with project implementation	4 LL2 grants awarded. 4.48 lbs combined TP removal.
3.3	**Community Blue Grant**	A communication and outreach grant program for projects that relate to water quality.	Use 75% of allocated funds. Complete 2 grants over $100 Complete 2 mini-grants under $100	Exceeded 75% of funds Complete 1 mini grant complete

PUBLIC EDUCATION AND OUTREACH

CORE ACTIVITY #	Project Name	Description	Goal: Going into 2020	Goal: 2020 result
3.3	**Watershed Action Volunteers (WAV)**	The WAV consists of Minnesota Water Stewards (Freshwater partnership), Citizen Advisory Commission (CAC), and VLAWMO-specific volunteers with individual volunteer job descriptions.	Assist 1 MN Water Steward in capstone project Fulfill 50 hour volunteer requirement in MWS program for 2 MN Water Stewards Host 3 student service learners Host 2 successful volunteers with job descriptions	1 MWS capstone complete 3 MN Water Steward service hours complete 1 student service learner hosted 2 volunteers hosted with job descriptions
3.3	**Workshops**	Workshops educate residents on watershed processes, raingarden and native plant function, and installation. They also introduce VLAWMO's cost-share program to participants and encourage them to apply.	Host 3 workshops independently, 3 workshops in partnership	2 workshops independently, 3 in partnership

PUBLIC EDUCATION AND OUTREACH

Review of 2020 Work Plan

CORE ACTIVITY #	Project Name	Description	Goal: Going into 2020	Goal: 2020 Result
3.3	**Community Events**	Staff a VLAWMO booth at various community events. Develop information and engagement components for community events. A rainbarrel giveaway contest is used to attract event goers, and number of entries signify how many people stopped by the VLAWMO booth. Prizes such as tote bags, boating kits, and craft soda will be provided for free to guests who engage the booth.	Attend 6 community events with a booth Conduct 2 watershed education tours Conduct 3 nature-based education activities	Events canceled: COVID-19 1 DIY/remote tour Education activities canceled: COVID-19
3.3	**Commun-ications**	Create and update material and publications for social media, website, seasonal E news, and local publications. Make all sections of the website active. Create and maintain communications to promote public awareness for responsible use of our water resources.	Complete updated lake fact sheets Maintain social media and email communications Maintain specific project web pages for Lambert Lake and Goose Lake regular updates	Lake fact sheets updated Social media/email maintained Lambert and Goose web pages maintained
3.3	**K-12**	Develop youth involvement opportunities and programs that relate to VLAWMO's goals and activities: Macroinvertabrates field days, STEM lessons. Assist schools in establishing and maintaining stormwater best management practices (BMP's).	Complete two volunteer raingarden maintenance events at each school. Interact with each school in the watershed once each year through either an in-person class visit or providing tools, maps, or resources to a class	One volunteer raingarden maintenance complete Jr Watershed Explorer book as a resource to each school
3.3	**Citizen Science**	Picture posts will be a new initiative for VLAWMO to explore phenology (ice-out, algae blooms) and AIS monitoring, with support from volunteers. Citizens assist lake monitoring each year through the Citizen Lake Monitoring Program (CLMP).	4 picture posts maintained. Three sites monitored for aquatic macroinvertabrates (Leaf Pack program). Citizens assist lake monitoring each year through the Citizen Lake Monitoring Program (CLMP)	4 posts maintained, 1 installed 6 sites monitored 3 lakes collected by volunteers for monitoring season

MONITORING PROGRAM

Review of 2020 Work Plan

SUB-WATERSHED	Project Name	Description	Goals: Going into 2020	Goals: 2020 Result
3.3 Lambert Creek	**Lambert Creek monitoring program**	Monitor basic phosphorus, nitrogen, Chlorophyll A, chloride, and sediment levels at 6 sites along with pH, conductivity and DO at the 3 flumes. Maintain automated flow meter and precipitation gauge at Whitaker.	Document and evaluate the general health of the creek	Monitoring complete, no change in creek health
Lambert Creek	**Lake Level Program**	Gilfillan, Birch, Gem & Goose Lake gauges are calibrated in the spring and read up to 11 times during the summer.	Monitor lake levels on 4 targeted lakes in the watershed to track short & long term trends	Complete
Multiple	**Stormwater Monitoring**	Automated and manual sampling at the iron-enhanced sand filter at Birch Lake.	Document effectiveness of iron-enhanced sand filter	Data complete
Multiple	**Lake Monitoring Program**	Monitor chemistry of 15 of VLAWMO's lakes through nutrient and sediment sampling, along with pH, conductivity, and dissolved oxygen (DO) measurements. Continue integration of automated sampling.	Keep water quality record of watershed's lakes Utilize water quality data for future projects and CIPs	4th season of stormwater monitoring completed at Birch Lake
ultiple	**Chloride Measurements**	Sample lakes and Lambert Creek. Partner with Birch Lake Improvement District (BLID) for summer monitoring of Birch Lake.	Check monthly measurement	Complete

MONITORING PROGRAM

Project Name	Description	Goals: Going into 2020	Goals: 2020 Result
Biological Monitoring	Volunteer-based macroinvertebrate Leaf Pack monitoring in Lambert Creek, Lambert Lake, and Deep and Charley Lake channels. Remote camera monitoring, otter telemetry project, frog and toad call surveys for baseline information on wetland health and function, long-term implementation initiatives.	Complete 5 Leaf Pack monitoring sessions on Lambert Creek/Lake Begin monitoring Deep and Charley channels Complete remote camera monitoring, telemetry, and frog and toad surveys	5 Leaf Packs complete, Deep and Charley channels initiated Lambert Lake remote cameras ongoing and continuous monitoring in place from July, 2020 - present, early 2021. Otter live trapping completed. Telemetry was not successful. An on line otter spotter map with reporting from residents now available, frog and toad surveys completed

ADMINISTRATION & REGULATION

Project Name	Description	Goals: Going into 2020	Goals: 2020 Results
Budget & Stormwater Utility	Storm sewer rates are based on the adopted budget and certified to the counties for collection.	Continued county participation and budgeting for future years	Complete
Wetland Conservation Act (WCA)	Complete boundary and type & other determinations in consultation with the TEP. Respond to WCA questions.	Continued administration of WCA	Complete

SUSTAINABLE LAKE MANAGEMENT PLANS (SLMP) AND STUDIES

Project Name	Description	Goals: Going into 2020	Goals: 2020 Results
Pleasant Lake Feasibility	A feasibility study to analyze sediment accumulation and possible removal in the west bay of Pleasant Lake	Complete study	Study complete Newspaper article published
Wilkinson Lake Feasibility	Partner with Ramsey County, the North Oaks Company, and SEH to identify improvement projects in the Wilkinson subwatershed.	Complete study	Complete
West Vadnais, East Vadnais, and Sucker Lake SLMPs	Surveys and research to be completed to support sustainable lake management plans.	Complete plans	Complete Integrated into 2021 restoration grant

2021 Work Plan

CAPITAL IMPROVEMENT AND MAINTENANCE PROJECTS

SUB-WATERSHED

	Project Name	Description	Goals	Timeline
Goose Lake	**East Goose Lake Adaptive Lake Management (ALM)**	Continuing work on the East Goose Lake ALM public engagement process including completion of community survey and presentation to the City Council and VLAWMO Board.	Residential and business survey Engagement report Determine next steps in proposed Lake management according to report findings	Ongoing
	Ditch Maintenance	Maintenance of the main stem of County Ditch 14 according to MN Public Drainage Permit 103D and the 2018 Hydrologic & Hydrology study contracted by VLAWMO with Houston Engineering Inc. (available at vlawmo.org/waterbodies/lambert-creek).	Initiate planning with the City of Vadnais Heights for possible maintenance work downstream of Lambert Lake. Begin design and permitting, determine work and/or funding for site access.	Ongoing
	Pleasant Lake Carp Removal	Working with Carp Solutions and NOHOA, this project will establish carp biomass in Pleasant Lake and determine movement patterns/ identify spawning and nursery areas so effective control can be conducted. Removals will be conducted and surveys continued to document results and water-quality improvements.	Carp removal Monitoring and biomass results	Ongoing
	West Vadnais Lake Carp Removal	Working with Carp Solutions and Ramsey Washington Metro Watershed District (RWMWD), VLAWMO seeks to control carp biomass in West Vadnais Lake and prevent movement from West Vadnais Lake into the Phalen Chain, which has been a focus of management efforts for RWMWD and reductions in carp biomass have been achieved. Initial surveys and biomass estimates were conducted by RWMWD. VLAWMO is partnering on removals and barriers.	Reduce biomass of carp in West Vadnais Lake Prevent movement from West Vadnais Lake into the Phalen Chain.	Ongoing

2021 Work Plan

CAPITAL IMPROVEMENT AND MAINTENANCE PROJECTS

SUB-WATERSHED	Project Name	Description	Goals	Time line
Lambert Creek	**Lambert Lake Pond and Meander**	Replace sheet pile at Lambert Lake, meander a portion of ditch, add bio char treatment cells for bacteria and nutrient removal. Partnership with SEH, City of Vadnais Heights, and various contractors, University of Minnesota. Grant provided by the MPCA.	Replace sheet pile and build meander. Incorporate bio char treatment and conduct monitoring to document bacteria reductions.	Construction winters '20-'21. Vegetation restoration '21-'22 Bio char monitoring '21-'23
Pleasant Lake	**Vadnais/Sucker Park Restoration**	45 acres of restoration in Vadnais-Sucker Lakes Regional Park. Removal and treatment of invasive buckthorn and reseeding/ planting with natives with ongoing maintenance. Partners in this project include Great River Greening, Ramsey County Parks/ SWCD, and St. Paul Regional Water Services. Funds provided by the Outdoor Heritage grant program administered by the MN DNR. The grant time frame for this project is 5 years.	Landowner Contracts and site visits Prep and planning for buckthorn removal First phase of buckthorn removal	Spring, 2021 Summer, 2021 Fall, 2021

GRANT PROGRAMS

CORE ACTIVITY #	Project Name	Description	Goals	Time line
3.4	**Landscape Level 1**	Establish relationships and provide grants to property owners within the watershed to install water quality enhancement projects.	Fund and install 2 LL1 infiltration projects with a combined annual phosphorus reduction of 1 lb.	Ongoing
3.4	**Landscape Level 2**	Landscape Level 2 Cost-share Program is aimed at assisting landowners with implementing larger BMP projects within the watershed. Preference for projects that have high visibility, educational value and/or local citizen support.	Fund 4 LL2 projects and achieve 2 lbs of annual phosphorus removal with project implementation.	Ongoing
3.3	**Soil Health Grant**	Small projects focused on habitat and shoreline restoration, utilizing native vegetation to promote soil and watershed health.	Fund 4 SHG projects and achieve 10,000 ft^2 of restored area with project implementations.	Ongoing
	Community Blue Grant	A communication and outreach grant program for projects that relate to water quality. Available to MN Water Stewards, volunteers, and community partners.	Support 2 MN Water Stewards capstone projects with grants and 1 community or volunteer grant.	Ongoing

PUBLIC EDUCATION AND OUTREACH

2021 Work Plan

CORE ACTIVITY # 3.3

Project Name	Description	Goals	Time line
Watershed Action Volunteers (WAV)	The WAV consists of Minnesota Water Stewards (Freshwater), Citizen Advisory Commission (CAC), and volunteers with individual job descriptions. Service Learning Partnership with the U of M, citizen science initiatives.	Complete 2 MN Water Stewards capstone projects Hold spring and fall WAV/CAC meetings Facilitate 10 service learning and citizen science efforts	Ongoing
Workshops	Educate residents on watershed processes, raingarden and native plant function, and project installation. Education and familiarity on VLAWMO's cost-share grant programs.	Host 2 workshops independently, 2 workshops in partnership	Spring-Fall
Community Events	Staff a VLAWMO booth at various community events. Develop information and engagement components for community events. A rainbarrel giveaway contest is used to attract event goers, and number of entries signify how many people stopped by the VLAWMO booth. Prizes such as tote bags, boating kits, and craft soda will be provided for free to guests who engage the booth.	Conduct 2 watershed education tours either in-person or remotely	Spring-Summer
Communications	Create and update material and publications for social media, website, seasonal E news, and local publications. Make all sections of the website active. Create and maintain communications to promote public awareness for responsible use of our water resources.	Facilitate East Goose Lake stakeholder engagement, summarize to Board.	Winter-Summer
K-12	Develop youth involvement opportunities and programs that improve/benefit VLAWMO's goals and activities. Reach multiple age demographics through school involvement. Assist schools in establishing and maintaining stormwater best management practices (BMP's).	Complete two volunteer raingarden maintenance events at each school	Ongoing

2021 Work Plan

MONITORING PROGRAM

Project Name	Description	Goals	Time line
Lambert Creek monitoring program	Monitor basic phosphorus, nitrogen, Chlorophyll A, chloride, and sediment levels at 6 sites along with pH, conductivity and DO at the 3 flumes. Maintain automated flow meter and precipitation gauge at Whitaker. Four remote sensors installed along creek, live updated volume and water levels displayed on line.	Document and evaluate the general health of the creek.	Monitoring May-Sept
Lake Level Program	Gilfillan, Birch, Gem & Goose Lake gauges are calibrated in the spring and read up to 11 times during the summer.	Monitor lake levels on 4 targeted lakes in the watershed to track short & long term trends.	Monitoring May-Sept
Stormwater Monitoring	Automated and manual sampling at the Birch Lake Iron-enhanced Sand Filter.	Monitor Effectiveness	May-Sept
Biological monitoring	Volunteer-based Leaf Pack macroinvertebrate monitoring in Lambert Creek, Lambert Lake, and Deep and Charley Lake channels. Wildlife monitoring (remote cameras, etc.) to build baseline on wetland health and function, build comparison into long-term implementation initiatives. Watershed-wide frog and toad monitoring and wildlife remote-camera surveys provide presence/absence information for native species. River otter identified as a species indicating health of wetlands and water quality. Otter monitoring to occur at key sites and especially habitat-improvement projects.	Surveys completed Watershed-wide analysis of wildlife monitoring conducted, results presented in StoryMaps	Ongoing

2021 Work Plan

ADMINISTRATION & REGULATION

CORE ACTIVITY #

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

STUDIES AND PLANS

Project Name	Description	Goals	Time line
Amelia Lake SLMP Surveys	Amelia is the focus of our SLMP work as specified in the Plan. Surveys will include bathymetry and aquatic macrophytes with an additional delineation for invasive flowering rush in 2021.	Complete surveys Make delineation available Consider initial treatment	Spring-Summer, 2021
Wilkinson 319	Wilkinson is the focus of an upcoming round of small watershed priority funding with the MPCA. A Nine Key Element (NKE) Plan. The Nine Key Element plan must be approved before the first round of project applications can be submitted (spring 2021).	Complete NKE Plan Approval by EPA, submit first round of projects for funding	Spring-Summer, 2021
Ash Street Spent Lime Study	Partner with Barr Engineering for a spent lime study treatment and monitoring on Ash St Pond. Striving for phosphorus (TP) reductions in water quality based on stormwater samples.	Complete treatment with Barr Take stormwater samples documenting a 25% TP reduction	Treatment Spring 2021 Complete sampling pending timing of treatment

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

To: VLAWMO Board of Directors
From: Dawn Tanner
Date: February 24, 2021

Re: V. D. 1. Lambert Lake Project Update:

a) Lambert Project Update and Consideration of Pay Request
b) Consider Modified Biochar BMP Project, 319 Grant Change Order, UMN Contract, SEH Scope of Engineering, Resolution 2021-03

A PPT slideshow will be provided at the Feb. 24, 2021 Board meeting to supplement information included in the staff memo for this section.

V. D. 1. a) Lambert Project Update and Consideration of Pay Request

Project Update:

Staff would like to provide a brief summary of progress on the meander and sheet pile portions of the project (in addition to the attached SEH memo):

Meander construction: As of, Feb. 16, meander construction is nearly half completed. Work has been going smoothly but was delayed during the extreme cold weather that started Feb. 8. Project work is expected to have resumed and be moving smoothly along at the time of the Board meeting.

SEH is under contract to perform part-time inspection of the construction activities. SEH has been present during critical activities and has been collecting field observation notes and photos. Supervision/inspection by SEH is keeping the process smooth on-site. For example, the contractor decided to put down erosion-control blanket as they go to prevent erosion. Video from a drone flight was prepared by SEH and provided to the Board. The project was also featured in an article in the Star Tribune on Feb. 16, 2021.

Sheet pile replacement: This process has been slower than expected. Sheet pile work ultimately needed the use of swamp/crane mats to provide stable ground for the equipment. The staging of these mats did appear to slow the contractor down early in the Project. This part of the project was also on hold due to the extreme cold and is expected to resume shortly (at the time of packet preparation). Video of sheet pile replacement was included in the drone footage.

Change Orders and Unforseen Challenges: See attached memo from SEH. To date, the project has faced some unforeseen challenges related to construction, including one change order recommended by SEH for moving forward at the time of packet preparation.

Consideration of Pay Request:

A pay request was submitted by Sunram Construction, Inc. on February 10, 2021 and the Application for Payment (AFP) #1 has been submitted to VLAWMO (see attached). SEH recommends the approval for payment to Sunram Construction, Inc. in the amount of $166,203.33.

This amount represents 32% of the work completed, with 5% held for retainage. The pay request includes work completed through February 10 on the meander and sheet pile installation.

Per the recommendation of the project engineer, Staff request authorization from the Board to pay the current pay request for $166,203.33 to Sunram Construction Inc.

Attachments:

1. Application for Payment No. 1 For Lambert Lake Project from Sunram
2. SEH Technical Memo dated February 17

V. D. 1. b) Consider Modified Biochar BMP Project, 319 Grant Change Order, UMN Contract, SEH Scope of Engineering, Resolution 2021-03

Introduction: Please find below a summary of the background related to the biochar portion of the Lambert project. The key overall takeaway is that, despite the challenges for this portion of the project, there is now a "path forward" to implement the project.

Background on Modified Biochar BMP Project: The biochar portion of the Lambert project has encountered challenges for the UMN biochar team. The largest challenge that they encountered resulted because they anticipated positive results from pending experiments with Midwest Floating Islands, Inc. (a company that has worked with VLAWMO and the UMN Principal Investigator/PI in the past, most notably at Tamarack Nature Center). Those results were expected to lead to a new "soft" proprietary design referred to as "floating fingers" or "socks" that would be anchored into the channel with biochar inside them for bacteria removal. The experimental work did not produce the expected results, and Midwest Floating Islands was not consulted further by the UMN PI.

As these design changes were being considered by the UMN PI and biochar team, COVID complications caused the labs and UMN facilities to be closed. That pushed back lab experiments and pilot biochar treatment cell development and field testing. The UMN worked to cope with these challenges but also abbreviated the work that they accomplished for this portion of the Lambert project. Full details regarding abbreviation are part of ongoing negotiation and legal consultation. Delays in lab and field work were communicated in previous Board packets.

During fall, 2020, the UMN team provided a concept design (titled 1.0 Lambert Plans and Specs). That design was not construction-ready and switched the design from a soft proprietary design to an in-ground filter with additional permitting, design, and construction costs. The UMN PI also informed VLAWMO on December 7, 2020, that they were finished with their research mission for the project and would not work more on the project until monitoring of a completed BMP (Phase 3 in the UMN workplan) was ready. This means that they would not finish the design nor do the permitting work to allow construction to occur on their 1.0 Lambert Plans and Specs.

VLAWMO staff have been working with legal counsel because the UMN team also invoiced VLAWMO for more than what was allocated in the MPCA workplan coauthored by the UMN PI. To date, VLAWMO has paid $18,924.36 to the UMN. VLAWMO received an invoice for an additional $17,368.37 on October 30, 2020. That invoice was formally put on hold with notice provided to the UMN until the project was caught up, with acknowledgement that the project was behind and that the billed costs exceeded the allocated funds for tasks to date.

Positive developments for the biochar portion of the Lambert project include:

1) MPCA has approved the change order authorizing moving funds from remaining monitoring and analysis to allow completion of design and construction within the current biochar portion of the grant budget. Depending upon final construction costs, VLAWMO is prepared to conduct monitoring in-house with partnership from SPRWS, as was done on the biochar studies that led to this project. A change order from MPCA is included in the packet. The change order needs to be completed before additional work can be done on the biochar portion of the project. As part of the resolution 2021-03, staff request authorization to sign the change order and return it to MPCA for final authorization.
2) Two years remain on the grant contract. Although the biochar construction will be delayed between 6-18 months from the original timeframe, adequate time remains to fully complete the project without requiring an extension.
3) The UMN PI recommended terminating the current contract to allow construction to occur with the option to pursue a new contract for monitoring if funds are available and there is sufficient interest from both parties.
4) SEH has been participating in the biochar process all along, even volunteering time to attend meetings. They have evaluated the concept design, identified deficiencies, and determined

that they can finish the design, build plans and specs, and supervise construction within the biochar budget (with already mentioned MPCA-approved financial shifts).

5) The Board Policy and Personnel Subcommittee met on Feb. 10, 2021 to discuss this matter, and upon further discussion, reached a consensus recommendation to approve the actions items identified in Resolution 2021-03 as attached.

Attachments:

3. 319 Grant Change Order: The MPCA approved grant change order is attached in the packet. A formal action is included in Resolution 2021-03.

4. Attorney-drafted Letter to UMN

5. SEH Scope Work for Engineering Services for the Biochar Portion of the Project: This is included as an attachment in the packet and referenced in Resolution 2021-03.

6. Resolution 2021-03: Included as a separate document in the packet.

Attachment 1

February 16, 2021

RE: Vadnais Lake Area Water Management Organization (VLAWMO)
Lambert Lake Improvements
SEH No. VADLA 158086

Phil Belfiori, Administrator
VLAWMO
800 E County Rd E
Vadnais Heights, MN 55127

Dear Phil:

Please find enclosed Application for Payment No. 1 for the referenced project. The quantities completed to date have been reviewed and we hereby recommend approval for payment to Sunram Construction, Inc. in the amount of $166,203.33. This amount represents 32% of the work completed, with 5% held for retainage.

If approved, please sign and forward payment, along with a copy of the signed pay application to Sunram Construction, Inc., retaining the original for VLAWMO records.

Please don't hesitate to contact me with any questions or comments. Thank you.

Sincerely,

Emily Jennings, PE
Project Manager
(Lic. MN)

ekj
Enclosures

S:\UZ\V\VADLA\153931\5-final-dsgn\50-final-dsgn\50-Hydro\022421 Board Meeting Info\AFP #1

SEH

Application for Payment
(Unit Price Contract)
No. 1A (Meander)

Eng. Project No.: VADLA 153931

Location: Vadnais Lake Area Water Management Organization (VLAWMO)

Contractor Sunram Construction, Inc.
20010 75th Avenue North
Corcoran, MN 55340

Contract Date October 28, 2020

Contract Amount $ 539,824.00

Contract for Lambert Lake Improvements

Application Date 2/24/21

For Period Ending 2/10/21

Item No.	Item	Unit	Est. Quantity	Quantity to Date	Unit Price	Total Price
0154.1	COMMON LABORERS	HOUR	10		$75.00	
0154.2	CRAWLER MOUNTED BACKHOE	HOUR	5		135.00	
0154.3	SKID LOADER	HOUR	5		135.00	
0155.1	ACCESS AND STAGING	LS	1	0.5	12,000.00	$6,000.00
0171.1	MOBILIZATION	LS	1	0.5	9,500.50	$4,750.25
0171.1	CONSTRUCTION SURVEYING	LS	1	0.5	17,500.00	$8,750.00
3123.1	MUCK EXCAVATION (P)	CY	1645	1000	16.50	$16,500.00
3123.2	SALVAGE MATERIAL (P)	CY	1235	300	11.50	$3,450.00
3125.2	STABILIZED CONSTRUCTION EXIT	LS	1	0.5	800.00	$400.00
3125.3	SILT FENCE, TYPE MS	LF	7500	6062	2.30	$13,942.60
3125.4	SEDIMENT CONTROL LOG TYPE EROSION CONTROL BLANKET	LF	880	400	3.25	$1,300.00
3125.5	CATEGORY 3N	SQ YD	12826	3000	1.50	$4,500.00
3125.6	MULCH MATERIAL TYPE 3	TON	5		525.00	
3292.1	SEEDING MIXTURE 32-241	LB	101		8.50	
3292.2	SEEDING MIXTURE 34-171	LB	14		115.00	
3292.3	SEEDING MIXTURE 34-181	LB	5	2.63	290.00	$762.70
3292.4	SEEDING MIXTURE 34-261	LB	23	1.5	33.00	$49.50
3293.1	DECIDUOUS SHRUB NO 2 CONT	SHRB	165		69.00	
3293.2	DECIDUOUS SHRUB NO 2 CONT	SHRB	110		69.00	
3293.3	DECIDUOUS SHRUB NO 2 CONT	SHRB	55		75.00	

Total Meander Amount	**$60,405.05**
Total Sheet Pile Amount (separate)	**$114,545.83**
Total Cumulative Contract Amount	**$174,950.88**

SEH

Application for Payment
(Unit Price Contract)
No. 1B (Sheet Pile)

Eng. Project No.: VADLA 153931

Location: Vadnais Lake Area Water Management Organization (VLAWMO)

Contractor: Sunram Construction, Inc.
20010 75th Avenue North
Corcoran, MN 55340

Contract Date: October 28, 2020

Contract Amount: $ 539,824.00

Contract for: Lambert Lake Improvements

Application Date: 2/24/21

For Period Ending: 2/10/21

Item No.	Item	Unit	Est. Quantity	Quantity to Date	Unit Price	Total Price
Sheetpile						
0155.1	ACCESS AND STAGING	LS	1	0.5	4,500.00	$2,250.00
0171.1	MOBILIZATION	LS	1	0.5	18,500.05	$9,250.03
0171.1	CONSTRUCTION SURVEYING	LS	1	0.5	500.00	$250.00
0241.1	REMOVE SHEET PILING	LS	1	0.35	69,300.00	$24,255.00
	EROSION CONTROL BLANKET					
3125.5	CATEGORY 3N	SQ YD	726		1.50	
3125.6	MULCH MATERIAL TYPE 3	TON	0.3		525.00	
3292.1	SEEDING MIXTURE 32-241	LB	5.7		8.50	
3292.2	SEEDING MIXTURE 34-171	LB	0.8		115.00	
3549.1	STEEL SHEET PILING	SF	12400	3328	23.60	$78,540.80
Alternate						
3549.1 Alt 1	USED STEEL SHEET PILING	SF	12400		23.60	

Total Sheet Pile Amount	**$114,545.83**
Total Meander Amount (separate)	**$60,405.05**
Total Cumulative Contract Amount	**$174,950.88**

Application for Payment (continued)

Total Contract Amount	$ 539,824.00	Total Amount Earned	$ 174,950.88
		Material Suitably Stored on Site, Not Incorporated into Work	
Contract Change Order No.		Percent Complete	
Contract Change Order No.		Percent Complete	
Contract Change Order No.		Percent Complete	
Less Previous Applications:		GROSS AMOUNT DUE	$ 174,950.88
AFP No. 1(A+B):	AFP No. 5(A+B):	LESS 5 % RETAINAGE	$ 8,747.54
AFP No. 2(A+B):	AFP No. 6(A+B):	AMOUNT DUE TO DATE	$ 166,203.33
AFP No. 3(A+B):	AFP No. 7(A+B):	LESS PREVIOUS APPLICATIONS	$
AFP No. 4(A+B):	AFP No. 8(A+B):	AMOUNT DUE THIS APPLICATION	$ 166,203.33

CONTRACTOR'S AFFIDAVIT

The undersigned Contractor hereby swears under penalty of perjury that (1) all previous progress payments received from the Owner on account of work performed under the Contract referred to above have been applied by the undersigned to discharge in full all obligations of the undersigned incurred in connection with work covered by prior Applications for Payment under said contract, Lambert Lake Improvements, Vadnais Lake Area Water Management Organization, and (2) all material and equipment incorporated in said Project or otherwise listed in or covered by this Application for Payment and free and clear of all liens, claims, security interests and encumbrances.

Date FEBRUARY 16, 2021

Sunram Construction, Inc.
(Contractor)

COUNTY OF HENNEPIN)
STATE OF MINNESOTA) SS

By Ryan M Sunram Vice President
(Name and Title)

Before me on this 16 day of FEBRUARY, 2021, personally appeared RYAN SUNRAM known to be, who being duly sworn did depose and say that he is the VICE PRESIDENT (office) of the Contractor above mentioned that he executed the above Application for Payment and Affidavit on behalf of said Contractor; and that all of the statements contained therein are true, correct and complete.

My Commission expires

ANNETTE MARIE SHIERTS
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/25

Annette Shierts
(Notary Public)

The undersigned has checked the Contractor's Application for Payment shown above. A part of this Application is the Contractor's Affidavit stating that all previous payments to him under this contract have been applied by him to discharge in full all of his obligations in connecting with the work by all prior Applications for Payment.

In accordance with the Contract, the undersigned recommends approval of payment to the Contractor for the Amount due.

Emily Jennings

Short Elliott Hendrickson Inc.

By Emily Jennings

Date 02.16.2021

Vadnais Lake Area Water Management Organization

By

Date

Attachment 2

MEMORANDUM

TO: Vadnais Lake Area Water Management Organization (VLAWMO)

FROM: Emily Jennings, PE (Lic. MN)
Project Manager

DATE: February 17, 2021

RE: Lambert Lake Improvements Project Update
SEH No. VADLA 158086 14.00

Background
The Lambert Lake Improvements Project (Project) includes the construction of a new, meandering channel for County Ditch 14, also known as Lambert Creek, including excavation, fill, and restoration and sheet pile replacement for a portion of the sheet pile that encompasses the Lambert Lake Pond.

Early design discussions and collaboration with stakeholders and regulatory agencies began in 2019. The final design for the Project was completed in late summer/fall 2020 and the Project was ultimately advertised for bids beginning on September 9, 2020 with a bid opening held on October 1, 2020. The Project was awarded to Sunram Construction, Inc on October 29, 2020 for the following contract price:

Meander Total Bid	$ 152,997.00
Sheetpile Total Bid	$ 386,827.00
Total Contract Price	**$ 539,824.00**

Sunram Construction has several sub-contractors assisting on the project, including Atlas Foundation Co. Atlas Foundations is the subcontractor responsible for the sheet pile replacement work.

Project Update
Due to the nature of the Project site, construction is ideal during cold/frozen conditions. A pre-construction meeting was held on December 2, 2020. At the time, it was discussed that the project would start in mid-December, however this was delayed until early to mid-January to allow for colder temperatures.

Work commenced in early to mid-January including,

- Mobilization
- Meander area access
- Erosion and sediment control device installation
- Construction staking of the meander and new sheet pile alignment
- Existing sheet pile removals began
- New sheet pile installation began
- Meander excavation and fill activities began

SEH is under contract to perform part-time inspection of the construction activities. SEH has been present during critical activities and has been collecting field observation notes and photos. To date, the project has faced some unforeseen challenges related to construction, including:

- More tree removals than the Contractor was expecting
- More excavation quantity than expected
- Sheet pile installation difficulties

More tree removals than the Contractor was expecting
On January 18th, 2021 SEH was informed by email by Ryan Sunram (Contractor) that there were trees present in the meander that the contractor did not account for in their bid. The Contractor's justification for why these trees were not accounted for was that there were no trees shown on the removal plan in the meander area. SEH identified tree removal as incidental to the Project and handled tree removal as incidental in two locations of the bidding documents: 1) Within note 2 on page 3 of the plans (removal plan) and 2) Within section 31 11 00 of the contract specifications. To keep the project on schedule, the SEH project team and the VLAWMO project team agreed to work with the Contractor to reach a resolution for the cost of tree removal at the Contractor's request. At this time, SEH is working on processing a change order for the removal of 32 trees in the field.

More excavation quantity than expected
The survey/staking for the meander was completed by the Contractor on January 12, 2021 and excavation started on January 29, 2021. Ryan Sunram (Contractor) notified SEH on February 1, 2021 that he believed that there was a greater quantity of excavation than that was included in the plans and bidding documents. The excavation and fill quantities included in the plans were a 'planned quantity'. A planned quantity is used to avoid the expense of measuring dimensions (i.e. full survey) – this was utilized for the final design as the engineering budget for design and plan production was fit to the funds allocated within the grant agreement. Field conditions show that there may be greater variation in the surface elevations, ultimately increasing the quantity of excavation necessary. At this time, SEH is working to verify this quantity in the field and attempt to mitigate the magnitude of any increase. If it is confirmed that the excavation and subsequent fill quantities are greater than those included in the plans and bidding documents, a change order to cover the additional quantity would be warranted.

Sheet pile installation difficulties
Sheet pile work ultimately needed the use of swamp/crane mats to provide stable ground for the equipment. The staging of these mats did appear to slow the contractor down early in the Project. Once mats were staged and removal/installation work began, SEH observed the contractor was having difficulties driving the sheets to the full plan depth. The contractor ultimately reported that there may have been a subsurface obstruction leading to the difficulties. SEH was not able to confirm the presence of an obstruction. The contractor made several modifications to their efforts including additional use of alignment templates and staff changes/additions on site. As of the week of February 1, it was reporting that the installation was going much smoother, with no unexpected issues installing the sheets to plan depth.

Current Project State
Work was paused from February 8 – 16, 2021 due to very cold temperatures. Work is expected to resume on February 17, 2021. The Project contract does identify substantial completion on for before June 1, 2021 however the contract also requires the following (Document 00 52 00. Standard Form of Agreement. Article 4):

- All final grading and earthwork must be completed on or before March 1, 2021
- Sheet Pile Removal and Installation must be completed on or before March 1, 2021

At this time, there has not been any formal request from the Contractor to modify the grading, earthwork, and sheetpile activities completion schedule.

If you have any questions or would like any additional information related to any of the information presented in this memorandum, please reach out to me at ejennings@sehinc.com or 651.302.7669.

EKJ

c: Jeremy Walgrave, PE

S:\UZ\V\VADLA\153931\5-final-dsgn\50-final-dsgn\50-Hydro\022421 Board Meeting Info

MINNESOTA POLLUTION CONTROL AGENCY

520 Lafayette Road North
St. Paul, MN 55155-4194

Attachment 3

P/T related Contract Encumbering Order
Change Order Form

Instructions: The revised workplan, budget detail sheet, and/or schedule must be attached to this form. The revisions should be shown in strikeout and underline. Refer to the Change Order clause in your contract.

Change Order information

Contractor name: Vadnais Lake Area Watershed Mgmt

Agency Interest ID number: 192051 Activity ID number: PRO20190002

SWIFT Contract number: 169280 Purchase Order number: 3000025454

Funding information: 3000-R3237835-R32R319; 3000-R3237836-R32R319

Contractor's Project Manager: Dawn Tanner Phone: 651-204-6070

Contractor's Project Manager email:

MPCA's Project Manager: Jordan Donatell Phone: 651-757-2254

Project name: VLAWMO Bacteria, Sediment, & Nutrient Reduction Project

Task change/Scope of Work change

Explanation (including verbal authorization):

Due to changes in the Biochar treatment approach within the project work area, funds were required to be moved from Objectives 5 and 6 into Objective 4. These additional funds in objective 4 will be used to design, construct and permit the updated Biochar treatment approach. The research paper aspect of this project will no longer be part of the workplan, hence the removal of Objective 5 and portions of Objective 6. Overall, similar reductions of pollutants are expected to be achieved in comparison to the original workplan.

Signatures

(The Change Order form must be signed by the MPCA Project Manager and the Contractor. The signature below authorizes the Contractor to proceed with the items listed. The original Contract and any previous Change Orders and Amendments are incorporated into this Change Order by reference.)

***By typing/signing my name below,** I certify the above statements to be true and correct, to the best of my knowledge, and that this information can be used for the purpose of processing this form.*

Contractor

Signature: _____
(This document has been electronically signed.)

Title: _____ Date: _____

MPCA Project Manager

Signature: _____
(This document has been electronically signed.)

Title: _____ Date: _____

Distribution: 1. Contractor
2. Project Manager uploads into Tempo/OnBase

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

Attachment A

Federal Clean Water Act Section 319

Project workplan

Doc Type: Contract

Swift #:	169280
Purchase Order #:	3000025454
Agency Interest ID #:	192051
Activity ID #:	PRO20190002

Project title: VLAWMO Bacteria, Sediment, and Nutrient Reduction Project

1. Project summary:

Organization: Vadnais Lake Area Watershed Management Organization (VLAWMO)
Contractor contact name: Dawn Tanner
Title: Program Development Coordinator
Address: 800 East County Road E
Vadnais Heights, MN 55127
Phone: 651-204-6074
Fax: 651-204-6173
Email: dawn.tanner@vlawmo.org

~~**Subcontractors/Partners**~~

~~**Partner Organization:** University of Minnesota (UMN)~~
~~**Project Partner:** Joe Magner, Research Professor, Department of Bioproducts & Biosystems Engineering (UMN-BBE)~~
~~**Address:** 1390 Eckles Avenue~~
~~St. Paul, MN 55108~~
~~**Phone:** 612-626-0875~~
~~**Email:** jmagner@umn.edu~~

~~**Partner Organization:** City of Vadnais Heights~~
~~**Project Partner:** Jesse Farrell~~
~~**Address:** 800 East County Road E~~
~~Vadnais Heights, MN 55127~~
~~**Phone:** 651-204-6050~~
~~**Email:** jesse.farrell@cityvadnaisheights.com~~

~~**Subcontractor:** Engineering Firm Short Elliott Hendrickson Inc. (SEH)~~
~~**Project Partner:** Emily Erdahl, Water Resources Engineer~~
~~**Address:** 3535 Vadnais Center Drive~~
~~Saint Paul, MN 55110-5196~~
~~**Phone:** 651-302-7669~~
~~**Email:** eerdahl@sehinc.com~~

~~**Subcontractor:** Midwest Floating Island~~
~~**Project Partner:** Autumn Boos~~
~~**Address:** 800 North Hampden Avenue~~
~~St Paul, MN 55114~~

~~**Phone:** 651-645-5721~~
~~**Email:** autumn@midwestfloatingisland.com~~

~~**Subcontractor:** Excavation company, to be selected through a competitive bidding process~~

~~**Subcontractor:** Company specializing in vegetation restoration and reseeding, to be selected through a competitive bidding process~~

Minnesota Pollution Control Agency (MPCA) contact

MPCA project manager: ~~Tim Schwarz~~ Jordan Donatell
Title: Environmental Specialist
Address: 520 Lafayette Road North
St. Paul, MN 55155
Phone: (651) 757-~~2426~~ 2254
E-mail: ~~timothy.schwarz@state.mn.us~~ jordan.donatell@state.mn.us

Project information

Latitude/Longitude: Ground Coordinates X: 495029.9485176 Y: 4989777.6082607
County: Ramsey
Start Date: 11/27/2019 **End Date:** 8/31/2023
Project cost: Grant: $302,679.00, Match: $601,447.25, Total: $904,126.25

Project location:

Basin (check all that apply):

☐ Lake Superior ☐ Lower Mississippi/Cedar ☒ Upper Mississippi ☐ Minnesota ☐ Rainy
☐ Red River ☐ Des Moines ☐ Missouri ☐ St. Croix

a) Watershed name: Vadnais Lake Area Hydrologic Unit Code (HUC) 8: 07010206 (Mississippi River-Twin Cities)

Organization type:
☒ Local/Regional government (county, SWCD, WD, etc.)
☐ State government
☐ Joint powers organization of local government

2. Statement of problems, opportunities, and existing conditions

Project background

The Vadnais Lake Area Watershed has a high proportion of impervious surface including residential (40%), and industrial, commercial, major highway (10%). There is also a high proportion of open water including lakes, wetlands, and streams (30%). Surface water in the watershed is of high importance because of the role in providing drinking water to the metro area. The Charley-Pleasant-Sucker-East Vadnais chain of lakes for St Paul Regional Water Service (SPRWS) provides drinking water for 446,000 residents of St. Paul and surrounding suburbs. Lambert Creek is a priority in the watershed for a number of reasons. Lambert Creek is impaired for bacteria. Lambert Creek flows into East Vadnais Lake, which is the main reservoir for SPRWS before water enters the McCarrons Water Treatment Plant. Lambert Creek is connected to other impaired waterbodies including Goose Lake. Goose Lake is the headwaters of the creek, impaired for nutrients, and a major focus of ongoing VLAWMO efforts. The Lambert Creek and Goose Lake Subwatersheds receive stormwater runoff from about 1/5 (4.6 acres) of the Vadnais Lake Area Watershed. Lambert Creek is also in need of improvement due to Best Management Practices (BMPs) that were implemented and innovative about 15 years ago but are now in need of updating and improvement. Specifically, Lambert Lake was built to allow sediment collection; that has been successful, but a reconstruction project by the Minnesota Department of Transportation (MnDOT) in 2016 on 35E sent a far larger sediment load than planned into the system. It is now filled in to about 80% of capacity. A fiberglass sheet pile weir was installed on the north end of Lambert Lake in 2004. That fiberglass sheet pile is now at the end of its lifespan and bowing into the lake. It is in urgent need of replacement and VLAWMO will replace this failing infrastructure at Lambert Lake through this project.

When Lambert Lake was built, it was designed to facilitate sheet flow across the wetland. Dense stands of native Phragmites and cattails short-circuit the flow so that it moves rapidly through a channel instead of the targeted sheet flow. Increased storm frequency and intensity consistent with climate change are causing flooding problems. There is a need to increase storage to

buffer against storm events, slow water moving through the system, remove bacteria, and increase resilience.

Lambert Creek and Lambert Lake are in the same HUC 12 subwatershed (#070102060802). The mainstem of Lambert Creek flows through a series of four wetland basins (Sobota Slough, Rice Lake, Grass Lake, and Lambert Lake). These wetlands represent former lake basins that were ditched and drained around the turn of the century. Present-day hydraulic properties of the basins include fluctuating water levels, short residence times, and channelized flow (Engstrom 1991). BMPs associated with this project are located on Lambert Lake, which Lambert Creek flows through, and located directly on the impaired waterbody. Project BMPs include replacing failing fiberglass sheet pile with steel sheet pile, building a meandering channel to increase water storage and improve ecosystem function, and adding biochar ~~cells~~ into the meandered channel to remove bacteria.

The water quality concern to be addressed with project BMPs is high bacteria counts. Monthly geometric means of E. coli exceed the State standard (126 cfu/100mL) for most months. The acute standard of greater than 10% of measured values at or above 1,260 cfu/100 mL during the month is also exceeded during most months (Wenck Associates, Inc. 2013). Data were collected from 2006-2010 for Total Maximum Daily Load (TMDL) development. Those trends have continued in the years following, and bacteria data collection along Lambert Creek is part of VLAWMO's ongoing monitoring program. Research completed in 2018 showed that nonpoint delivery of bacteria to the creek occurs following storm events. Molecular testing was used to determine the sources of *E. coli*. Sources were found to be mostly avian with some canine. *E. coli* appear to be collected throughout the subwatershed, possibly including regrowth of *E. coli* as it reproduces in the environment. Bacteria are flushed into the creek in stormwater runoff. Lambert Lake is an appropriate location for BMPs as the last receiving wetland in the chain before Lambert Creek flows into East Vadnais Lake.

Target goals or reductions needed to meet water quality standards for the water body will require a 55% reduction, which includes a margin of safety. The geometric mean of all data collected within the impaired reach for all months is 260 MPN/100mL (Wenck Associates, Inc. 2013).

Project impact

The purpose of this project is to implement new BMPs to remove bacteria, increase storage, provide resilience, and improve ecosystem function on Lambert Creek, which is an impaired stream that flows into East Vadnais Lake, a major reservoir for St. Paul's drinking water supply. This project will reduce bacteria in the creek by 59%, Total Phosphorus (TP) by 70%, and sediment by 19%. Evidence supports that heavy metals will also be removed from the system, but quantitative estimates are not available at this time because the technique is still in experimental stages. Building the meander also allows sediment deposition, slows the rate of water moving through Lambert Creek, and improves wetland function for filtering and storing water, reducing flooding issues in the subwatershed.

High bounce in the Lambert Creek system is a result of extensive ditching that channelized flow and reduced residence times, reducing the possible function of the wetland network in filtering out pollutants. These wetlands are sustained by diffuse nonpoint sources and exceed what could be retained by internal nutrient cycling. This project also aims to reverse detrimental modifications that were done in past decades to restore wetland function and improve water quality.

Bacteria loading to Lambert Creek is predominately from nonpoint urban stormwater with a small contribution to the load from wildlife and canine pet waste within the watershed. As part of the TMDL for Lambert Creek, recommendation for priority load reduction strategies included streambank restoration, infiltration basins, and researching the source of bacteria. The 107 BMP cost shares that have been added in the subwatershed since 2007 were prioritized to help meet the goals of reducing nonpoint stormwater delivery into the creek Implemented cost shares with local citizen involvement include pervious pavement, infiltration basins, and stream stabilization at Oakmede, Lower Lambert, and Koehlar.

The most critical pollution sources come from stormwater from Municipal Separate Storm Sewer Systems (MS4s): Gem Lake City, MnDOT, Ramsey County, Vadnais Heights City, White Bear Lake City, and White Bear Township. These MS4s have been involved in building additional stormwater BMPs into their city designs and planning process.

Extensive monitoring has been the focus of VLAWMO's efforts following establishment of the TMDL to build the research needed to understand source and concentration of bacteria loading. From 2008-2014, five locations on Lambert Creek were sampled twice per month from May through September. Samples were collected for nutrients and bacteria. From 2014-2018, continuous sampling was done in four subwatersheds upstream from Lambert Lake during wet and dry periods to identify bacterial sources. Bacterial sources were found to be primarily avian and are collected with stormwater runoff from streets, gutters throughout the subwatershed. Variation was found among samples but results among sites were not significantly different. Bacteria is collected fairly uniformly in stormwater across the subwatershed (Burns & McDonnell 2014; final results and report pending).

The suite of BMPs implemented so far have helped reduce untreated stormwater delivered to the creek. Research has been conducted to better understand nonpoint sources of bacteria in the subwatershed. Adding BMPs to Lambert Lake including adding a meander to the stream and installing biochar ~~cells~~ will remove bacteria, reduce nutrients, and slow water to allow sediment deposition, improving storage and resilience. The replacement of existing BMPs is required to maintain the system, prevent a system failure, and support function of the new BMPs.

3. Goals, objectives, tasks, and subtasks

Goal: Install suite of BMPs to address bacteria impairment, provide increased stormwater storage, and capture sediment in

the Lambert Lake area of Lambert Creek

Objective 1: Lambert Lake sheet pile replacement

Task A: Excavation and replacement of fiberglass sheet pile with steel sheet pile

~~**Responsible Party:** Excavation company~~

Objective 1 Timeline: January 2021-March 2021

Objective 1 Cost: Grant: $0, Match: $400,000.00, Total: $400,000.00

Objective 1 Deliverables: Repaired pond and system ready for addition of meandering channel

Objective 2: Design new meandering channel through Lambert Lake

Task A: Assess the nature and depth of peat/sand and the groundwater flux
Task B: Based on substrate condition, design a meandering channel to optimize water storage and ~~contact time with Biochar Cells.~~ treatment.

~~**Responsible Party:** SEH partnering with UMN~~

Objective 2 Timeline: November 2019-March 2020

Objective 2 Cost: Grant: $34,000, Match: $33,772, Total: $67,772

Objective 2 Deliverables: Accepted bid and contract for construction

Objective 3: Build meandering channel through Lambert Lake

Task A: Construct meandering channel

~~**Responsible Party:** SEH~~

Objective 3 Timeline: January 2021-May 2021

Objective 3 Cost: Grant: $190,670, Match: $104,000, Total: $294,670

Objective 3 Deliverables: As-builts for meander construction and a description of the vegetative restoration that was completed

Objective 4: Design and install Biochar Treatment ~~Cells~~, ~~including sampling protocol for monitoring BMP performance~~

Task A: Lab test Biochar ~~Cell~~ treatment performance ~~using UMN flume~~
Task B: ~~Work with vendor to d~~Design and create Lambert Lake Biochar ~~Cells~~treatment
Task C: Design placement of Biochar ~~Cells~~ treatment ~~in selected locations of the meandering channel~~
Task D: Install Biochar ~~Cells~~ treatment

~~**Responsible Party:** UMN working with Midwest Floating Island and SHE~~

Objective 4 Timeline: January 2020-~~December 2020~~ -April 2022

Objective 4 Cost: Grant: ~~$18,009~~ $78,009, Match: ~~$10,000~~ $40,000, Total: ~~$28,009~~ $118,009

Objective 4 Deliverables: A final product with documentation of lab performance and plans showing the location and placement of Biochar. ~~Cells~~

~~**Objective 5:** Design and implement performance evaluation of BMPs~~

~~**Task A:** Design sensors and sampling protocol~~
~~**Task B:** Install sensors and sampling access ports~~

~~**Responsible Party:** UMN BBE (Magner and Ulrich)~~

~~**Objective 5 Timeline:** January 2021-December 2021~~

~~**Objective 5 Cost:** Grant: $25,000, Match: $10,000, Total: $35,000~~

~~**Objective 5 Deliverables:** Constructed sensors and sampling ports placed into the system.~~

Objective 6: Monitor BMP performance

Task A: Collect data
Task B: Analyze data
~~**Task C:** Write a report illustrating BMP performance~~
~~**Task D:** Enter data into databases (EQuIS, eLINK)~~

~~**Responsible Party:** VLAWMO working with UMN (Magner and graduate student)~~

Objective 6 Timeline: January 2022-December 2022

Objective 6 Cost: Grant: ~~$35,000~~ $0, Match: ~~$31,226.40~~ $11,226.40, Total: ~~$66,226.40~~ $11,226.40

Objective 6 Deliverables: Report of BMP performance, summary of projects completed, and pollutant reductions as outlined in the grant agreement.

Objective 7: Grant administration, monitoring and community engagement

Task A: Communicate results and deliver site-specific programming
Task B: Grant reporting and grant administration

~~**Responsible Party**: VLAWMO~~

Objective 7 Timeline: November 2019-August 2023

Objective 7 Cost: Grant: $0, Match: $12,448.85, Total: $12,448.85

Objective 7 Deliverables: Education and Outreach programming delivered and published on VLAWMO website

4. Measurable outcomes

Lake ID or stream AUID	07010206-801					
Phosphorus	7.1	lbs/yr	1130	$/lb	70	%
Sediment	5.5	tons/yr	1450	$/ton	19	%
Other (list): Bacteria	7.7 x 10^9	org/day		$/	59	%

Bacteria is a major pollutant leading to §303(d) listings and subsequent TMDL development. Given the nature of bacteria measurements (e.g., counts per 100 milliliters), an appropriate expression of loads for bacteria TMDLs is organisms per day. Cost when divided out is a very small number (on the level of many fractions of a cent) that does not make much sense to report. The direct cost for the Biochar Treatment ~~Cells~~ that lead to removal of 7.7x10^9 organisms per day includes building the meander and installing the Biochar Treatment ~~Cells (or $125,500).~~ However, that work cannot be completed without replacing the failing sheet pile and conducting the research and design budget components that need to happen prior to installation of ~~cells~~Biochar Treatment.

Bacterial load reductions have been projected for the purposes of this project. However, it is recognized that bacterial loads vary depending upon the flow regime. More specifically targeted goals will be determined by using the load duration curve method from https://www.epa.gov/sites/production/files/2015-07/documents/2007_08_23_tmdl_duration_curve_guide_aug2007.pdf.

Load duration curves will be developed that set bacteria load reductions for high, moderate, medium, low and baseflows. Performance will be measured above and below the channel and at selected ~~Biochar Cells~~ locations. Bi-weekly sampling will continue along Lambert Creek and document resulting bacterial load reductions. Lab analyses will be used for bacteria and nutrient reductions and include documentation with annual reports. Monitoring will extend beyond the terms of the grant.

Adaptive management will be utilized to make modifications as needed. An adaptive strategy is especially important because of the innovative and experimental nature of this project. Biochar Treatment ~~Cell~~ design and optimal stream placement is currently being researched by Dr. Magner's lab at the University of Minnesota. The testing and implementation of ~~these cells~~ biochar in stormwater management to remove bacteria is a cutting-edge design.

6. Project budget (attached)

MINNESOTA POLLUTION CONTROL AGENCY

Attachment A - Budget

SWIFT:		169280
Purchase Order:		3000025454
AI:		192051
Activity ID:		PRO20190002

VLAWMO Bacteria, Sediment, & Nutrient Reduction Project
Vadnais Lake Area Water Management Organization (VLAWMO)

Objective	Cost category	Unit cost	Rate	Quantity	Grant	Grant Change Order 1	In kind match	Cash match	Cash Change Order 1	Total match	Total Change Order 1	Budget total
Objective 1: Lambert Lake Sheet Pile Replacement												
Task A: Replace failing fiberglass sheet pile with steel sheet pile (420 total feet)	Best Management Practices (BMP) Replacement	$400,000.00					$ -	$ 400,000.00		$ 400,000.00		$ 400,000.00
Objective 1 - Total					**$ -**		**$ -**	**$ 400,000.00**		**$ 400,000.00**		**$ 400,000.00**
Objective 2: BMP Engineering and Technical Assistance												
Tasks A-B: Engineering and Technical Assistance	Engineering	$59,000.00			$ 34,000.00		$ -	$ 25,000.00		$ 25,000.00		$ 59,000.00
Tasks A-B: VLAWMO Staff Coordination	Coordinator				$ -		$ 8,772.00	$ -		$ 8,772.00		$ 8,772.00
Objective 2 - Total					**$ 34,000.00**		**$ 8,772.00**	**$ 25,000.00**		**$ 33,772.00**		**$ 67,772.00**
Objective 3: BMP Installation												
Task A: Build meander from Lambert Lake and reconnect to ditch (1,500 to 2,000 total feet)	BMP Implementation	$294,670.00			$ 190,670.00			$ 104,000.00		$ 104,000.00		$ 294,670.00
Objective 3 - Total					**$ 190,670.00**		**$ -**	**$ 104,000.00**		**$ 104,000.00**		**$ 294,670.00**
Objective 4: Design and Install Biochar ~~Cells~~, including sampling protocol for monitoring BMP performance												
Task A-C: Lab test, work with vendor to design, select placement	Engineering	$22,509.00			$ 12,509.00	$ 12,509.00	$ -	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 22,509.00
Task D: Installation of biochar ~~cells, includes perforated tubes, accessories, and support rods anchored through peat~~	BMP Implementation	$5,500.00			~~$ 5,500.00~~	$ 65,500.00	$ -	~~$ -~~	$ 30,000.00	~~$ -~~	$ 30,000.00	~~$ 5,500.00~~
Objective 4 - Total					**~~$ 18,009.00~~**	**$ 78,009.00**		**~~$ 10,000.00~~**	**$ 40,000.00**	**~~$ 10,000.00~~**	**$ 40,000.00**	**~~$ 28,009.00~~**
~~Objective 5 - Monitoring Design and Installation~~												
~~Task A-B: Design sensors and sampling protocol and install~~	~~Engineering and Research~~	~~$35,000.00~~			~~$ 25,000.00~~		~~$ -~~	~~$ 10,000.00~~		~~$ 10,000.00~~		~~$ 35,000.00~~
~~Objective 5 - Total~~					**~~$ 25,000.00~~**		**~~$ -~~**	**~~$ 10,000.00~~**		**~~$ 10,000.00~~**		**~~$ 35,000.00~~**
Objective 6 - Monitoring and Analysis												
Task A: Staff Monitoring and data entry	Water Resources Manager				$ -	$ -	$ 3,366.40	$ -	$ -	$ 3,366.40	$ 3,366.40	$ 3,366.40
Task B: Bacteria Samples Lab Analysis	Lab Fees				$ -	$ -	$ 780.00	$ -	$ -	$ 780.00	$ 780.00	$ 780.00
Task B: Nutrient Samples Lab Analysis	Lab Fees				$ -	$ -	$ -	$ 7,080.00	$ 7,080.00	$ 7,080.00	$ 7,080.00	$ 7,080.00
~~Tasks B-D: Analyze data, enter into databases, and develop research paper~~	~~Research~~	~~$55,000.00~~			~~$ 35,000.00~~	$ -		~~$ 20,000.00~~	$ -	~~$ 20,000.00~~	$ -	~~$ 55,000.00~~
Objective 6 - Total					**~~$ 35,000.00~~**	**$ -**	**$ 4,146.40**	**~~$ 27,080.00~~**	**$ 7,080.00**	**~~$ 31,226.40~~**	**$ 11,226.40**	**~~$ 66,226.40~~**
Objective 7 - Grant administration, monitoring, and community engagement												
Education and Outreach												
Task A: Programming	E&O Coordinator				$ -		$ 2,689.60	$ -		$ 2,689.60		$ 2,689.60
Grant Reporting and Adminstration												
Task B: Staff Coordination	Administrator				$ -		$ 4,496.05	$ -		$ 4,496.05		$ 4,496.05
Task B: Staff Coordination	Coordinator				$ -		$ 5,263.20	$ -		$ 5,263.20		$ 5,263.20
Objective 7 - Total					**$ -**		**$ 12,448.85**	**$ -**		**$ 12,448.85**		**$ 12,448.85**
	Total				**$ 302,679.00**		**$ 25,367.25**	**$ 576,080.00**		**$ 601,447.25**		**$ 904,126.25**

Attachment 4

February 24, 2021

Attn: Joe Magner, Principal Investigator, and Steven Smith, Financial Professional
University of Minnesota
NW 5957
PO Box 1450
Minneapolis, MN 55485-5957

Re: Notice of Termination -- VLAWMO Minor Services Agreement

Dear Joe Magner and Steven Smith:

As you know, the Vadnais Lake Area Water Management Organization ("VLAWMO") entered into a Minor Services Agreement with the Regents of the University of Minnesota, Office of Sponsored Projects Administration dated February 11, 2020 ("Agreement"). This letter serves as notice under Section 4 that VLAWMO is terminating the Agreement. Your office is directed to not do any further work on the project as VLAWMO has been forced to hire an engineering firm to move this project forward in a timely fashion due to design changes delivered by the University.

You previously represented that your office completed all the work for Phase 1 and Phase 2 of the project. However, when VLAWMO reviewed what were supposed to be final deliverables for these phases, it discovered significant portions of the work were not completed. The following illustrates VLAWMO's evaluation of the completeness of the work submitted:

Percentage Complete	**Description of Tasks**
~25%	Phase 1: Lab testing for 16 treatments proposed including screening for bacteria, nutrients, heavy metals, organic matter; 4 completed
~40%	Phase 1: Column experiments with each condition (N = 8) in triplicate; 3 completed in triplicate and 1 completed without replication
100%	Phase 2: Design pilot system
~50%	Phase 2: Pilot testing of potential configurations under typical and stressed operating conditions (i.e., extreme flow, prolonged drought, high contaminant loadings, etc.); 2 conditions tested
0%	Phase 2: Calculation for volume of biochar needed; not provided
0%	Bacterial load reduction curves from MPCA workplan; not provided
50%	Tested designed treatment container; design provided but not construction ready
0%	Permitting; not provided

This table was not presented to argue over the percentage of completeness, but simply to point out that a number of items of work were either not entirely completed or apparently not started at all.

A total of $22,509 of the project funds were allocated in the MPCA workplan, coauthored by the UMN PI, for Phase 1 and Phase 2 work, excluding construction materials. To date, VLAWMO has paid $18,924.36 to the UMN for the work. Because significant portions of the work have not been completed, VLAWMO determines it has not received value for the amount it already paid. Further, VLAWMO will need to spend substantially more than the remaining $3,584 to an engineering firm to complete the work for these phases.

VLAWMO is aware of an outstanding invoice (#2010726491) in the amount of $17,368.37 for the Phase 1 and 2 work that was submitted on October 30, 2020. Project delayed status was communicated by VLAWMO and acknowledged by the University with regard to this invoice on November 3, 2020. Given the failure to complete the work and provide the required deliverables for these phases, the VLAWMO Board did not approve payment of this invoice. The Board could not find a legitimate basis on which to pay an amount that exceeds the amount allocated for work, especially when the work was not actually completed.

Perhaps VLAWMO will be able to partner with the University again in the future to further our mutual goals to improve water quality, but at this point VLAWMO needs to turn the project over to someone else to ensure VLAWMO satisfies its obligations to the MPCA under the grant agreement helping to fund the project. Feel free to let me know if there are any questions.

Sincerely,

Jim Lindner

VLAWMO Board Chair

Supplemental Letter Agreement

Attachment 5

In accordance with the Master Agreement for Professional Services between Vadnais Lake Water Management Organization (VLAWMO) ("Client"), and Short Elliott Hendrickson Inc. ("Consultant"), effective February 28, 2019, this Supplemental Letter Agreement dated February 15, 2021 authorizes and describes the scope, schedule, and payment conditions for Consultant's work on the Project described as: BioChar Project – Permitting and Final Design Assistance.

Client's Authorized Representative: Phil Belfiori, Administrator
Address: 800 E County Rd E
Vadnais Heights, Minnesota 55127
Telephone: 651.204.6073 email: Phil.Belfiori@vlawmo.org

Project Manager: Emily Jennings
Address: 3535 Vadnais Center Drive
St. Paul, Minnesota 55110
Telephone: 651.302.7669 email: ejennings@sehinc.com

SEH has prepared a preliminary scope of work and fee estimate for obtaining permits and completing the final design, including plans and specifications, for the Lambert Lake Pond BioChar BMP. The Basic Services to be provided by Consultant:

Task 1. Permitting
Due to the nature of the project location, approvals will be necessary from the Minnesota Department of Natural Resources. Additionally, as permit coverage may be obtained through amending existing permit coverage from the neighboring meander project, approvals from the United States Army Corps of Engineers may also be necessary. Stakeholder coordination is known to require project team collaboration; therefore, this task includes time for 4 team meetings.

It is recognized that VLAWMO staff may be heavily involved in Task 1, therefore we would propose this task on an as-needed basis.

Task 2. Final Design
The preliminary design includes a surface filtration cell that intercepts drainage from the Lambert Lake pond during a high-flow event that causes a 'bounce' within the pond (in exceedance of all existing outlet weirs). The final design tasks include:

- Collecting limited survey data at the BioChar BMP location, including discharge point, to verify surface elevations necessary for constructability. One day of time for a surveyor is included with this proposal.
- Performing a hydraulic analysis of the inflow to the BioChar BMP, including determining the interaction of the Lambert Lake Pond and BioChar BMP proposed inlet location/elevation at select storm events, including the 1-inch, 2-yr, 10-yr, and 100-yr, 24-hr design events.
- Completing a final design BMP layout, including plan view, cross sectional view with media layers, and inlet and outlet elevation/location

The final design task also includes time for 4 design team meetings. This scope assumes that the overall concept developed by the University is a feasible design, as preliminarily verified by SEH through field observations and initial measurements. High-water levels within the Lambert Lake pond will be collected using the VLAWMO XP-SWMM model. Minor modifications to the model will be made to the Lambert Lake Pond node as needed however

it is assumed that no changes up or down-stream of the Lambert Lake Pond node within the model will be necessary.

Task 3. Plans and Project Specifications
Final design plans and project technical specifications will be prepared for construction. We assume a simple bidding process and that this task does not include advertisement for formal bids but rather solicitation for quotes from up to 3 contractors. The plans and project specifications task also includes time for 4 design team meetings.

Construction observation services will be revisited on an as needed basis prior to construction activity. Please note that the above scope does not include any water quality analysis, sampling, or modelling to verify loading or removal rates of pollutants or wetland delineations or WCA permitting.

Schedule: The project schedule will be heavily dependent on the permitting process, which could take up to 4-6 months if USACE permit approvals are needed. We propose to initiate final design survey collection in the spring, when snow and ice melt will allow for visual confirmation of the assumed BMP discharge point, due to the sensitive nature of the vertical allowance. We estimate that Tasks 2 and 3 will take two (2) months to complete, following data collected and clear directive from stakeholder agencies.

Payment: The estimated fee is subject to a not-to-exceed amount of $31,075 including expenses and equipment. The payment method, basis, frequency and other special conditions are set forth in attached Exhibit A-1. Additional work, if required, shall be compensated in accordance with the rate schedule attached hereto as Attachment 1.

Tables 1A and 1B, below, is a preliminary cost estimate for the scope outlined above. Please note that costs related to permitting fees are not included in Table 1B. Expenses related to survey equipment is included in Task 2.

Table 1A: Preliminary Cost Estimate

Task 2. Final Design	$9,535
Task 3. Plans and Project Specifications	$14,305
Total	**$23,840**

Table 2B: Preliminary Cost Estimate for As Needed Basis

Task 1. Permitting	$7,235
Total	**$7,235**

Other Terms and Conditions: Other or additional terms contrary to the Master Agreement for Professional Services that apply solely to this project as specifically agreed to by signature of the Parties and set forth herein:

Section I.D.4. DELETE “including charges for expenses and equipment costs then due and all termination expenses.”

Section IV.C.1 DELETE in its entirety and insert the following:

1. The Client hereby agrees that to the fullest extent permitted by law, Consultant’s total liability to the Client for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to the Project or this Agreement from any cause or causes including, but not limited to, Consultant’s negligence, errors, omissions, strict liability, breach of contract or breach of warranty to the limits of the Consultant’s insurance coverage at no extra expense to the Client.

Short Elliott Hendrickson Inc.	Vadnais Lake Water Management Organization (VLAWMO)
By: _____	By: _____
Robert L. Ellis	
Title: Commercial Director	Title: _____

Exhibit A-1
to Supplemental Letter Agreement
Between Vadnais Lake Area Water Management Organization (VLAWMO) (Client)
and
Short Elliott Hendrickson Inc. (Consultant)
Dated February 15, 2021

Payments to Consultant for Services and Expenses
Using the Hourly Basis Option

The Agreement for Professional Services is amended and supplemented to include the following agreement of the parties:

A. Hourly Basis Option

The Client and Consultant select the hourly basis for payment for services provided by Consultant. Consultant shall be compensated monthly. Monthly charges for services shall be based on Consultant's current billing rates for applicable employees plus charges for expenses and equipment.

Consultant will provide an estimate of the costs for services in this Agreement. It is agreed that after 90% of the estimated compensation has been earned and if it appears that completion of the services cannot be accomplished within the remaining 10% of the estimated compensation, Consultant will notify the Client and confer with representatives of the Client to determine the basis for completing the work.

Compensation to Consultant based on the rates is conditioned on completion of the work within the effective period of the rates. Should the time required to complete the work be extended beyond this period, the rates shall be appropriately adjusted.

B. Expenses

The following items involve expenditures made by Consultant employees or professional consultants on behalf of the Client. Their costs are not included in the hourly charges made for services and shall be paid for as described in this Agreement but instead are reimbursable expenses required in addition to hourly charges for services:

1. Transportation and travel expenses.
2. Long distance services, dedicated data and communication services, teleconferences, Project Web sites, and extranets.
3. Lodging and meal expense connected with the Project.
4. Fees paid, in the name of the Client, for securing approval of authorities having jurisdiction over the Project.
5. Plots, Reports, plan and specification reproduction expenses.
6. Postage, handling and delivery.
7. Expense of overtime work requiring higher than regular rates, if authorized in advance by the Client.
8. Renderings, models, mock-ups, professional photography, and presentation materials requested by the Client.
9. All taxes levied on professional services and on reimbursable expenses.
10. Other special expenses required in connection with the Project.
11. The cost of special consultants or technical services as required. The cost of subconsultant services shall include actual expenditure plus 10% markup for the cost of administration and insurance.

The Client shall pay Consultant monthly for expenses.

C. Equipment Utilization

The utilization of specialized equipment, including automation equipment, is recognized as benefiting the Client. The Client, therefore, agrees to pay the cost for the use of such specialized equipment on the project. Consultant invoices to the Client will contain detailed information regarding the use of specialized equipment on the project and charges will be based on the standard rates for the equipment published by Consultant.

The Client shall pay Consultant monthly for equipment utilization.

Attachment 1

SEH Hourly Billable Rates – 2021

Classification – Office Staff	Billable Rate[1]
Principal	$170 - $270
Project Manager	$140 - $240
Senior Project Specialist	$135 - $220
Project Specialist	$100 - $175
Senior Professional Engineer I	$115 - $180
Senior Professional Engineer II	$140 - $225
Professional Engineer	$105 - $165
Graduate Engineer	$85 - $135
Senior Architect	$125 - $210
Architect	$110 - $150
Graduate Architect	$85 - $110
Senior Landscape Architect	$115 - $170
Landscape Architect	$95 - $125
Graduate Landscape Architect	$85 - $100
Senior Scientist	$130 - $170
Scientist	$90 - $135
Graduate Scientist	$80 - $105
Senior Planner	$130 - $210
Planner	$100 - $150
Graduate Planner	$90 - $120
Senior GIS Analyst	$110 - $175
GIS Analyst	$100 - $120
Project Design Leader	$120 - $185
Lead Technician	$105 - $170
Senior Technician	$90 - $135
Technician	$65 - $115
Graphic Designer	$90 - $145
Administrative Professional	$55 - $130

Classification – Field Staff	Billable Rate[1]
Professional Land Surveyor	$110 - $160
Lead Resident Project Representative	$95 - $155
Sr. Project Representative	$90 - $135
Project Representative	$75 - $125
Survey Crew Chief	$85 - $135
Survey Instrument Operator	$60 - $95

(1) The actual rate charged is dependent upon the hourly rate of the employee assigned to the project.

The rates shown are subject to change.

Effective: January 1, 2021
Expires: December 31, 2021

Attachment 6

Resolution 2021-03
Of the Vadnais Lake Area Water Management Organization (VLAWMO)

Approve changer order to biochar portion of Lambert grant contract with MPCA, authorize termination of UMN contract and approve letter to be sent to UMN that includes refusal to pay outstanding invoice, and approve scope of work with SEH to complete the biochar project.

Resolution 2021-03 was moved by Director _____ and seconded by Director _____:

Whereas, the Board of the Vadnais Lake Area Water Management Organization (the "Board") recognizes the need to fulfill the requirements on the grant contract with the MPCA for the Lambert Lake VLAWMO Bacteria, Sediment, and Nutrient Reduction Project;

Whereas, the UMN biochar team decided to deviate from the original biochar project design, presented VLAWMO with a more expensive and incomplete design, and notified VLAWMO through their legal counsel that they would not participate in completing the draft plans and specs (titled 1.0 Lambert Plans and Specs) sent to VLAWMO on 12/7/2020;

Whereas, the UMN biochar team completed a portion of the tasks identified in the UMN Workplan and contract signed 2/11/2020;

Whereas, a change order to the grant contract with MPCA is needed to shift remaining tasks and funding related to the UMN team to the biochar design and construction grant categories to accommodate the new biochar project design requirements;

Whereas, the MPCA project coordinator has provided approval of the biochar portion of the MPCA workplan in a change order dated 2/17/2021;

Whereas, SEH has been consulted, reviewed draft plans from the UMN biochar team and identified that they have the ability to complete the design, develop signed plans and specs, supervise construction, and has provided a scope of work to complete the project;

Whereas, the VLAWMO Policy and Personnel Subcommittee met on 2/10/2021, to discuss this matter and upon further discussion reached consensus recommendation on the proposed Board actions listed below;

Therefore be it resolved by the VLAWMO Board that:

1. The VLAWMO Board authorizes approval of the MPCA change order dated 2/17/2021 to the biochar portion of Lambert grant contract, with nonmaterial changes,

2. Approves and authorizes the Board Chair to sign the letter dated 2/24/2021, which terminates the UMN contract, states a refusal to pay the outstanding invoice received by VLAWMO on 10/30/2020 and approves sending the letter to the UMN,
3. Approves scope of work with SEH to complete biochar project, and
4. Authorizes the VLAWMO Administrator to sign the scope of work and supplemental letter agreement with SEH for the amount of $31,075, with nonmaterial changes once the MPCA change order is fully approved.

The question was on the adoption of the resolution and there were __ yeas and __ nays as follows:

	Yea	Nay	Absent
Dan Jones	☐	☐	☐
Ed Prudhon	☐	☐	☐
Rob Rafferty	☐	☐	☐
Tom Watson	☐	☐	☐
Patricia Youker	☐	☐	☐
Jim Lindner	☐	☐	☐

_____ Board Chair Date

_____ Attest Date

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

To: VLAWMO Board of Directors
From: Dawn Tanner
Date: February 24, 2021

Re: VI. D. 2. Consideration of 319 Small Watershed Nine Key Element (NKE) Document

With participation from our many stakeholder organizations, including Board and TEC representation, VLAWMO was selected as a priority small watershed through a competitive process with the MPCA during 2019. VLAWMO is part of group B and will be eligible to apply for our first suite of projects during spring 2021. The Request for Proposals is expected to open in May and will close 60 days later, likely in June prior to our June Board meeting. VLAWMO staff are working with partners to build of proposal package now. To apply for funding, we first needed an approved Nine Key Element Document (NKE). This is a federal requirement with approval required by both the MPCA and EPA.

VLAWMO has received approval from the MPCA on our NKE Document (see attached email confirmation from MPCA). This document has been in development with MPCA over the past few months. The NKE is included in the current packet. The NKE needs to be approved by the EPA prior to proposal submission. That approval process is now underway with MPCA and EPA.

As part of the 319 small priority watershed process, VLAWMO was required to identify a suite of projects that would have the potential to allow the WMO to fully meet goals established in the 10-year Watershed Plan (Plan). Because of connections between waterbodies and impaired status, VLAWMO and the MPCA decided to focus on the Wilkinson, Birch, and Tamarack subwatersheds at least for initial round(s) of the grant program. The goal for the program is that delisting would occur if all listed projects were implemented, with a recognition that only a subset of projects will actually be possible.

Our project proposal will include a suite of projects with a total value of ~$450,000. That will follow the same 60/40 grant/cash match ratio that the 319 program has had in the past. Approximately $270,000 will be provided in grant funding. The suite of projects would be accepted during the summer, with formal approval and contract set-up required to follow. Likely the projects will be fully funded and allowed to go forward in late 2021/early 2022. VLAWMO will have 3 years to implement the projects and then propose a new suite of projects in year 4 (and so on for the 16 years of the program).

SEH worked with VLAWMO staff during 2020 to complete a feasibility study for Wilkinson Lake to identify smaller projects that could be implemented as part of the upcoming 319 grant proposals. Barr Engineering has also been working closely with North Oaks Company to develop a suite of larger projects focused on areas owned by the Company and private owners. The goal for this effort is to build a suite of projects with the potential to reduce pollutant loading into Wilkinson Lake, as projects are implemented over time.

At this point, Barr is working to develop a first batch of projects and a phasing plan for the first two rounds of the grant program. VLAWMO staff plan to bring a tentative project proposal to the Board in April and will request authorization to submit the grant application at that time, because there will not be time to request authorization at the June Board meeting.

Staff received a recommendation from the TEC to bring the NKE to the Board at this Feb. meeting.

Attached:
Draft executive summary and implementation table of VLAWMO NKE document
See link at: https://tinyurl.com/8wl7r3pm for the full NKE Plan document.

Staff Recommendation:

Staff request approval of the draft NKE plan (as attached and included in link above) with nonmaterial changes and authorize Staff to finalized NKE Plan once comments are received from EPA. Staff also request Board to authorize staff to continue to consider a suite of projects for the first-round, 319 priority small-watershed proposal for a cohesive package of projects targeting Wilkinson Lake as identified by Barr Engineering. Staff will communicate with the Board when EPA authorization of the NKE is received and anticipates bringing a tentative project proposal forward at the April Board meeting.

Dawn Tanner <dawn.tanner@vlawmo.org>

VLAWMO NKE Document 1.26.22

1 message

Penny, Cynthia (MPCA) <cynthia.penny@state.mn.us> Fri, Jan 29, 2021 at 9:10 AM
To: "Dawn Tanner (dawn.tanner@vlawmo.org)" <dawn.tanner@vlawmo.org>, "phil.belfiori (phil.belfiori@vlawmo.org)" <phil.belfiori@vlawmo.org>, "Cords, Wayne (MPCA)" <wayne.cords@state.mn.us>
Cc: "Johnson, Gregory (MPCA)" <gregory.johnson@state.mn.us>, "Colin Geisenhoffer (geisenhoffer.colin@epa.gov)" <geisenhoffer.colin@epa.gov>

Hello Everyone,

Please see the attached copy of the VLAWMO NKE document and its review. This is still a draft document, but the MPCA has determined that this document describes all the information necessary to meet the NKEs. The entire, comprehensive plan for the entire VLAWMO can be found: https://www.vlawmo.org/about/why-water-matters/ Please note that this information has been incorporated to into the NKE Document, which provides the details necessary to meet the requirements. The additional plan is simply an FYI.

Once it is reviewed by all parties, suggestions incorporated, etc. we will finalize the document, ensure its formatting is completed and to Agency standards.

Thank you for all your work to this point and your continued efforts to complete this project.

Cindy

2 attachments

VLAWMO NKE Document 1.26.22.docx
5478K

VLAWMO Review of Nine Element CMP 1.26.21.xlsx
64K

Grant

January 2021

Vadnais Lake Area Watershed Management Organization Nine Key Element Document for Birch, Tamarack, and Wilkinson Lakes

This document provides a summary of the EPA's nine key elements information for Birch, Tamarack, and Wilkinson Lakes.

Contents

Executive summary

The Vadnais Lake Area Water Management Organization's (VLAWMO) mission is "to protect and enhance the water and natural resources within the watershed through water quality monitoring, education and outreach projects, wetland protection, and water quality enhancement projects and programs." (VLAWMO, 2020, p. 6).

The VLWAMO has a long history of working with its member cities, watershed citizens, and many other partners in protecting and enhancing the water resources within the watershed. The VLAWMO was formed in 1983 using a Joint Powers Agreement (JPA) under the authority of Minn. Stat. chs. 471.59 and 103B.201. The watershed encompasses the City of North Oaks, along with portion of the Cities of White Bear Lake, Gem Lake, Vadnais Heights, Lino Lakes, and White Bear Township, and includes 17 lakes, 1 creek, and over 1,000 wetlands. The history of watershed planning for VLAWMO extends back to water management planning required for watershed management organizations in the seven-county Twin Cities metropolitan area by the Minnesota Legislature in 1987. Water management organizations are required to develop a Plan at least every 10 years under Minn. Stat. ch. 103B.231 and Minn. R. ch. 8410. The plans must contain information which describes the natural resources within the watershed, establish measurable goals that address priority issues, devise and implement strategies to reach the goals, and a procedure to evaluate progress. The preferred approach by the locals for planning is to include what can be reasonably accomplished in 10 years.

The VLAWMO Comprehensive Watershed Management Plan (Plan) is the fourth generation of their Plan and describes how VLAWMO will manage activities in the watershed from the years 2017 through 2026. The Plan describes the natural resources and core activities of the watershed, the issues and goals that VLAWMO will focus on for the next ten years, and the implementation strategies and subwatershed activities that will be utilized to meet those goals. The VLAWMO has also conducted specific studies, including retrofit analysis and sustained lake management plans, for Wilkinson, Birch, and Tamarack Lakes.

Development of a nine key element (NKE) plan in conjunction with the existing Plan presented a complex challenge to mesh all of the varied programmatic requirements. Water and watershed plans in Minnesota are generally developed on a 10-year timeline with specific activities and projects that will be reasonably achieved within the current funding and capacity of the watersheds. The EPA requires that the 10-year timeline identify and adaptively work to implement activities and projects that will be required to meet the reductions needed to meet water quality standards. Part of the NKE plan is to work to identify and adaptively implement means to achieve these goals.

The Plan, along with individual Sustainable Lake Management Plans (SLMP), use an adaptive management approach. The Plan and SLMPs, Ramsey County retrofit reports, and feasibility studies, combined with the documentation described in this memorandum, fully provide the NKEs identified by EPA as critical in a watershed plan for achieving improvements in water quality for the three lakes. This NKE document summarizes the details required to meet the NKEs and the VLAWMO planning processes. The NKE plan (in collaboration with VLAWMO's other reports and documentation) is addressing pollutants, sources and solutions in the watershed. For the purposes of the Section 319 grant program, only practices and activities eligible for funding under the EPA 2014 Section 319 program guidance and Minnesota's Nonpoint Source Pollution Program Management Plan (NPSPPMP) are eligible for Section 319 funding. All match activities must be eligible for Section 319 funding, except where noted in the NPSPPMP.

While it may not appear to be a significant difference, in practice it becomes difficult to mesh the Watershed's requirements under State statute for watershed planning with the NKE. It is the goal of the VLAWMO and the MPCA to successfully marry these two approaches by focusing on Birch, Tamarack, and Wilkinson subwatersheds within the Vadnais Lake HUC12. It is the desire and intent of the WMO to achieve the measurable outputs described in this document and the spreadsheet. However, achievement is highly dependent on partner interest, opportunity, funding, schedule and capacity.

In preparation for this grant program, the VLAWMO and partners conducted specific feasibility studies focused on the Wilkinson subwatershed to further identify and design projects that would be pursued. The VLAWMO engineers conducted additional analysis in the Wilkinson subwatershed during 2020 in preparation for this grant program to further analyze the feasibility of achieving goals specified in the Plan. Small, disconnected projects are unlikely to make a difference to water quality in the lake. A large, connected network of projects is necessary in this largely developed area with substantial habitat buffers and designated protected areas. Working with the major landowner in the area, the North Oaks Company (NOC), is crucial to make measurable differences and work to achieve the goals set out in the Plan. To build the framework for these projects, an additional feasibility study was undertaken by North Oaks Company in late 2020, in collaboration with VLAWMO, to identify large, connected projects focused on NOC-owned land. The large, connected projects have been identified and designed by Barr Engineering as part of this feasibility study. Results of that work are recently available (Dec. 2020), and development for a phasing plan for those projects is currently underway. This connected suite of projects, forming a stormwater spine, is intended to be a major focus for project implementation for at least the initial grant rounds.

Implementation strategies

The implementation strategies, schedules, goals, milestones, and measurement criteria are described in the following tables for each of the Lakesheds. The estimated reductions will meet the estimated needed reduction to either restore (Tamarack and Wilkinson Lakes) or improve the trend for protection (Birch Lake). These tables are intended to illustrate meeting of Elements b., c., f., g., and h. Note: It is the desire and intent of the WMO to achieve the measurable outputs listed below. However, achievement is highly dependent on partner interest, opportunity, funding, schedule and capacity.

Table 3. Wilkinson Lake implementation activity, measure, assessment, status, schedule, and estimated load reductions

Implementation Activity	Goal	Milestone	Assessment	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction (P) lbs/yr	Estimated Load Reduction (TSS) lbs/yr
Current projects underway/ongoing									
Ongoing biweekly monitoring and reporting (May-Sept)	Gain an understanding of water quality conditions and trends for Wilkinson Lake	EQuIS/MPCA reporting completed on time annually; Annual monitoring report included on website and provided to BWSR	# data entered in EQuIS annually # annual reports filed with BWSR/MPCA # reports posted on website	X	X	X	X		
Digital communications and social media outreach	Develop meaningful relationships with community and further their understanding of water quality	Page views per year, new page likes per year, email opens per year	# website views annually # social media page likes annually # email opens/yr	X	X	X	X		
Large BMP (stormwater spine) in development with North Oaks Company and Barr Engineering Step 1: Completion of feasibility and stakeholder input for proposed regional project	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	Feasibility study completed Input from stakeholders gathered, understood and used to inform the study	# stakeholders participated Feasibility study	X					
Invasive species control efforts: Purple loosestrife	Establish appropriate native plants and mitigate the presence of invasive species	Invasive species extent documented and reduced, Purple loosestrife mapped,	# acres of purple loosestrife reduced # beetles introduced # maps	X	X				

Implementation Activity	Goal	Milestone	Assessment	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction (P) lbs/yr	Estimated Load Reduction (TSS) lbs/yr
		analysis/comparison of maps							
Future planned projects									
Invasive species control efforts: Yellow iris, Eurasian watermilfoil, Curly-leaf pondweed	Mitigate the presence of invasive species and reduce nutrient contribution by AIS to the lake	Invasive species extent documented and reduced for Yellow iris Eurasian watermilfoil Curly-leaf pondweed	# species reduced # maps # estimated pounds TP reduced		X	X	X	20	
Subwatershed neighborhood raingarden projects	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	2-3 completed raingardens over the full grant program timeframe through cost share projects annually	# raingardens # cost share projects # estimated pounds TP reduced	X	X	X	X	1.5	
BMP from 2020 feasibility study focused on upgrading storm ponds in WB Township and NO	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	1-2 pond upgrades constructed as identified from retrofit analysis/report	# ponds upgraded # estimated pounds TP reduced		X	X	X	1.5	

Constructed wetland project as identified in 2020 feasibility study	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	Build constructed wetland as identified from retrofit analysis/report and subsequently enhanced in footprint if amenable with North Oaks Company	# acres wetland # acres treated # estimated pounds TP reduced	X	X	X		1.5	
Large BMP (possible stream meander) in development with North Oaks Company and Barr Engineering: This would require a separate feasibility phase to go forward.	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	1 large meander constructed in partnership with North Oaks Company and others	# feet of meander constructed # estimated pounds TP reduced			X	X	429	
Alum treatment feasibility to quantify internal load and dosing study	Decrease internal phosphorus load to decrease lake water TP concentrations and decreased algal blooms	Feasibility study completed and dosing calculated	# pounds alum needed # estimated pounds TP reduction			X	X		
Alum treatment to address internal load	Decrease internal phosphorus load to decrease lake water TP concentrations and decreased algal blooms	Alum treatment applied	# alum applications # pounds alum applied # estimated pounds TP reduced			X	X	35	
Bathymetry & vegetation surveys	Decrease internal phosphorus load to decrease lake water TP concentrations and decreased algal blooms	Lake contours included in VLAWMO/ESRI online GIS resource; veg survey report included on Wilkinson Lake page on VLAWMO website	Schedule created # bathymetry updates # vegetation survey updates		X				
Barr Project: Detailed erosion inventory and targeted erosion control and bank stabilization along agricultural ditch on North Oaks Company/MLT easement	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	Erosion survey of entire ditch length; Efforts to reduce erosion completed along the ditch corridor	Survey completed # (and length or volume - ?) of sites restored # estimated pounds TP reduced			X	X	7	19,000

Barr Project: "Treatment Spine" of a series of wetlands along the agricultural ditch on North Oaks Company/MLT easement that removes pollutants being transported through the ditch flows	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	Phased plan and design and specifications completed, construction completed	# wetlands created # estimated pounds TP reduced	X	X	X	X	42	64,000
Barr Project: Regional filter (i.e. iron-enhanced sand, spent lime, or proprietary device) to treat agricultural ditch flows	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	Design and specifications completed, construction completed	Regional filter installed # estimated pounds TP reduced		X	X	X	8.4	5,000
Completed projects									
Carp control efforts including large fish barrier	Keep internal phosphorus load from increasing and increasing lake water TP concentrations and algal blooms	Carp not detected in fish surveys	# surveys without carp						
Biological monitoring (remote cameras and frog call survey)	Evaluate faunal condition of the watershed landscape	Monitoring complete, reports posted, and maps available for future comparison and evaluation (especially for restoration projects)	# native species Frequency of presence						
Minnesota Land Trust easement for ~900 acres, the largest in the metro area	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Wilkinson Lake	Easement in place	MLT annual site inspection, survey, report						
Total estimated reductions								**546**	**88,000**

Table 4. Birch Lake implementation activity, measure, assessment, status, schedule, and estimated load reductions

Implementation Activity	Goal	Milestone	Assessment Criteria	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction P lbs/yr	Estimated Load Reduction (TSS) lbs/yr
Current/ underway projects									
Ongoing biweekly monitoring and reporting (May-Sept)	Gain an understanding of water quality conditions and trends for Birch Lake	EQuIS/MPCA reporting completed on time annually; Annual monitoring report included on website and provided to BWSR	# data entered in EQuIS annually # annual reports filed with BWSR/MPCA # reports posted on website	X	X	X	X		
Use existing educational materials and/or create materials for homeowners about chloride, raking leaves, and other water friendly yard management techniques	Develop meaningful relationships with community and further their understanding of water quality	Chloride brochure, notice/ad placed in local paper, coordination with member cities to provide information at central locations, training for key employees to reduce salt application, 1 newspaper article or ad per year; 1 webpage on municipality website	# articles # webpage/ municipality website # salt trainings for key employees # coordination events with municipalities	X	X	X	X		
Digital communications and social media outreach	Develop meaningful relationships with community and further their understanding of water quality	Website page views, social media engagement, email newsletter engagement	# website views annually # social media page likes annually # email opens/yr	X	X	X	X		

Implementation Activity	Goal	Milestone	Assessment Criteria	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction P lbs/yr	Estimated Load Reduction (TSS) lbs/yr
Subwatershed neighborhood raingarden projects	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Birch Lake to protect from impairment	1-3 completed raingardens through cost share projects annually	# raingardens completed # cost share dollars # estimated pounds TP reduced	X	X	X	X	2	4555
Partner with BLID to reduce Eurasian watermilfoil in areas identified in veg survey/delineation. This would be an extension of a current project. The current project is done by BLID and includes a general harvest, not only focused on invasives	Establish appropriate native plants and mitigate the presence of invasive species to decrease internal P loading	Reduced contribution of organic matter to P loading in the lake; area of Eurasian watermilfoil and hybrid watermilfoil	# acres Eurasian milfoil reduced # pounds hybrid watermilfoil removed # plant surveys # estimated pounds TP reduced	X	X	X	X	10	
Future planned projects									
4th and Otter Lake Road reconstruction incorporating infiltration and/or filtration BMPs Step 1: Completion of feasibility	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Birch Lake	Feasibility study completed	Feasibility/design phase completed		X	X	X		
4th and Otter Lake Road reconstruction incorporating infiltration and/or filtration BMPs Step 2: Upon completion of feasibility study, proceed with implementation of "project"	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Birch Lake	Construction of project, completion of project	Construction of project begun Project completed # estimated pounds TP reduced Maintenance plan in place		X	X	X	4	
Neighborhood retrofit continued implementation (curb-cut raingardens) as identified in Ramsey County SWCD retrofit study (previously completed)	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Birch Lake	Additional raingardens added using VLAWMO cost-share program and stakeholder/City partnerships	# raingardens completed # estimated pounds TP reduced Amount of drainage area treated		X	X	X	3	1000

Implementation Activity	Goal	Milestone	Assessment Criteria	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction P lbs/yr	Estimated Load Reduction (TSS) lbs/yr
Rotary Nature Preserve restoration to support improved wetland function	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Birch Lake	Restoration completed and maintenance plan in place	# acres restored wetland # estimated pounds TP reduced		X	X	X		900
Completed projects									
Bathymetry & vegetation surveys	Decrease internal phosphorus load to decrease lake water TP concentrations and decreased algal blooms	Lake contours included in VLAWMO/ESRI online GIS resource; veg survey report included on Birch Lake page on VLAWMO website	Schedule created # bathymetry updates # vegetation survey updates						
Support BLID efforts	Develop meaningful relationships with community and further their understanding of water quality	TEC representation from BLID member and continued collaboration	# BLID activities supported	X	X	X	X		
4th and Otter Lake Road project development and implementation (iron-enhanced sand filter)	Reduce TP loading from stormwater runoff at 4th and Otter Lake Road	1 CIP constructed at location identified from retrofit analysis/report	# maintenance	X	X	X	X	8.1	1245
Shoreline restoration on north shore	Reduce TP loading through erosion control from shoreline erosion activities.	Restoration of 850 acres (150 initial and 700 added) completed and maintenance plan in place	# acres maintained # estimated pounds TP reduced	X	X	X	X	1	2200
Native plantings; restoration underway to support iron-enhanced sand filter	Restore ecological function of the watershed	Restoration completed and maintenance plan in place	# acres maintained	X	X	X	X		45

Implementation Activity	Goal	Milestone	Assessment Criteria	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction P lbs/yr	Estimated Load Reduction (TSS) lbs/yr
Picture Post (U.S. Phenology Network) installed and photos utilized to report on phenology	Increase awareness of the native landscape in the watershed	Picture Post installed, digital article published on VLAWMO website, and coordination with other PP sites	# coordination with Picture Post sites	X	X	X	X		
Biological monitoring (remote cameras and frog call survey)	Evaluate faunal condition of the watershed landscape	Monitoring complete, reports posted, and maps available for future comparison and evaluation (especially for restoration projects)	# native species Frequency of presence						
Engage partner on additional street sweeping & chloride management	Reduce TP and chloride loading through street management practices	E&O outreach workshops, and cohost for annual salt symposium	# workshops # salt symposium	X	X	X	X		
Total estimated reductions								**28**	**9,945**

Table 5. Tamarack Lake implementation activity, measure, assessment, status, schedule, and estimated load reductions

Implementation Activity	Goals	Milestones	Assessment criteria	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction (P) lbs/yr	Estimated Load Reduction (TSS) lbs/yr
Current /underway projects									
Ongoing biweekly monitoring and reporting (May-Sept)	Gain an understanding of water quality conditions and trends for Tamarack Lake	EQuIS/MPCA reporting completed on time annually; Annual monitoring report included on website and provided to BWSR	# data entered in EQuIS annually # annual reports filed with BWSR/MPCA # reports posted on website	X	X	X	X		
Subwatershed neighborhood raingarden projects, including a large raingarden and pervious pavers at Tamarack Nature Center	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Tamarack Lake	4 completed raingardens over the grant program through cost-share projects	# raingardens completed # cost share funds # estimated pounds TP reduced	X	X	X	X	6	1017
Digital communications and social media outreach	Develop meaningful relationships with community and further their understanding of water quality	Website page views, social media engagement, email newsletter engagement	# website views annually # social media page likes annually # email opens/yr	X	X	X	X		
Woodland restoration (underway by RCSWCD with CPL grant, 18 acres)	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Tamarack Lake	18 acres of restoration completed	# acres restored # maintenance plan	X					

Implementation Activity	Goals	Milestones	Assessment criteria	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction (P) lbs/yr	Estimated Load Reduction (TSS) lbs/yr
Wetland restoration project at Teal Pond in partnership with RCSWCD (in progress ~3.37 acres)	Reduce phosphorus loading from the watershed and decreasing TP and TSS concentrations in Tamarack Lake	3.37 acres of restoration complete	# acres wetland restored # maintenance plan # estimated pounds TP reduced	X				1	800
Future/planned project									
1-3 CIP projects constructed		1-3 CIP constructed at location identified from retrofit analysis/report. Projects include curb-cut raingardens of 3 different possible types (simple bioretention, moderately complex bioretention, and complex bioretention).		X	X	X	X	7	
Alum treatment feasibility to quantify internal load and dosing study	Decrease internal phosphorus load to decrease lake water TP concentrations and decreased algal blooms	Feasibility study completed and dosing calculated	Feasibility and plan for alum application		X	X			
Alum treatment to address internal load	Decrease internal phosphorus load to decrease lake water TP concentrations and decreased algal blooms	Alum treatment applied	# alum treatments applied # estimated pounds TP reduced			X	X	28	
Bathymetry & vegetation surveys	Increase understanding of internal loading of Tamarack Lake	Lake contours included in VLAWMO/ESRI online GIS resource; veg survey report included on Tamarack Lake page on VLAWMO website	# survey updates	X					
Completed projects									

Implementation Activity	Goals	Milestones	Assessment criteria	2021-2023	2024-2026	2027-2029	2030-2032	Estimated Load Reduction (P) lbs/yr	Estimated Load Reduction (TSS) lbs/yr
Prairie restoration (done by Tamarack and RCSWCD, previously completed, ~80 acres)	Improve habitat for wildlife	Restoration of ~80 acres completed and maintenance is ongoing	# acres restored						
Floating island experimental site and educational signage	Evaluated feasibility of floating islands for nutrient treatment of waterbodies	Floating island in place, monitoring conducted by UMN scientist and students, reporting complete, load reductions reported.	Report completed Reductions estimated						
Biological monitoring (remote cameras and frog call survey)	Evaluate faunal condition of the watershed landscape	Monitoring complete, reports posted, and maps available for future comparison and evaluation (especially for restoration projects)	# native species Frequency of presence						
Total estimated reductions								**42**	**1,817**

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

To: VLAWMO Board of Directors
From: Dawn Tanner
Date: February 24, 2021

Re: VI. D. 3. Pleasant Lake Internal Loading Package for 2021

VLAWMO staff have been working on plans for a suite of internal load reduction projects on Pleasant Lake (and connected waterbodies) for 2021. These projects together constitute a comprehensive internal load reduction plan. Partner involvement is critical in successful implementation of these projects. NOHOA and SPRWS are working on key pieces of financial support.

Internal load reduction is focused on controlling early-season nutrient load additions from Curly-leaf pondweed and continued resuspension of sediment by carp. Targeted Curly-leaf pondweed control in the west bay, high sediment accumulation area was recommended by the engineers doing the sedimentation and internal loading study during 2020. The carp project is in year 3 and well poised for a large successful harvest of carp because of the baseline data and planning that have been built during years 1 and 2 of the project.

a) Carp control effort:

Carp Solutions has provided biomass data (273 kg/ha) to compare against management goals (100 kg/ha) and set targets for removal. They have also monitored and provided movement data to document additional possible harvest locations during migration periods. The work completed to date informs the proposed year 3 effort.

WSB engineering provides a market connection, coordination with commercial fishers, and telemetry implanting and use to focus on effective large-scale carp removal. VLAWMO has been working with WSB over the past few months and conducted site visits and monitoring to prepare for removal needs. A proposal is now in from WSB to provide assistance to VLAWMO during 2021 and help facilitate carp removal this fall. The full proposal is included in the current packet. That work includes:

- Coordinate with commercial fishers and work to prioritize harvest in Pleasant
- Coordinate with transport, holding if needed, and shipping to get fish to market
- Assist in implanting radio transmitters to make a harvest more efficient
- Provide vegetation control recommendations to increase success of a harvest

WSB has provided a proposal with itemized components for 2021. VLAWMO recommends allocating ~$20,572 for carp removal with WSB (see quote included in the packet; this would include Tasks 1-6). Note that depending upon the size of the haul, including Bigmouth buffalo, costs may be lower. VLAWMO also has $3,884.60 remaining on the Carp Solutions, Inc. contract from 2021 to continue antenna monitoring between Deep and Wilkinson Lakes, as was done in 2020. SPRWS was able to allocate funds for work on Pleasant and has offered that those funds could be applied toward carp work. VLAWMO has requested support from SPRWS for carp work in 2021.

1) Staff request authorization from the Board to sign a contract with WSB for $20,572, with the understanding that a reduced amount may be needed depending upon the size of the carp and Bigmouth buffalo harvest. Financial partnership for this project has been requested from SPRWS.

b) Curly-leaf demonstration project:

Targeted Curly-leaf pondweed is also proposed as part of this project. The area selected is experiencing rapid sedimentation and becoming shallow. The rate of "filling in" is much higher than would be expected naturally. Results of the study in 2020 showed that the sedimentation that is occurring is actually composed of much and organic matter. It has been demonstrated that the high biomass of invasive Curly-leaf pondweed, that grows early in the season and dies back in June, is accelerating the rate of filling in that is occurring in the bay. Additionally, high plant density will interfere with carp nets during removal.

VLAWMO staff seek support from the Board for cost share funding to NOHOA a demonstration Curly-leaf treatment in partnership with NOHOA in Pleasant Lake. This would be a trial treatment to reduce nutrients released by Curly-leaf into the water column early in the summer. This would be a demonstration only at this time. The location has been selected to support the carp removal and was also requested by the commercial fisher to make the removal process easier and likely more successful. The total cost for the Curly-leaf treatment in the west bay area is $11,700 to treat 19.41 acres. NOHOA has allocated $8,500 for the treatment and requests $3,510 from VLAWMO to fund this demonstration effort. An additional $1,500 cost share (from VLAWMO to NOHOA) may be needed to expand the area slightly based on the commercial fisher recommendation.

Staff would note that this cost share should not be considered as setting a VLAWMO funding precedent given that a previous study was completed in the specific area, other internal-load reductions strategies were not viable (oxygenation system in place preventing high release of P into the water column and high iron content in the sediment ruling out an iron addition as needed), the engineers recommend Curly-leaf control for internal loading improvement and to reduce high accumulation of sediment, the location has been selected to facilitate carp removal (site identified and requested by commercial fisher), partner funding is in place, and the project is being presented as a trial/demonstration project only with results to be assessed before recommendations for possible future directions will be offered.

This information was brought to the Policy and Personnel Committee on Feb. 10 and recommended to bring to the full Board at that meeting. It was also presented to the TEC on Feb. 12 and recommended by the TEC to bring to the full Board.

2) Staff request authorization from the Board to support VLAWMO cost share to NOHOA for a demonstration Curly-leaf treatment in the west bay of Pleasant with NOHOA, at 30% of the total cost plus a possible extension area for optimal carp harvest. The total VLAWMO cost would be $3,510-$5,000. NOHOA is contributing $8,500.

January 14, 2021

Ms. Dawn Tanner
Project Development Coordinator
Vadnais Lake Area Water Management Organization
800 East County Road E.
Vadnais Heights, MN 55127

Re: Proposal for Common Carp Management and Removal Coordination in Pleasant Lake, Ramsey County (ID #62004600)

Dear Ms. Tanner:

Thank you for the opportunity to provide this proposal to work collaboratively with the Vadnais Lake Area Water Management Organization (VLAWMO) to manage the common carp (referred to as carp for the remainder of this document) population in Pleasant Lake.

Carp (an aquatic invasive species in Minnesota) negatively affect water quality and overall ecological integrity of waterbodies by resuspending sediments and nutrients into the water column through feeding and spawning behavior, reducing the abundance of submerged aquatic vegetation, and, to a lesser extent, excretion of waste. Overabundant carp populations can bioengineer the environments they live in and dramatically change the ecology of shallow lake systems.

WSB staff have a combined 29 years of experience in carp research and management. This research and management experience includes over 3,000 hours of high and low frequency radio telemetry surveys, surgical implants on over 300 individual carp and northern pike, removal of over 1,000,000 pounds of carp biomass, age structure removal, preparation, and interpretation, aerial telemetry surveys, PIT tagging and PIT tag station construction, boat, barge, and backpack electrofishing, as well as box, fyke, mini-trap, gill, and seine netting.

WSB staff have designed and installed several nets, vertical wall, electric, and drum barriers as part of carp integrated pest management plans and drafted carp management plans for the Prior Lake Spring Lake Watershed District (Prior Lake, MN), Grand Lake St Mary Restoration Commission (Celina, OH), Minneapolis Park and Recreation Board (Minneapolis, MN), Shel Rock River Watershed District (Albert Lea, MN) and Circle Lake - Lake Improvement District (Millersburg, MN).

In 2019 WSB added the services of FisH2o, a fisheries logistics company, that specializes in the transportation and sustainable use of live rough fish from roughly 36 inland commercial fishing crews across the Midwest. This provides us unequaled access to commercial fishing crews and the ability to time and prioritize our clients' projects for large scale rough fish removal.

Our projects span the upper Midwest and include the states of Minnesota, Wisconsin, Illinois, and Ohio. We have worked with eight (8) separate licensed commercial fishermen in Minnesota, including Jeff Reidemann and Tim Adams who would be the licensed commercial fishing crews for this project.

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Background

Pleasant Lake is listed as impaired for nutrients (phosphorous) by the MPCA. Excess phosphorous can lead to algae blooms and reduce or inhibit designated uses such as swimming and boating. Pleasant Lake is also part of the Saint Paul Regional Water Services System that supplies drinking water to the Twin Cities Metro.

A TMDL or other phosphorous loading study has not yet been completed for Pleasant Lake; however, overabundant carp can influence internal phosphorous loading due to bioturbation and indirectly through a reduction in native submerged aquatic vegetation. Bajer (2009) identified an ecological tipping point for carp biomass of 100 kg/ha where this density can significantly impact water quality and ecological integrity.

In 2019, Carp Solutions completed an electrofishing CPUE carp biomass estimate. The estimated carp biomass density for Pleasant lake is 273.4 kg/ha; more than double the threshold value identified above. This would indicate that Pleasant Lake could benefit from carp management; part of which would be removal.

Additional data collected on size structure and spring migration show that the Pleasant Lake carp population is composed of larger adults which may indicate an older population with little recruitment. Passive integrated transponder (PIT) data indicates that a large number of carp attempted to migrate into Wilkinson Lake, a suspected nursery, but a barrier near the outlet of Wilkinson appears to prevent carp from accessing Wilkinson, from which it is assumed that carp are not able to spawn and recruit. No young of year or juvenile carp were collected during electrofishing surveys in 2019 or during a trap netting survey completed in 2017 in Wilkinson Lake; further indicating that carp may not be recruiting and removal be lead to sustainably reducing the adult carp biomass in Pleasant Lake.

Approach and Scope

We propose to facilitate the large-scale removal of carp from Pleasant Lake through the implementation of the following tasks:

Task 1. Acquire MN DNR Permit
Task 2. Implant 10 adult carp in Pleasant Lake with high frequency radio tags
Task 3 Complete telemetry surveys and train VLAWMO staff to complete telemetry surveys
Task 4. Coordinate commercial fishing crews to complete one (1) netting attempt
Task 5. Draft technical memo on results of telemetry surveys and carp removal

Optional tasks may be completed to increase the probability of a successful carp removal and supplement the total amount of carp removed from the system through techniques other than large scale commercial seining.

Task 4a. Include Modified Unified Method
Task 6. Site Reconnaissance
Task 7. In-Stream Removals
Task 8. Baited Box Netting

Task 1. Acquire MN DNR Permit

A Minnesota DNR fisheries research permit will be required to collect and implant carp with radio tags. WSB currently holds a variety of these permits in MN, WI, and other states. WSB will apply for a permit that allows us to collect carp using gear such as boat electrofishing, trap nets, seining, and/or gill nets. Under the permit we will also request the ability to surgically implant up to 12 adult carp with high frequency radio tags. Research permits are valid through the end of each calendar year and require a report be submitted by January 31 the year after the permit is issued. We propose to apply for the permit in early to mid-2021 to allow for the greatest flexibility in scheduled carp collection activities.

Task 2. Implant Up to 10 Adult carp in Pleasant Lake with High Frequency Radio Tags

Using the permit acquired in task 1, WSB will capture and implant up to 10 adult carp with high frequency radio tags. Carp may be captured using the gear listed above, anesthetized, implanted, and released. Ideally capture would not occur during the peak growing season as cooler water temperatures reduce the risk of infection to the surgical site. Late spring and late summer/early fall are ideal periods to collect carp since they should be present in shallower water and water temperatures should be suppressed.

By implanting carp in the spring prior to carp migration periods, staff have the opportunity to track carp during and after the spawning period which can add to the body of knowledge about carp movement in and adjacent to Pleasant Lake, however this will need to be balanced with the ultimate goal of using telemetry to identify winter carp aggregations for removal opportunities. The period for implants whether spring or late summer can be determined in consultation with VLAWMO staff and will be dependent on weather, permitting, and availability of radio tags from the manufacturer.

WSB staff will plan to complete two (2) site visits to Pleasant Lake to deploy nets and/or complete electrofishing transects to capture carp for radio tagging. This is included in the project budget and can be completed during spring and/or fall periods. If completed in late summer/early fall, catch per effort data can be utilized to add to the dataset used to estimate carp abundance.

Task 3. Complete Telemetry Surveys and train VLAWMO staff to complete telemetry surveys

Telemetry surveys will be used to locate radio tagged carp locations and document in GIS. Radio tags will be high frequency 1850 style tags manufactured by Advanced Telemetry Systems, Isanti, MN. WSB utilizes an R410 receiver and understand this is the same receiver that VLAWMO staff have.

Under this proposal, WSB will complete one (1) telemetry survey with VLAWMO staff 2-3 weeks after implants are completed to familiarize staff with basic techniques for tracking carp. VLAWMO staff will be responsible for tracking carp during the project period with an emphasis on surveying in late fall and winter to provide data for scheduling removals.

Once an aggregation of carp has been located and remains in an area identified for removal, WSB staff will complete up to three (3) telemetry surveys to confirm and pinpoint the aggregation distribution and locations for removal.

Task 4. Coordinate commercial fishing crews to complete one (1) netting attempt

Our understanding of commercial removal of inland rough fish species, relationships with commercial fishing crew members, and experience completing these types of removals gives us a distinct advantage for successfully coordinating large scale carp removals. In addition, WSB owns and manages FisH2o, a fisheries logistics company that specializes in the transport of fish to from commercial fishing crews to markets. This advantage allows to coordinate timing and effort throughout our project area.

Under this proposal, we will coordinate with the licensed commercial fisherman for Area 18; Jeff Riedemann. A variety of factors will influence the potential to complete a removal and the timing of the removal. These factors include tightness of the radio tag aggregation, propensity of fish to stay aggregated in one location, suitability of the aggregation site to be netted, weather, ice thickness (if done during hardwater), permits, and scheduling for fishing crews.

WSB will communicate telemetry data to the commercial crews and coordinate the appropriate time for removal based on the factors listed above. We will also be present the day of removal to track carp, guide fishing crew, and observed netting operations as well as afterward to process captured fish. Processing may include checking for marks and/or radio tags, data collection, or assisting crews to load fish out.

Task 5. Draft technical memo on results of telemetry surveys and carp removal

The final task under this project will be for WSB staff to draft a technical memo or brief report detailing the implementation and results of the tasks described above. This report will include telemetry data/maps, updated carp abundance estimates from fall electrofishing and removals, and a discussion of next steps.

Tasks 1-5 will be critical components to complete this project. However; there are a number of additional tasks that may be implemented to increases the probability of a successful; large scale removal and add to the amount of carp biomass that is removed from Pleasant Lake if one (1) large scale removal effort does not reduce carp biomass density to VLAWMO's desired goal.

Task 4a. Include Modified Unified Method

The modified unified method (MUM) is a technique adapted by the USGS from China that utilizes underwater speakers to concentrate carp and move them to an area of a waterbody that is conducive to netting. We have successfully used this technique on Asian carp species in Nebraska and have adapted it to carp removals in the Prior Lake Spring Lake Watershed District.

Under this proposal we would have this equipment available the day of removal to aid in moving carp into or away from a specific area if necessary. While a rapid deployment of the MUM may work to drive carp, a more detailed and measured effort may be an option in the future to further increase netting success. This project budget includes a small amount of time for WSB staff to prepare the necessary equipment. Time to deploy this equipment is captured in task 4, since WSB staff will be present the day of removal. A more large-scale effort can be discussed with VLAWMO staff for future project development if additional removals are necessary.

Task 6. Site Reconnaissance

Bathymetric and vegetation maps along with the diagram for the oxygen diffuser will provide much needed data along with the commercial fisherman's knowledge of the lake, but additional reconnaissance of the lake bottom where aggregations have been known to exist or from telemetry data, can provide critical data as to whether obstructions or bottom contours exist and plans may be developed to mitigate those hindrances to netting. Maps and/or photos along with coordinates and a brief summary will be provided.

Task 7. In-stream Removals

The 2020 Pleasant Lake Carp Management Interim Report suggests that a large percentage of carp migrate from Pleasant Lake through the connecting channel to both Deep and Wilkinson Lakes. This may provide an opportunity to supplement the amount of carp biomass removed through efforts on Pleasant Lake proper.

WSB has completed in-stream carp removal using gill nets, electrofishing, and a "push-trap" design used by the Prior Lake Spring Lake Watershed District in 2020.

While there are many options to completing in-stream removal, we propose to construct and install a push-trap device. WSB will provide staff to complete construction and installation as well complete site checks and carp removal once/week for a period of 4 weeks during the greatest migration activity. From PIT data, this would be generally be the month of May.

Task 8. Baited Box Netting

In addition to in-stream removal and commercial fishing, carp may also be removed using baited box nets in Pleasant Lake. WSB staff have been intimately involved in the development of this technique for many years and have a wealthy of experience using baited box nets. Similar to in-stream removal, this technique may not provide an opportunity for large scale carp removal but may supplement other removal efforts furthering VLAWMO towards its goal of lower carp biomass densities.

We would propose to complete baited box netting in phases, each one building on the previous and only implemented through consultation and approval of VLAWMO.

The first phase would be to determine if carp respond to bait and how quickly bait is consumed. Quick consumption may indicate a large number of carp visiting the site. WSB staff would place bait bags (cracked corn) in 1-3 locations around the lake that may be conducive to box netting based on water depth, firmness of the substrate (for walking), and vegetation density. VLAWMO staff would monitor, fill, and report consumption rates to WSB. This would need to be completed each morning (critical) to effectively determine if a site is a good candidate for box netting.

If results indicate heavy feeding for a period of 1-2 weeks, then a box net may be installed at one (1) site. Installation would require 1 day and be completed by WSB staff. WSB charges rental fees for box nets which is reflected in the budget for this item. The rental would be for a period of 3-4 weeks and may be extended if VLAWMO determines box netting is effective beyond this period. Baiting of the box net would resume post-installation for roughly a one (1) week period to habituate carp to feed normally (as reported by VLAWMO staff).

In coordination with VLAWMO, WSB would select an overnight period to "lift" the net and remove carp. Based on the number of carp captured in the initial netting, VLAWMO could then determine

if additional effort is warranted. The budget provides includes time for WSB coordination with VLAWMO, site recon and bait bag installation, box net installation, one (1) lift, disposal of carp, uninstallation of the net, and a brief technical memo summarizing results. Additional lifts can be included at the request of VLAWMO.

Project Schedule

	2021									2022					
Task	February	March	April	May	August	September	October	November	December	January	February	March	April	May	June
1															
2															
3															
4															
5															
4a															
6															
7															
8															

This project schedule assumes that the proposal is accepted and authorized by mid-February 2021. Task 2 may be completed in spring 2021 or late summer/early fall 2021 and task 3 would follow after a period of 2 weeks have passed since the initial implants as discussed in the previous section. Task would be planned to be completed either in open water fall 2021 or the winter of 2021/2022 based on the conditions described under task 4 and task 4a would be completed concurrently with task 4. The technical memo would be completed after removal operations.

Task 6 is perhaps the most flexible. Spring 2021 would be an ideal time to complete this since vegetation growth will be minimal and water clarity should be at its greatest during the year. However, reconnaissance may be more focused after initial fall winter telemetry data is available that indicates the location of radio tagged carp. A one (1) day effort is budgeted currently. Additional time could be included if VLAWMO would prefer additional effort for recon during different time periods. This could even be evaluated for spring 2022 after winter removal operations are complete as aggregations sites may be identified outside of the area where carp are eventually removed, and additional removal plans could be made using this recon data if warranted.

Task 7 could occur in either May 2021 or May 2022 based on financial resources. There may be some rationale to wait until 2022 after commercial removal operations are complete in the event that enough carp are removed under these operations, additional removal may be unnecessary.

Similarly, task 8 can be completed during carp feeding periods in 2021 or 2022 and based on the amount of carp biomass removed under commercial fishing operations.

Project Budget

Task	Total
Project Management	$730
Task 1. Permits	$770
Task 2. Collection and Implants	$5,192
Task 3. Telemetry and Training	$1,455
Task 4. Removal and Coordination	$7,518
Task 5. Reporting	$1,844
Base Project Total	**$17,509**
Optional or Add-on Tasks	
Task 4a. MUM	$707
Task 6. Recon	$2,356
Task 7. In-Stream Removals	$12,840
Task 8. Box Netting	$10,811

Task 2 includes WSB labor, surgical supplies, and 10 high frequency radio tags valued at $200/tag.

Task 4 includes WSB labor for coordination and on-site removal operations as well as a lump sum of $5,000 for commercial fishing crews to net under the ice. This fee may be reduced based on the amount of fish captured that may be saleable and timing of removal operations.

Task 6 includes a one (1) day fee for Jeff Riedemann and WSB labor for a field visit with Jeff and map production.

Task 7 includes WSB labor and materials to build, install, and uninstall the trap, as well as four (4) separate efforts (once/week for four weeks) to remove and dispose of captured carp. This assumes that VLAWMO staff will maintain and check the trap between WSB site visits.

Task 8 includes time for one (1) WSB staff to identify bait sites with VLAWMO staff and install bait stations, and WSB labor for installation and uninstallation of the box net, one (1) "lift", carp disposal, box net rental fee ($1,500 for a 4-week period) and drafting of a brief memo.

The table above provides a limit not to exceed. Additional hours may be billed only by authorization from VLAWMO.

If you have any questions and would like to discuss further please email me at thavranek@wsbeng.com or call me at (612)246-9346.

Sincerely,

WSB

Tony Havranek
Senior Ecologist

Attachments:
WSB 2021 Rate Table

To: VLAWMO Board of Directors

From: Tyler Thompson, GIS Watershed Technician

Date: February 18, 2021

Re: VI. D. 4. 2021 – 2023 BWSR Watershed-Based Imp. Funding (WBIF) Grant (C21-9984) Work Plan & Grant Agreement – Res. 2021-04

Since the December 2020 Board meeting, a funding request was submitted by staff following the recommended and approved funding split for the '21 – '23 BWSR Watershed-Based Implementation Funding (WBIF) grant, with $60,000 going towards VLAWMO's Cost Share Program and $33,304.20 going towards the construction of a subwatershed BMP. VLAWMO's match contribution for this grant is 10% at $9,304.20. BWSR had approved staff's grant funding request and staff had submitted a work plan, as of writing this memo, is pending approval from BWSR, but is expected to be approved by the 2/24 meeting. Staff has included the draft work plan in the packet, and no significant changes are expected.

The next steps to continue are Board approval of the '21-'23 WBIF grant work plan, and approval to enter into grant agreement with BWSR under Resolution 2021-04, agreeing to enter into grant execution and disbursement of BWSR grant funds.

Staff Recommendation

Staff recommends the VLAWMO Board approve the attached '21-'23 WBIF grant work plan, authorize the VLAWMO Board Chair to sign and enter into Agreement for grant C21-9984, with Tyler Thompson as the listed Authorized Representative of the grant, by approving VLAWMO Resolution 2021-04.

Proposed Motion

_____ moves to approve the '21-'23 WBIF work plan and authorizes the Board Chair to sign and enter into the grant agreement, with submittal to BWSR with any non –material changes, with the adoption of Resolution 2021-04. Seconded by _____.

Attached:

- 2021-2023 WBIF DRAFT Grant Work Plan
- Proposed BWSR C21-9984 Grant Agreement
- VLAWMO Resolution 04-2021

Grant Workplan
Watershed Based Implementation JAN 2021

Grant Title - 2021 Metro Miss. River East - Vadnais Lake Area WMO
Grant ID - C21-9984
Organization - Vadnais Lake Area WMO

Original Awarded Amount	$93,042.00	**Grant Execution Date**	
Required Match Amount	$9,304.20	**Original Grant End Date**	12/31/2023
Required Match %	10%	**Grant Day To Day Contact**	Tyler Thompson
Current Awarded Amount	$93,042.00	**Current End Date**	12/31/2023

Budget Summary

	Budgeted	Spent	Balance Remaining
Total Grant Amount	$93,042.00	$0.00	$93,042.00
Total Match Amount	$9,304.00	$0.00	$9,304.00
Total Other Funds	$7,000.00	$0.00	$7,000.00
Total	**$109,346.00**	**$0.00**	**$109,346.00**

**Grant balance remaining is the difference between the Awarded Amount and the Spent Amount. Other values compare budgeted and spent amounts.*

Budget Details

Activity Name	Activity Category	Source Type	Source Description	Budgeted	Spent	Last Transaction Date	Matching Fund
Cost Share Program Implementation	Urban Stormwater Management Practices	Current State Grant	Cost Share Program BMP Implementation	$40,000.00			N

Activity Name	Activity Category	Source Type	Source Description	Budgeted	Spent	Last Transaction Date	Matching Fund
Cost Share Program Implementation - Landowner Match	Urban Stormwater Management Practices	Landowner Fund	Cost Share Landowners	$6,000.00			Y
Cost Share Program Implementation - Streambank & Shoreline Restorations	Streambank or Shoreline Protection	Current State Grant	2021 Metro Miss. River East - Vadnais Lake Area WMO	$20,000.00			N
Subwatershed BMP Implementation	Urban Stormwater Management Practices	Current State Grant	2021 Metro Miss. River East - Vadnais Lake Area WMO	$33,042.00			N
Technical & Engineering	Technical/Engineering Assistance	Local Fund	VLAWMO	$3,304.00			Y
VLAWMO WBIF Grant Coordination	Administration /Coordination	Local Fund	VLAWMO	$7,000.00			N

Activity Details Summary

Activity Details	Total Action Count	Total Activity Mapped	Proposed Size / Unit	Actual Size / Unit

Proposed Activity Indicators

Activity Name	Indicator Name	Value & Units	Waterbody	Calculation Tool	Comments
Cost Share Program Implementation	PHOSPHORUS (EST. REDUCTION)	0.3 LBS/YR	Lambert Creek, Goose Lake and Gem Lake subwatersheds	MIDS	
Subwatershed BMP	PHOSPHORUS (EST.	0.3 LBS/YR	GTBWA, Birch	MIDS	

Activity Name	Indicator Name	Value & Units	Waterbody	Calculation Tool	Comments
Implementation	REDUCTION)		Lake and Goose Lake subwatershed		

Grant Activity

Grant Activity - Cost Share Program Implementation	
Description	VLAWMO will provide cost-share for installation of BMPs in accordance with VLAWMO's Landscape Level 1 or Level 2 Cost Share program policies. Eligible practices include: rain gardens/infiltration basins, trenches, cisterns, green roofs; stormwater retention, media-enhanced filtration, or reuse; flooding prevention projects with measurable water quality benefits; permeable paver or pavement projects. Projects will be targeted in the priority tier 1 Lambert Creek and Goose Lake, and tier 2 Wilkinson and Gem Lake subwatersheds. Practices will be designed in accordance with MN Stormwater Manual. NRCS FOTG or other accepted engineering standards, for a minimum 10-year effective life. Practices will be designed and certified by WMO staff, professional design technicians or engineers with appropriate technical approval authority to accepted engineering practice standards. Landowners will be responsible for the operation and maintenance of practices. The WMO will fund the construction of at least 1 BMP each year, with a total pollution reduction goal of 0.3 lbs of TP reduction annually. See annual milestones document in the grant attachments.
Category	URBAN STORMWATER MANAGEMENT PRACTICES
Has Rates and Hours?	No

Grant Activity - Cost Share Program Implementation - Landowner Match	
Description	Landowner or project partner monetary match contributions to approved Cost Share Program Level 1 or Level 2 grant projects, funded by the Cost Share Program BMP Implementation of urban stormwater management practices or streambank & shoreline restoration practices. See respective work plan activities for BMP and operations and maintenance requirements.
Category	URBAN STORMWATER MANAGEMENT PRACTICES
Has Rates and Hours?	No

Grant Activity - Cost Share Program Implementation - Streambank & Shoreline Restorations	
Description	VLAWMO will provide cost-share for installation of BMPs in accordance with VLAWMO's Landscape Level 1 or Level 2 Cost Share program policies. Eligible practices include: shoreline or streambank restoration of actively-eroding banks, or obvious sedimentation downstream; gully erosion repair and permanent stabilization projects that affect or threaten WQ. Projects will be targeted in the priority tier 1 Lambert Creek and Goose Lake, and tier 2 Wilkinson and Gem Lake subwatersheds. Practices will be designed in accordance with MN Stormwater Manual. NRCS FOTG or other accepted engineering standards, for a minimum 10-year effective life. Practices will be designed and certified by WMO staff, professional design technicians or engineers with appropriate technical approval authority to accepted engineering practice standards. Landowners will be responsible for the operation and maintenance of practices. The WMO will fund the construction of at least 1 BMP each year, with a total pollution reduction goal of 0.3 lbs of TP reduction annually. See annual milestones document in the grant attachments.
Category	STREAMBANK OR SHORELINE PROTECTION
Has Rates and Hours?	No

Grant Activity - Subwatershed BMP Implementation	
Description	The WMO will fund or construct a stormwater BMP project within the Gillfillan-Tamarack-Black-Wilkinson-Amelia subwatershed, Birch Lake subwatershed or Goose Lake subwatershed. The project will be prioritized based on impact to water resources with completed subwatershed assessments or feasibility studies used to target the project. The BMPs may include raingardens, infiltration, tree trenches, media-enhanced filtration practices, bio-swales, permeable paver/pavement, or stormwater reuse. The implemented project will provide a reduction of at least 0.3 lbs of TP, annually. The project will be designed in accordance with MN Stormwater Manual or other accepted engineering standards for a minimum 10-year effective life. Project design and certification will be provided by a professional engineer. See annual milestones document in the grant attachments. The work plan may be revised upon determining whether VLAWMO is an LGU funding partner or the construction head of the project.
Category	URBAN STORMWATER MANAGEMENT PRACTICES
Has Rates and Hours?	No

Grant Activity - Technical & Engineering	
Description	Technical and engineering costs for BMP project selection, design, construction oversight, and project certification. Subwatershed BMPs will be designed to the Stormwater Manual, NRCS FOTS, or other accepted engineering standards, for a minimum 10-year effective life. Cost Share BMP practices will be designed and certified by WMO staff or professional engineers with appropriate technical approval authority, with a minimum 10-year effective life. Landowners will be responsible for the operation and maintenance of practices for Cost Share-funded projects. Estimate of 40% PE, and 60% Technician. Practices will be designed and certified by WMO staff or professional technical staff or engineers with appropriate technical approval authority. VLAWMO will select a consultant engineer in accordance with LGU procedures.
Category	TECHNICAL/ENGINEERING ASSISTANCE
Has Rates and Hours?	Yes

Grant Activity - VLAWMO WBIF Grant Coordination	
Description	Includes VLAWMO GIS Watershed Technician in-kind staff time. Activities include grant administration/coordination, reporting, project development, and WBIF grant fund implementation within VLAWMO's Cost Share Program, as well as the Subwatershed BMP implementation of WBIF. The GIS Watershed Tech. is the program manager of VLAWMO's Cost Share Program, overseeing all aspects of the Program. Management activities include: citizen site visits, grant application coordination, technical review, and approval recommendations to VLAWMO's Technical Commission & Board to meet VLAWMO's Cost Share Grant Program policies. Also includes VLAWMO Education & Outreach Coordinator in-kind staff time for Cost Share Program citizen workshops, flyers for Program advertising, social media postings, and project construction completion spotlights and surveys.
Category	ADMINISTRATION/COORDINATION
Has Rates and Hours?	Yes

Grant Attachments

Document Name	Document Type	Description
2021 Watershed Based Implementation Funding	Grant Agreement	2021 Watershed Implementation Funding - Vadnais Lake Area WMO
Application	Workflow Generated	Workflow Generated - Application - 01/19/2021
C21-9987 VLAWMO WBIF Annual Milestones '21-'23	Grant	2021 Metro Miss. River East - Vadnais Lake Area WMO
VLAWMO LL2 Grant Agreement Example	Grant	2021 Metro Miss. River East - Vadnais Lake Area WMO
VLAWMO Landscape Level 1 Cost Share Guidance Policy	Grant	2021 Metro Miss. River East - Vadnais Lake Area WMO
VLAWMO Landscape Level 2 Cost Share Guidance Policy	Grant	2021 Metro Miss. River East - Vadnais Lake Area WMO
Work Plan	Workflow Generated	Workflow Generated - Work Plan - 02/02/2021

BOARD OF WATER AND SOIL RESOURCES

FY 2021 STATE OF MINNESOTA
BOARD OF WATER and SOIL RESOURCES
WATERSHED-BASED IMPLEMENTATION FUNDING
GRANT AGREEMENT

Vendor:	0000209380
PO#:	3000013137

This Grant Agreement is between the State of Minnesota, acting through its Board of Water and Soil Resources (Board) and **Vadnais Lake Area WMO, 800 East County Road E Vadnais Heights Minnesota 55127** (Grantee).

This grant is for the following Grant Programs :		
C21-9984	2021 Metro Miss. River East - Vadnais Lake Area WMO	$93,042

Total Grant Awarded: **$93,042**

Recitals

1. The Laws of Minnesota 2019, 1st Special Session, Chapter 2, Article 2, Section 7(a), appropriated Clean Water Funds (CWF) to the Board for the FY 2020-2021 Watershed-based Implementation Funding.
2. The Board adopted the FY 2020-2021 Clean Water Fund Watershed-based Implementation Funding Program Policy and authorized the Watershed-based Implementation Funding Program through Board Order #19-54.
3. The Board adopted Board Order #19-54 to allocate funds for the FY 2020-2021 Watershed-based Implementation Funding Program.
4. The Grantee has submitted a BWSR approved work plan for this Program which is incorporated into this Grant Agreement by reference.
5. The Grantee represents that it is duly qualified and agrees to perform all services described in this Grant Agreement to the satisfaction of the State.
6. As a condition of the grant, Grantee agrees to minimize administration costs.

Authorized Representative

The State's Authorized Representative is Marcey Westrick, Clean Water Coordinator, BWSR, 520 Lafayette Road North, Saint Paul, MN 55155, 651-284-4153, or his/her successor, and has the responsibility to monitor the Grantee's performance and the authority to accept the services and performance provided under this Grant Agreement.

The Grantee's Authorized Representative is:
TITLE: Tyler Thompson, VLAWMO GIS Watershed Technician
ADDRESS: 800 County Road E East
CITY: Vadnais Heights
TELEPHONE NUMBER: (651) 204-6071

If the Grantee's Authorized Representative changes at any time during this Grant Agreement, the Grantee must immediately notify the Board.

Grant Agreement

1. **Terms of the Grant Agreement.**
   1.1. ***Effective date:*** The date the Board obtains all required signatures under Minn. Stat. § 16B.98, Subd. 5. **The State will notify the Grantee when this Grant Agreement has been executed. The Grantee must not begin work under this Grant Agreement until it is executed.**
   1.2. ***Expiration date:*** **December 31, 2023**, or until all obligations have been satisfactorily fulfilled, whichever comes first.
   1.3. ***Survival of Terms:*** The following clauses survive the expiration date or cancellation of this Grant Agreement: 7. Liability; 8. State Audits; 9. Government Data Practices; 11. Publicity and Endorsement; 12. Governing Law, Jurisdiction, and Venue; 14. Data Disclosure; and 19. Intellectual Property Rights.

2. **Grantee's Duties.**
The Grantee will comply with required grants management policies and procedures set forth through Minn. Stat § 16B.97, Subd. 4(a)(1). The Grantee is responsible for the specific duties for the Program as follows:
2.1. ***Implementation:*** The Grantee will implement their work plan, which is incorporated into this Grant Agreement by reference.
2.2. ***Reporting:*** All data and information provided in a Grantee's report shall be considered public.
2.2.1. The Grantee will submit an annual progress report to the Board by February 1 of each year on the status of Program implementation by the Grantee. Information provided must conform to the requirements and formats set by the Board. All individual grants over $500,000 will also require a reporting expenditure by June 30 of each year.
2.2.2. The Grantee will prominently display on its website the Clean Water Legacy Logo and a link to the Legislative Coordinating Commission website.
2.2.3. Final Progress Report: The Grantee will submit a final progress report to the Board by February 1, 2024 or within 30 days of completion of the project, whichever occurs sooner. Information provided must conform to the requirements and formats set by the Board.
2.3. ***Match:*** The Grantee will ensure any local match requirement will be provided as stated in Grantee's approved work plan.

3. **Time.**
The Grantee must comply with all the time requirements described in this Grant Agreement. In the performance of this Grant Agreement, time is of the essence.

4. **Terms of Payment.**
4.1. Grant funds will be distributed in three installments: 1) The first payment of 50% will be distributed after the execution of the Grant Agreement. 2) The second payment of 40% will be distributed after the first payment of 50% has been expended and reporting requirements have been met. An eLINK Interim Financial Report that summarizes expenditures of the first 50% must be signed by the Grantee and approved by BWSR. Selected grantees may be required at this point to submit documentation of the expenditures reported on the Interim Financial Report for verification. 3) The third payment of 10% will be distributed after the grant has been fully expended and reporting requirements are met. The final, 10% payment must be requested within 30 days of the expiration date of the Grant Agreement. An eLINK Final Financial Report that summarizes final expenditures for the grant must be signed by the Grantee and approved by BWSR.
4.2. All costs must be incurred within the grant period.
4.3. All incurred costs must be paid before the amount of unspent funds is determined. Unspent grant funds must be returned within 30 days of the expiration date of the Grant Agreement.
4.4. The obligation of the State under this Grant Agreement will not exceed the amount listed above.
4.5. This grant includes an advance payment of 50 % of the grant's total amount. Advance payments allow the grantee to have adequate operating capital for start-up costs, ensure their financial commitment to landowners and contractors, and to better schedule work into the future.

5. **Conditions of Payment.**
5.1. All services provided by the Grantee under this Grant Agreement must be performed to the State's satisfaction, as set forth in this Grant Agreement and in the BWSR approved work plan for this program. Compliance will be determined at the sole discretion of the State's Authorized Representative and in accordance will all applicable federal, State, and local laws, policies, ordinances, rules, FY 2020-2021 Clean Water Fund Watershed-based Implementation Funding Program Policy, and regulations. The Grantee will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, State or local law.
5.2. Minnesota Statutes §103C.401 (2018) establishes BWSR's obligation to assure Program compliance. If the noncompliance is severe, or if work under the Grant Agreement is found by BWSR to be unsatisfactory or performed in violation of federal, State, or local law, BWSR has the authority to require the repayment of grant funds or withhold payment on grants from other programs.

6. **Assignment, Amendments, and Waiver**
6.1. ***Assignment.*** The Grantee may neither assign nor transfer any rights or obligations under this Grant Agreement without the prior consent of the State and a fully executed Assignment Agreement, executed and approved by the same parties who executed and approved this Grant Agreement, or their successors in office.
6.2. ***Amendments.*** Any amendments to this Grant Agreement must be in writing and will not be effective until it has been approved and executed by the same parties who approved and executed the original Grant Agreement, or their successors in office. Amendments must be executed prior to the expiration of the original Grant Agreement or any amendments thereto.

6.3. ***Waiver.*** If the State fails to enforce any provision of this Grant Agreement, that failure does not waive the provision or its right to enforce it.

7. **Liability.**
The Grantee must indemnify, save, and hold the State, its agents, and employees harmless from any claims or causes of action, including attorney's fees incurred by the State, arising from the performance of this Grant Agreement by the Grantee or the Grantee's agents or employees. This clause will not be construed to bar any legal remedies the Grantee may have for the State's failure to fulfill its obligations under this Grant Agreement.

8. **State Audits.**
Under Minn. Stat. § 16B.98, Subd. 8, the Grantee's books, records, documents, and accounting procedures and practices of the Grantee or other party relevant to this Grant Agreement or transaction are subject to examination by the Board and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this Grant Agreement, receipt and approval of all final reports, or the required period of time to satisfy all State and program retention requirements, whichever is later.
8.1. The books, records, documents, accounting procedures and practices of the Grantee and its designated local units of government and contractors relevant to this grant, may be examined at any time by the Board or Board's designee and are subject to verification. The Grantee or delegated local unit of government will maintain records relating to the receipt and expenditure of grant funds.

9. **Government Data Practices.**
The Grantee and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, as it applies to all data provided by the State under this Grant Agreement, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Grantee under this Grant Agreement. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data referred to in this clause by either the Grantee or the State.

10. **Workers' Compensation.**
The Grantee certifies that it is in compliance with Minn. Stat. § 176.181, Subd. 2, pertaining to workers' compensation insurance coverage. The Grantee's employees and agents will not be considered State employees. Any claims that may arise under the Minnesota Workers' Compensation Act on behalf of these employees and any claims made by any third party as a consequence of any act or omission on the part of these employees are in no way the State's obligation or responsibility.

11. **Publicity and Endorsement.**
11.1. ***Publicity.*** Any publicity regarding the subject matter of this Grant Agreement must identify the Board as the sponsoring agency. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Grantee individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this Grant Agreement.
11.2. ***Endorsement.*** The Grantee must not claim that the State endorses its products or services

12. **Governing Law, Jurisdiction, and Venue.**
Minnesota law, without regard to its choice-of-law provisions, governs this Grant Agreement. Venue for all legal proceedings out of this Grant Agreement, or its breach, must be in the appropriate State or federal court with competent jurisdiction in Ramsey County, Minnesota.

13. **Termination.**
13.1. The State may cancel this Grant Agreement at any time, with or without cause, upon 30 days' written notice to the Grantee. Upon termination, the Grantee will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed.
13.2. In the event of a lawsuit, an appropriation from a Clean Water Fund is canceled to the extent that a court determines that the appropriation unconstitutionally substitutes for a traditional source of funding.
13.3. The State may immediately terminate this Grant Agreement if the State finds that there has been a failure to comply with the provisions of this Grant Agreement, that reasonable progress has not been made or that the purposes for which the funds were granted have not been or will not be fulfilled. The State may take action to protect the interests of the State of Minnesota, including the refusal to disburse additional funds and requiring the return of all or part of the funds already disbursed.

14. **Data Disclosure.**
Under Minn. Stat. § 270C.65, Subd. 3, and other applicable law, the Grantee consents to disclosure of its social security number, federal employer tax identification number, and/or Minnesota tax identification number, already provided to the State, to federal and State tax agencies and State personnel involved in the payment of State obligations. These identification numbers may be used in the enforcement of federal and State tax laws which could result in action requiring the Grantee to file State tax returns and pay delinquent State tax liabilities, if any.

15. **Prevailing Wage.**
It is the responsibility of the Grantee or contractor to pay prevailing wage for projects that include construction work of $25,000 or more, prevailing wage rules apply per Minn. Stat. §§ 177.41 through 177.44. All laborers and mechanics employed by grant recipients and subcontractors funded in whole or in part with these State funds shall be paid wages at a rate not less than those prevailing on projects of a character similar in the locality. Bid requests must state the project is subject to prevailing wage.

16. **Municipal Contracting Law.**
Per Minn. Stat. § 471.345, grantees that are municipalities as defined in Subd. 1 of this statute must follow the Uniform Municipal Contracting Law. Supporting documentation of the bidding process utilized to contract services must be included in the Grantee's financial records, including support documentation justifying a single/sole source bid, if applicable.

17. **Constitutional Compliance.**
It is the responsibility of the Grantee to comply with requirements of the Minnesota Constitution regarding the use of Clean Water Funds to supplement traditional sources of funding.

18. **Signage.**
It is the responsibility of the Grantee to comply with requirements for project signage as provided in Minnesota Laws 2010, Chapter 361, Article 3, Section 5(b) for Clean Water Fund projects.

19. **Intellectual Property Rights.**
The State owns all rights, title, and interest in all of the intellectual property rights, including copyrights, patents, trade secrets, trademarks, and service marks in the Works and Documents *created and paid for under this grant.* Works means all inventions, improvements, discoveries, (whether or not patentable), databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, and disks conceived, reduced to practice, created or originated by the Grantee, its employees, agents, and subcontractors, either individually or jointly with others in the performance of this grant. Work includes "Documents." Documents are the originals of any databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, disks, or other materials, whether in tangible or electronic forms, prepared by the Grantee, its employees, agents or subcontractors, in the performance of this grant. The Documents will be the exclusive property of the State and all such Documents must be immediately returned to the State by the Grantee upon completion or cancellation of this grant at the State's request. To the extent possible, those Works eligible for copyright protection under the United State Copyright Act will be deemed to be "works made for hire." The Grantee assigns all right, title, and interest it may have in the Works and the Documents to the State. The Grantee must, at the request of the State, execute all papers and perform all other acts necessary to transfer or record the State's ownership interest in the Works and Documents.

***IN WITNESS WHEREOF**, the parties have caused this Grant Agreement to be duly executed intending to be bound thereby.*

Approved:

Vadnais Lake Area WMO

By: _____
(print)

_____
(signature)

Title: _____

Date: _____

Board of Water and Soil Resources

By: _____

Title: _____

Date: _____

RESOLUTION 04-2021
Of the Vadnais Lake Area Water Management Organization (VLAWMO)
Acceptance of 2021-2023 BWSR Watershed-Based Implementation Funding Grant (C21-9984 2021 Metro Miss. River East – Vadnais Lake Area WMO)

Director _____ introduced the following resolution and moved its adoption. Director _____ seconded the motion.

A RESOLUTION FOR APPROVAL of the 2021-2023 BWSR Watershed-Based funding (Vadnais Lake Area WMO) grant for VLAWMO Cost Share implementation and Subwatershed BMP development and installation (C21-9984).

Whereas, VLAWMO has submitted a funding request and work plan for the Watershed-Based Implementation Funding grant to the Board of Water and Soil Resources to address nutrient loading and volume reduction within the Gilfillan-Tamarack-Black-Wilkinson-Amelia, Birch Lake, Goose Lake, Gem Lake and Lambert Creek Subwatersheds, and

Whereas, components of the grant proposal include VLAWMO Cost Share Program fund integration and the implementation of a subwatershed BMP within the counties of Ramsey and Anoka, Minnesota, and

Whereas, VLAWMO has completed and continues to initiate subwatershed retrofits and feasibility studies to target and implement Watershed BMP implementation projects for the reduction of volume and pollutant loading into 303(d) list-impaired and tributary waterbodies within VLAWMO and to be the beneficiary of the Watershed-Based Implementation Funding from the State of Minnesota, and

Whereas, VLAWMO has finalized a work plan with the Board of Water and Soil Resources for implementation of the grant,

Therefore be it resolved that the VLAWMO Board of Directors hereby approves the C21-9984 grant agreement, with workplan, and authorizes the WMO Board Chair to execute the grant agreement and submit the grant agreement and workplan to the Board of Water and Soil Resources, with any final non-material changes and on advice of counsel.

The question was on the adoption of the resolution and there were _ yeas and _ nays as follows:

	Yea	Nay	Absent
Dan Jones	☐	☐	☐
Ed Prudhon	☐	☐	☐
Rob Rafferty	☐	☐	☐
Tom Watson	☐	☐	☐
Patricia Youker	☐	☐	☐
Jim Lindner	☐	☐	☐

_____ Board Chair _____ Date

_____ Attest _____ Date

The foregoing resolution was passed by the Board of Directors of the Vadnais Lake Area Water Management Organization, Minnesota this 24th day of February, 2021.