

MEMORANDUM OF UNDERSTANDING
Wilkinson Lake Water Quality Improvements

This Memorandum of Understanding (“**Agreement**”) is made as of this 16th day of July, 2021, by and between the Vadnais Lake Area Water Management Organization, a Minnesota joint powers watershed management organization (“**VLAWMO**”), and North Oaks Farms (“**NOF**”), Inc., doing business as North Oaks Company (NOC), LLC, a Minnesota limited liability company (“**NOC**”). VLAWMO and NOC/NOF may hereinafter be referred to individually as a “party” or collectively as the “parties.”

RECITALS

- A. The parties have jointly prepared a concept plan for a series of projects, referred to as a stormwater spine, with an overall goal of improving water quality in the nutrient-impaired Wilkinson Lake (collectively, the “**Project**”). A concept plan for the Project is attached hereto in the form of a pre-permitting memo by Barr Engineering as Exhibit A.
- B. The Project is conceptually designed to be implemented on and around Wilkinson Lake, on property that is located in the City of North Oaks and owned by NOC/NOF, including Ramsey County PIDs 053022410003 and 043022320002 (the “**Property**”).
- C. VLAWMO was recently selected by the Minnesota Pollution Control Agency (“**MPCA**”) as a prioritized small watershed for the Section 319 Small Watersheds Focus grant funding program (the “**Section 319 Program**”), beginning in federal fiscal year 2021, and therefore anticipates being provided with grant funding to support the Project under the Section 319 Program.
- D. The Section 319 Program is a long-term program, and the Project may include one or more phases depending on grant funding and other factors that are yet to be determined. The intent of this Agreement is to address the parties’ respective goals, duties, and expectations for the Project’s first phase (hereinafter, “**Phase I**”) and beyond.
- E. The parties understand the considerable long-term benefit that the Project will produce for the community and its residents, and desire to work collaboratively throughout design and implementation so that Phase I, along with subsequent phases of the Project, can be delivered in an efficient, cost-effective manner that minimizes physical disturbance to the project area and maximizes value for the local community.
- F. To that end, the parties desire to enter into this Agreement to formally outline a framework for design and implementation of Phase I, affirm their commitments as to responsibility for tasks to be undertaken for Phase I and beyond, establish a roadmap for performing these tasks and fulfilling these responsibilities, and facilitate communication and cooperation to ensure successful improvement and long term sustainability of the water quality in Wilkinson Lake.

AGREEMENT

In consideration of the mutual promises and agreements hereinafter set forth, and intending to be legally bound, the parties do hereby agree as follows:

1. Incorporation of Recitals. The above recitals are hereby incorporated into this Agreement as if fully set forth herein.
2. Phase I Scope; Estimated Costs. Phase I of the Project is more fully described in the attached draft MPCA workplan which is included as Exhibit B. The estimated total cost of Phase I is \$590,760.00, which includes all components (i.e. design, construction and administrative costs and based on the concept plan previously prepared by the parties).
3. Phase I Grant Funding; Cost-Share. Of the total Phase I cost, it is anticipated that 60% (currently estimated at \$354,456.00) will be paid for with Section 319 Program grant funding via a separate agreement that will be entered into between MPCA and VLAWMO. The additional 40% of Phase I costs (currently estimated at \$236,304.00) will be shared equally by VLAWMO and NOC/NOF. Accordingly, both parties agree to pay one-half of the Phase I costs that are not paid for with Section 319 Program grant dollars and in an amount not which shall not exceed \$118,152.00 per party. The cost allocations provided for herein, including the grant amount and the parties' 50-50 cost-share arrangement for the remaining local match, apply only to Phase I. VLAWMO or NOC/NOF may identify and secure funding from other parties interested and willing to contribute to the cash-match portion of the grant. Any such financial contribution will not affect the 50-50 cost-share arrangement between VLAWMO and NOC/NOF, just proportionately reduce the total contribution required from each party. Final cost-sharing obligations for Phase I will be determined in a subsequent agreement to be entered into by the parties at a later date, as outlined in more detail in Section 6 below. Cost allocations and requirements for subsequent phases of the Project, if any, will be determined on a case-by-case basis and separately negotiated in good faith by the parties at the time of said future phases.

The parties recognize that actual cost-share obligations for Phase I will be determined following (i) an awarded Section 319 Program grant and (ii) final design of Phase I, which shall include an updated engineer's estimate of Phase I costs. Both parties acknowledge that the anticipated cost-share obligations outlined above are based on preliminary plans, preliminary estimates, and anticipated levels of grant funding for Phase I. However, if following a grant award and the subsequent Phase I design and final estimates, the cost-sharing projections above change in a manner that would otherwise require additional monetary contributions from the parties, the parties agree to work together in good faith to determine an updated cost-sharing framework that will support Phase I feasibility.

4. VLAWMO Responsibilities. VLAWMO agrees to perform the following as it relates to Phase I of the Project:
 - a. Participate in the cost-sharing framework outlined above;
 - b. At least 30 days prior to the Section 319 Program grant application deadline, prepare and submit to NOC/NOF all documents necessary as part of the grant application, including, but not necessarily limited to, the nine key element (NKE) document, a formal grant proposal, a workplan and budget, and any other required documents;

- c. Upon NOC/NOF review and input regarding the grant application materials pursuant to Section 5(b) of this Agreement, finalize and submit a completed Section 319 Program grant application for Phase I, which shall include all information required by the MPCA;
 - d. If a funding proposal is accepted, complete a workplan, enter into a contract, and prepare any other documents required by MPCA to ensure that grant funding is properly secured;
 - e. Serve as the fiscal agent for the grant application;
 - f. Enter into and administer a contract with a design engineering firm for the Phase I design, bidding, and construction inspection services. VLAWMO will consult/review with NOC/NOF prior to final selection of a design engineering firm and collaborate with NOC/NOF in finalizing plan designs;
 - g. Responsible for submitting to the City Engineer design plans and specifications related to land disturbance and grading for the City's review and consideration;
 - h. In partnership with NOC/NOF, consult with the City of North Oaks and inform them about project status, progress, and next steps;
 - i. Continue to participate in all project-related meetings and make its staff available to serve on the project team;
 - j. Reasonably seek and provide financial resources for the maintenance of Phase I of the Project in partnership with NOC/NOF, for the timeframe required by any grant documents unless and until NOC ceases to exist as a company or the land is sold to a third party. Prior to or at the time of NOC dissolution or land sale, NOC/NOF will work to secure access for continued maintenance by VLAWMO. VLAWMO will continue with the maintenance responsibility for the remainder of the 10 years. Maintenance responsibilities are project-dependent and will be determined in detail at a later date. As part of the subsequent agreement contemplated pursuant to Section 6 of this Agreement, VLAWMO and NOC/NOF agree to work together to build a separate and detailed joint maintenance agreement for Phase I as additional design is made available. Notwithstanding the foregoing, the parties anticipate that maintenance may include, without limitation, annual evaluations, ongoing vegetation maintenance and enhancement, and planning ahead for possible, albeit unlikely, larger-scale maintenance tasks (e.g., pond dredging or infrastructure replacement in the event of failure); and
 - k. Adhere to the provisions contained in Section 6 of this Agreement regarding negotiation of a subsequent cooperative agreement with NOC/NOF regarding Phase I.
5. NOC/NOF Responsibilities. NOC/NOF agrees to perform the following as it relates to Phase I of the Project:
- a. Participate in the cost-sharing framework outlined above;

- b. At least two weeks prior to the grant application deadline, review and provide any desired written input to VLAMO regarding the Section 319 Program grant application for Phase I, assuming timely receipt of draft materials from VLAWMO in accordance with Section 4(b) above;

Provide VLAWMO with either an easement or non-exclusive license to access those portions of the Property reasonably necessary for the design, construction and implementation of Phase I of the Project;

Provide VLAWMO, or another entity identified by VLAWMO, with a perpetual easement so that those portions of the Property reasonably necessary for long-term monitoring and maintenance of Phase I may be accessed for the lifetime of the improvements. Said easement shall include the right to access all portions of the Property and perform all functions that are otherwise deemed necessary by mutual agreement between VLAWMO and NOC/NOF, to ensure adequate maintenance; where conservation easement areas are incorporated into project design, MLT will also be consulted for approval and written support.

The term for right of entry shall be for the required maintenance period associated with the 319 Grant, Phase 1. Any party working on NOC/NOF property will provide a certificate of insurance NOC/NOF prior to work proceeding on the property.

- c. Provide to VLAWMO any and all previous reports, surveys, data, and/or models for the project area, if and when requested by VLAWMO;
- d. Continue to facilitate and secure easement access with the Minnesota Land Trust (MLT) to ensure feasibility of Phase I;
- e. In partnership with VLAWMO, when deemed appropriate, consult with the City of North Oaks and inform them about project status, progress, and next steps;
- f. In partnership with VLAWMO, obtain permits from the City of North Oaks, consistent with development project requirements as previously established;
- g. Ensure compliance with the preexisting PDA and applicable City ordinances required by the City of North Oaks;
- h. Continue to participate in all Project meetings and make its staff available to serve on the project team;
- i. Collaborate with VLAWMO regarding the shared maintenance responsibilities of Phase I for the timeframe required by any grant documents unless and until this responsibility is formally transferred to a separate entity, i.e. a homeowners' association or other future property owner. Maintenance responsibilities are project-dependent and will be determined in detail at a later date. As part of the subsequent agreement contemplated pursuant to Section 6 of this Agreement, VLAWMO and NOC/NOF agree to work together to build a separate and detailed joint maintenance agreement for Phase I as

additional design is made available. Notwithstanding the foregoing, the parties anticipate that maintenance may include, without limitation, annual evaluations, ongoing vegetation maintenance and enhancement, erosion control and repair, and planning ahead for possible, albeit unlikely, larger-scale maintenance tasks (e.g., pond dredging or infrastructure replacement in the event of failure); and

- j. Adhere to the provisions contained in Section 6 of this Agreement regarding negotiation of a subsequent cooperative agreement with NOC/NOF regarding Phase I.
6. Subsequent Agreement. The parties agree that following a grant award and additional design work of Phase I by VLAWMO, a separate cooperative agreement is necessary that will address construction and contract administration of Phase I, ongoing construction inspection, payment of each parties' final cost-share obligation, and any long-term rights and maintenance responsibilities between the parties. The parties will negotiate said agreement in good faith and will seek to finalize such an agreement prior to any final contract award for Phase I construction and pursuant to any and all requirements of the Section 319 Program or otherwise.
7. Right of Entry. NOC/NOF, as the property owner, grants to VLAWMO, its engineers, and its agents an irrevocable license to enter the Property at all reasonable times to conduct such inspections as VLAWMO determines are needed to ensure that all Phase I components contemplated or otherwise required under this Agreement are duly satisfied.
8. Indemnification. The parties are each responsible for their own acts under this Agreement and neither party agrees to accept liability on behalf of the other party. NOC/NOF agrees to indemnify, defend, and hold VLAWMO and its officials, employees, and agents harmless for all costs, damages, or expenses which VLAWMO may pay or incur, including attorneys' fees, in consequence of any claims arising out of or related the acts or omissions of NOC/NOF in performing its obligations under this Agreement. This duty to indemnify does not extend to any claims arising from VLAWMO's own negligence.

Likewise, VLAWMO agrees to indemnify, defend, and hold NOC/NOF and its officials, employees, and agents harmless for all costs, damages, or expenses which NOC/NOF may pay or incur, including attorneys' fees, in consequence of any claims arising out of or related the acts or omissions of VLAWMO in performing its obligations under this Agreement. This duty to indemnify does not extend to any claims arising from NOC/NOF's own negligence. Nothing in this Agreement shall be construed as a waiver of, or limitation on, any immunity from or limitation on liability available to any party under law.
9. Term and Termination. This Agreement shall be in effect as of the date first written above and shall terminate upon execution of a subsequent agreement as provided in the above Section 6, unless the parties otherwise agree in writing to mutually terminate this Agreement, in which case the Agreement shall immediately terminate.

- f. No Third-Party Rights. This Agreement is solely for the benefit of the signatories hereto. This Agreement shall not create or establish any rights in, or be construed as being for the benefit of, any third party.
- g. Applicable Law. The execution, interpretation, and performance of this Agreement will, in all respects, be controlled and governed by the laws of Minnesota. The provisions of this Agreement are severable. If any portion of this Agreement is, for any reason, held by a court of competent jurisdiction to be contrary to law, such decision will not affect the remaining provisions of the Agreement.
- h. Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same document.
- i. Authority to Execute. The person or persons executing this Agreement on behalf of the parties represent that he, she, or they are duly authorized to execute this Agreement on behalf of their respective entities and represent and warrant that this Agreement is a legal, valid, and binding obligation enforceable according to its terms.

[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers on behalf of the parties as of the day and date first above written.

VLAWMO:

By:  _____
Its Chair

And by:  _____
Its Secretary

Date: 8-25-21

NOC/NOF:

By: Mark Houge _____

Its: President, North Oaks Company LLC

Date: August 18, 2021

EXHIBIT A
Concept Plan

[Attached as pdf document]

EXHIBIT B
Description of Phase I
[Attached as pdf document]

Section 6, Joint Maintenance Agreement for Phase I of the 319 small priority watershed grant program, Wilkinson Lake

Part a: As defined in the MOU between VLAWMO and NOC/NOF, maintenance will include minor maintenance tasks including annual evaluations, ongoing vegetation maintenance and enhancement, erosion control and repair, and possible, albeit unlikely, larger-scale maintenance tasks (e.g., pond dredging, conveyance blowout, or infrastructure replacement in the event of failure). The Phase I project is expected to consist of a combination of stormwater pond, overflow bypass channel, possibly meander areas, and vegetation restoration south of Wilkinson Lake in City of North Oaks. Anticipated costs and partnership are defined in this additional agreement.

Whereas VLAWMO will enter into the contract with MPCA and that process will include required project maintenance:

The Minnesota Pollution Control Agency's (MPCA) Stormwater Manual has been used to anticipate expected maintenance costs. The MN Stormwater Manual states that the responsibility of maintenance is usually assigned to the landowner, and expected stormwater pond maintenance costs are estimated at 3%-5% of original construction costs annually.

VLAWMO has defined a 10-year project maintenance plan for cost-share BMPs, in anticipation of specific terms that will be defined in the workplan/grant contract with MPCA. The 10-year timeframe is used in this document to build commitment among parties and in preparation for the VLAWMO Board authorization of submission of the first round 319 grant application. Specific responsibilities are project dependent and will be determined prior to finalization of a contract with MPCA.

This joint maintenance agreement defines a 50/50 cost-share partnership in all project maintenance between VLAWMO and NOC/NOF. The cost allocations provided for herein, including the grant amount and the parties' 50-50 cost-share arrangement for the remaining local match, apply only to Phase I. VLAWMO or NOC/NOF will endeavor to identify and secure funding from other parties benefiting from this project. Any such financial contribution will not affect the 50-50 cost-share arrangement between VLAWMO and NOC/NOF, just proportionately reduce the total contribution required from each party.

Minor Maintenance cost share: VLAWMO will incorporate Phase I project maintenance into their annual maintenance contract with a qualified contractor that includes multiple watershed projects. The contractor will handle minor maintenance, conduct evaluation while doing maintenance activities, and recommend additional maintenance should be done to prevent larger problems. Minor maintenance will include: mowing and invasive species control where needed, adding native plants to supplement loss and maintain diversity. This cost is estimated to be \$2,000 annually, based on other watershed sites that are currently being maintained. Additional minor maintenance activities that may be done upon recommendation of the consultant may include (but are not limited to): repairing undercut areas, eroded sections, bare-soil areas, and possible gullies in banks where identified by the consultant. These minor maintenance activities would add to the standard annual contract. Both parties will be

informed prior to any minor maintenance activities. Minor maintenance activities will be done proactively to help prevent larger repair/maintenance needs. VLAWMO will pay minor maintenance costs for the project as they occur and bill NOC/NOF for 50% of total annual cost not to exceed \$22,500 or \$11,250 to each party per year [$\$450,000 \times 5\% / 2$]. Invoices will be paid by NOC/NOF within 60 days following receipt. This not to exceed minor maintenance cost share amount was calculated by taking construction costs for the project (approximately \$450,000). That number was calculated by the difference between the estimated construction cost and the total grant amount being engineering and permitting and administration \$547,000). Using a 5% estimate from the Stormwater Manual, \$22,500 should be considered the "worst case scenario" for a total invoice to NOC/NOF for annual minor maintenance. Again, \$22,500 is a not-to-exceed number for minor maintenance with the more likely anticipated minor maintenance annual amount to be between \$2,000 – \$5,000.

Larger-scale maintenance tasks: (e.g., pond dredging, conveyance blowouts, or infrastructure replacement in the event of failure) is not expected during the maintenance timeframe defined for the project. If an unlikely event occurs and large-scale maintenance is needed, parties will share the cost equally (50/50). NOC/NOF will be consulted prior to any repair to see if they have internal capacity to address the repair need. In an emergency, VLAWMO will respond as needed. As long as time allows, NOC/NOF will have 30 days to respond regarding internal capacity. If NOC/NOF does not have internal capacity to address, VLAWMO will lead arranging for a contractor to conduct repairs and invoice NOC/NOF for 50% of the cost. Invoices will be paid within 60 days following receipt.



North Oaks and Wilkinson Lake Improvements

1.0 Introduction

Barr Engineering Co. (Barr) has drafted this memo to provide a narrative for the conceptual design of several potential water quality improvement projects within the agricultural and conservation easements held by the Minnesota Land Trust (MLT) on North Oaks Company (NOC) property. The projects presented in this memo provide a range of possibilities for implementation through the Section 319 grant program. It should be noted that because the designs are in the conceptual stage, they are subject to change depending on future permitting, funding, stakeholder engagement, and final design considerations. Alternatives for Project 1 will be submitted for the spring 2021 Section 319 funding cycle, which will cover final design and construction.

2.0 Background

NOC hired Barr to create conceptual designs for stormwater management projects to be implemented on the company property, including its easements held through the MLT. The goal of the projects is to improve water quality in Wilkinson Lake (downstream of NOC property) by reducing loading of nutrients and sediment. Wilkinson Lake is listed by the Minnesota Pollution Control Agency (MPCA) as impaired for excess nutrients (phosphorus). The Vadnais Lakes Area Watershed Management Organization (VLAWMO) has completed a TMDL and several feasibility studies to identify ways to reduce phosphorus loading from the direct drainage area to Wilkinson Lake (Wilkinson subwatershed). Most recently, VLAWMO began working with the MPCA and Environmental Protection Agency (EPA) to secure Section 319 grant funding for projects that will help remove Wilkinson Lake from the MPCA's impaired waters list. In its planning process, VLAWMO identified NOC as a major partner in accomplishing this goal; its holdings are located at a critical point in the Wilkinson subwatershed where the majority of runoff from the subwatershed flows through an agricultural ditch system (see Photo 1) before entering Wilkinson Lake. Water quality monitoring (conducted by VLAWMO) shows that the runoff in these ditches has high total phosphorus (TP) concentrations and makes up a significant portion of the loading to Wilkinson Lake. However, the monitoring data also suggests that the high pollutant concentration in the ditch is driven by loading from areas east of Centerville Road in the Birch and Tamarack Lake subwatersheds.

Barr worked with NOC and VLAWMO to create conceptual designs that met several shared goals and would help remove Wilkinson from the impaired waters list. The focus of these efforts is on the agricultural ditch that runs through NOC property and within the MLT's agricultural and conservation easements. By treating poor water quality in the ditch before it enters Wilkinson Lake, we can maximize water quality improvement. Centralizing the treatment along the ditch also provides an opportunity to restore degraded areas in the easements and increase recreational use through added trails and interactive design features.



Photo 1: Existing agricultural ditches and surrounding wetland

The following sections summarize the proposed conceptual designs as of March 2021 and next steps in the process of design and securing 319 funding.

3.0 Proposed Conceptual Design

This section outlines the proposed concept design. Alternative configurations for the three project components are included in the sections below.

The focus area of this project is located in the upstream wetland in the agricultural easement. The project would be implemented between the future Red Forest Way and Gate Hill development. Currently, there are several agricultural ditches that intersect in this location and drain the surrounding wetlands. These ditches also convey flow from eastern subwatersheds (Tamarack and Birch Lakes) to Wilkinson Lake. Below are details for three alternative configurations for the upstream pond. These alternative configurations are also shown on Figures 1 through 3. It should be noted that the final design may not reflect these exact configurations but would be located within the red boxes outlined on the figures.

Project 1a (Figure 1): A pond would be excavated in upland area outside of the wetland boundary. The existing ditch would be realigned adjacent to the pond to allow flows above baseflow to spill into the pond and add a meandering aesthetic.

Project 1b (Figure 2): A smaller pre-treatment basin would be excavated in-line with the ditch to treat baseflow and small event flow. A high flow bypass would be constructed to the west of the basin to reduce the impact of high flows in the basin (scour, sediment resuspension, etc.). The pre-treatment basin would discharge into an excavated wetland basin with a meandering flow path to add improved wetland habitat and a meandering aesthetic.

Project 1c (Figure 3): A large pond would be excavated in-line with the ditch to treat baseflow and small event flow. The pond excavation would remove existing agricultural ditches to improve

aesthetics in the area. A high flow bypass would be constructed to the west of the basin to reduce the impact of high flows in the basin (scour, sediment resuspension, etc.).

For Options 2 and 3, the proposed basin would be constructed in the wetland. Several agencies will likely require permitting prior to construction of these options, including the United States Army Corps of Engineers (USACE) and the Board of Water and Soil Resources (BWSR) under the Wetland Conservation Act (WCA). Regulated activities in the wetland may include filling (grading above existing wetland bottom), excavation, and functional change. Wetland mitigation (replacement, banking/credits purchase) may be needed depending on the functional assessment of the existing wetland area and the extent of impact determined by the regulatory agencies.

Below in Table 1 is a summary of pros, cons, and unknowns for the proposed upstream pond configurations. The unknowns will be investigated and resolved prior to final design. The shape and placement of the basins shown on Figures 1

Table 1. Pros and cons for upstream pond alternatives

Project Component	Pros	Cons	Unknowns
Project 1a: Upland Pond	<ul style="list-style-type: none"> Minimal work within the wetland 	<ul style="list-style-type: none"> High excavation costs Smaller water quality treatment (off-line basin) Need to establish maintenance access. More frequent maintenance relative to Project 1c 	<ul style="list-style-type: none"> Flow regime in the ditch for hydraulic design
Project 1b: Pre-treatment Basin and Wetland with Meander	<ul style="list-style-type: none"> Moderate water quality treatment Habitat creation Lower excavation costs 	<ul style="list-style-type: none"> Work within wetland Need to establish maintenance access More frequent maintenance relative to Project 1c 	<ul style="list-style-type: none"> Potentially complex wetland permitting Wetland soil types (i.e., deep peat layer may cause constructability issues) Existing wetland function (may impact complexity of permitting) Flow regime in the agricultural ditch (impacts hydraulic design)
Project 1c: In-line Pond	<ul style="list-style-type: none"> Significant water quality treatment Habitat creation Lower excavation costs 	<ul style="list-style-type: none"> Work within wetland Need to establish maintenance access 	<ul style="list-style-type: none"> Potentially complex wetland permitting Wetland soil types (i.e., deep peat layer may cause constructability issues) Existing wetland function (may impact complexity of permitting) Flow regime in the agricultural ditch (impacts hydraulic design)



- Ditch Realignment
- Proposed Basin
- Wetland Boundary (NWI)
- Potential Disturbance Area
- 2-Ft Intermediate Contour
- 10-Ft Index Contour

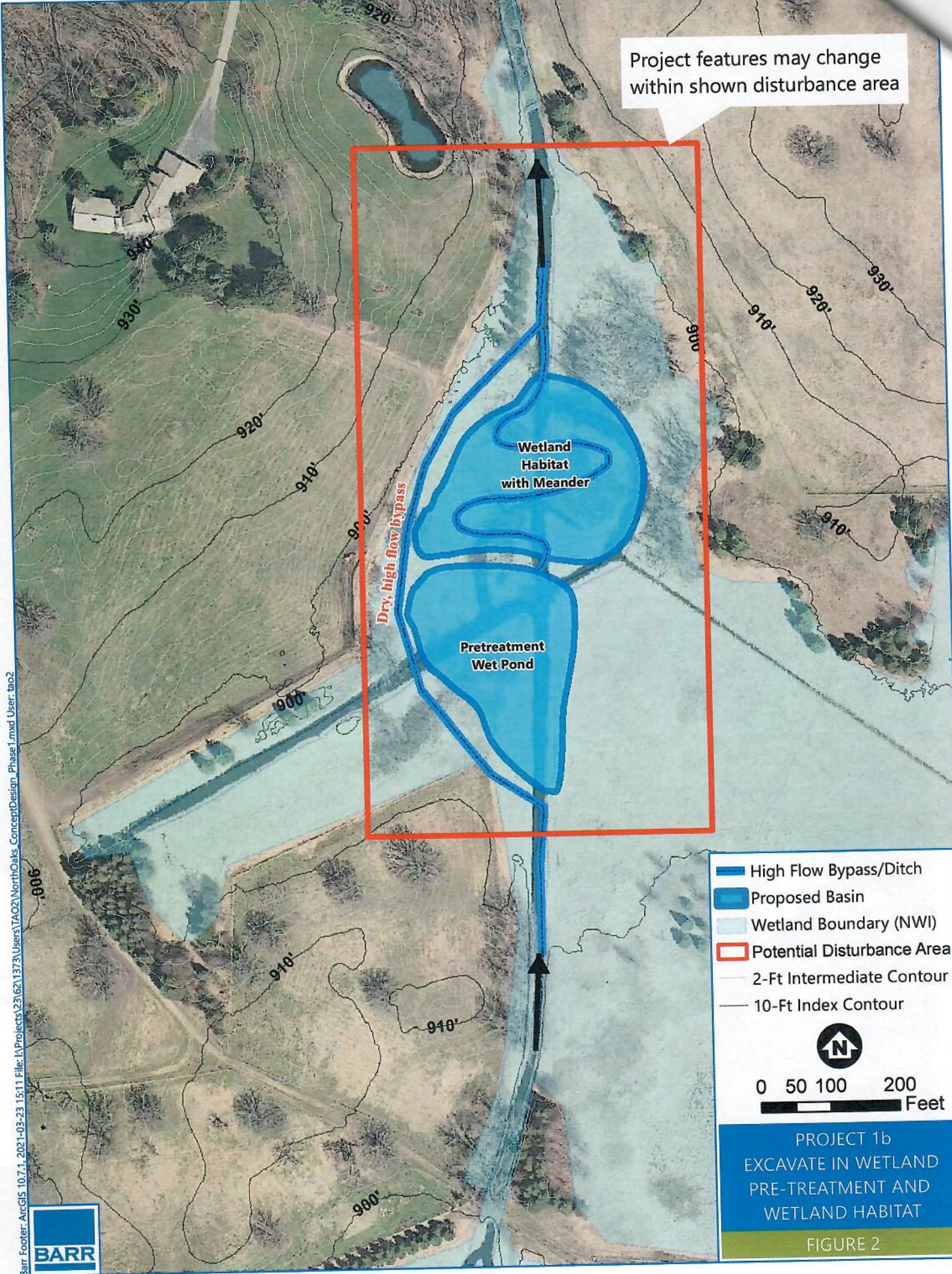


0 50 100 200
Feet

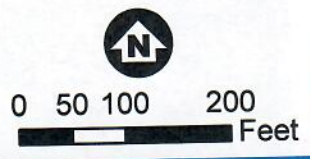
PROJECT 1a
EXCAVATE IN UPLAND
LARGE NARROW POND

FIGURE 1

Project features may change within shown disturbance area



- High Flow Bypass/Ditch
- Proposed Basin
- Wetland Boundary (NWI)
- Potential Disturbance Area
- 2-Ft Intermediate Contour
- 10-Ft Index Contour

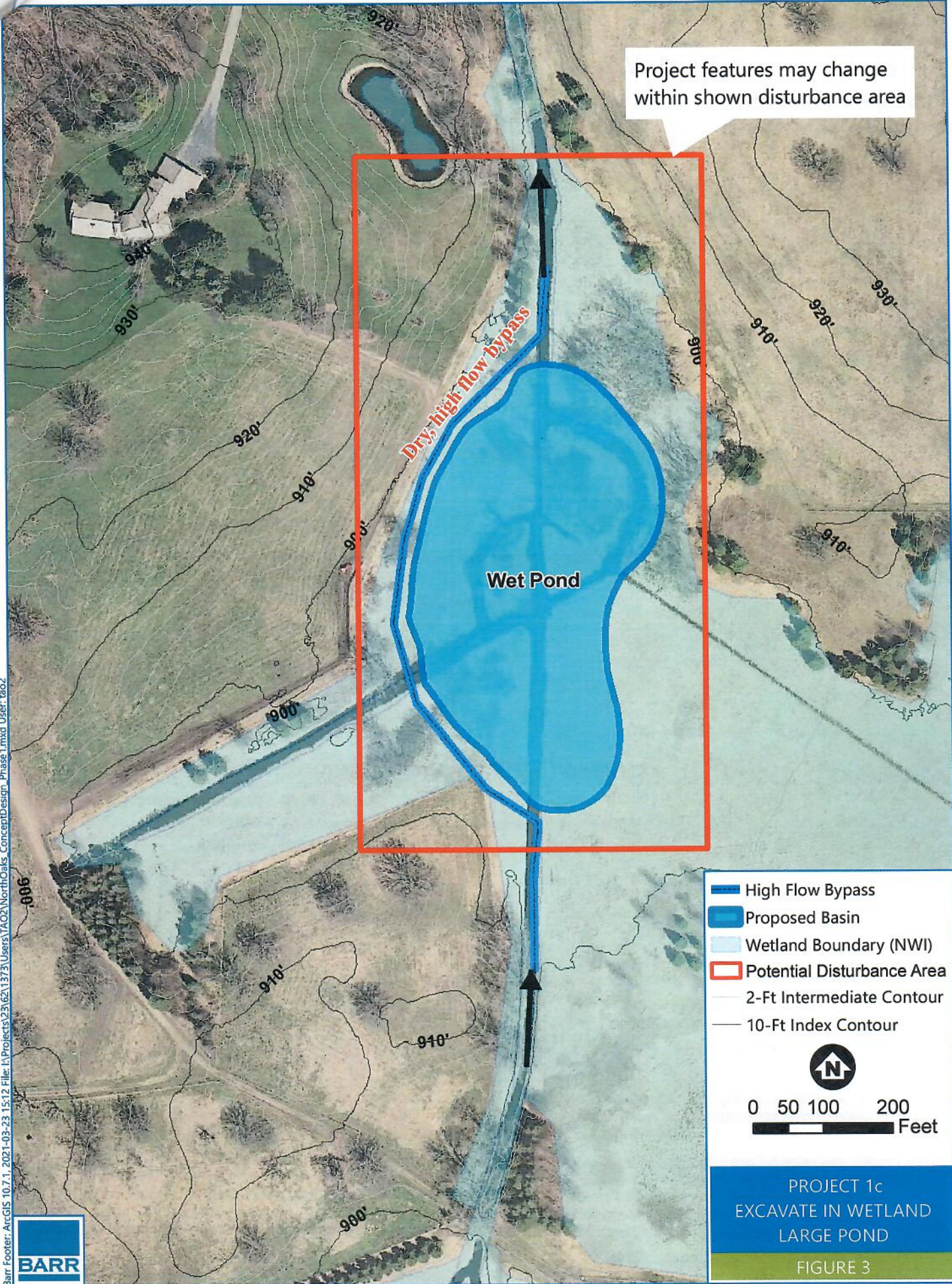


PROJECT 1b
EXCAVATE IN WETLAND
PRE-TREATMENT AND
WETLAND HABITAT

FIGURE 2



Project features may change within shown disturbance area



Barr Footer: ArcGIS 10.7.1, 2021-03-23 15:12 File: I:\Projects\23162\1373\Users\TAO2\NorthOaks - ConceptDesign - Phase 1.mxd User: tao2



PROJECT 1c
EXCAVATE IN WETLAND
LARGE POND

FIGURE 3



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

Federal Clean Water Act Section 319

Project workplan

Doc Type: Contract

Exhibit B

Swift #:	169280
PO #:	30000XXXXX
AI:	
Activity ID:	

Project title: Wilkinson, Tamarack, and Birch Lakes: Wilkinson Lake Stormwater Spine Phase I

1. Grant sponsor summary:

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

Minnesota Pollution Control Agency (MPCA) contact:

MPCA project manager: Jordan Donatell
Title: Environmental Specialist, East Central Watershed Unit
Address: 520 Lafayette Road North
 St Paul, MN 55155
Phone: 715-441-0068
Email: jordan.donatell@state.mn.us

Project information

Project Cost: Grant: \$354,456, Match: \$236,304, Total: \$590,760

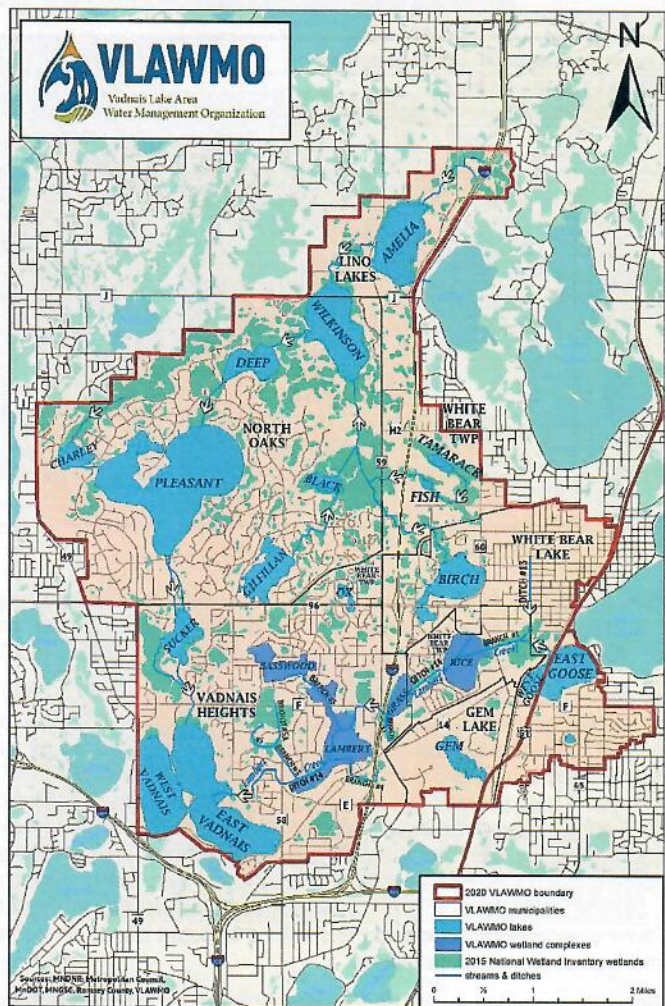
2. Project information

A detailed, Nine Key Element document was developed for Wilkinson, Birch, and Tamarack Lakes, and approved for funding by the U.S. Environmental Protection Agency. This project was identified as a priority concern to address critical phosphorus loading to Wilkinson Lake. Note that the BMP is not a structural part of the curb and gutter MS4.

Wilkinson and Tamarack Lakes are impaired waterbodies that are listed for nutrients. Wilkinson Lake has an approved Total Maximum Daily Load (TMDL) and completed feasibility studies to identify Best Management Practices (BMPs) to improve water quality. Tamarack Lake is slated for TMDL development in 2024; studies have been completed to inform TMDL development and prepare for BMP implementation. Birch Lake has good water quality and a designation of "protect" in the Vadnais Lake Area Watershed. Birch and Tamarack Lakes flow into Wilkinson Lake. See Watershed Figure (Figure 1) for locations and

context of the first phase project site and longer-term comprehensive plan (Figure 2).

Figure 1: Vadnais Lake Area Watershed. Note the locations of Wilkinson, Tamarack, and Birch Lakes.

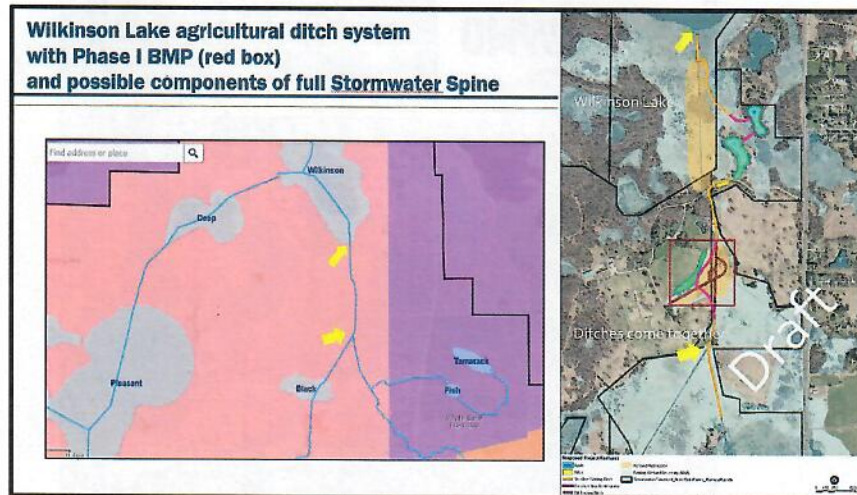


The project that is the focus of this grant round is a component in a connected network of stormwater BMPs. The collection of projects is referred to as the Wilkinson Lake Stormwater Spine. Phase I of the spine includes: stormwater ponding /treatment BMP area prior to treat regional drainage before discharge into Wilkinson Lake. Final design could incorporate additional project elements such as (but not limited to) a pretreatment basin, overflow structure, wetland restoration, and/or a meandering flow path. Additional structures are planned to build over time and create additive benefits in an overall comprehensive design. The overall goal of the Stormwater Spine is to improve water quality in Wilkinson Lake by reducing loading of nutrients and sediment.

The location of the Wilkinson Lake Stormwater Spine has been selected as a regionally important to strategically treat water prior to entering Wilkinson Lake; Wilkinson Lake receives water from Tamarack and Birch Lakes through an extensively channelized system in subwatersheds with high impervious area. Target areas are important in a largely developed watershed and provide key locations, where the majority of subwatershed runoff flows through an agricultural ditch system prior to entering Wilkinson Lake.

As identified in the Wilkinson Lake TMDL, the communities of North Oaks, White Bear Township, the City of White Bear Lake, Lino Lakes, and Ramsey and Anoka County all contribute stormwater to Wilkinson Lake. North Oaks Company/North Oaks Farms (NOC/NOF) is a major landowner in North Oaks. NOC/NOF has taken on a leadership role in working closely with VLAWMO to develop the concept plans for the Wilkinson Stormwater Spine. The company has also initially committed to being a financial partner in the cash match portion of the project and partnering on ongoing maintenance following project construction with VLAWMO. St. Paul Regional Water Services (SPRWS) uses the chain of lakes that receives water from Wilkinson as part of their drinking water supply, in addition to Mississippi River Water that is pumped through the system. SPRWS worked with VLAWMO to receive funding for a grant from the Minnesota Department of Health (MDH) for continued project development prior to completion of this workplan to continue site investigation and preliminary project design development.

Figure 2: Location of Phase I and anticipated Stormwater Spine project.

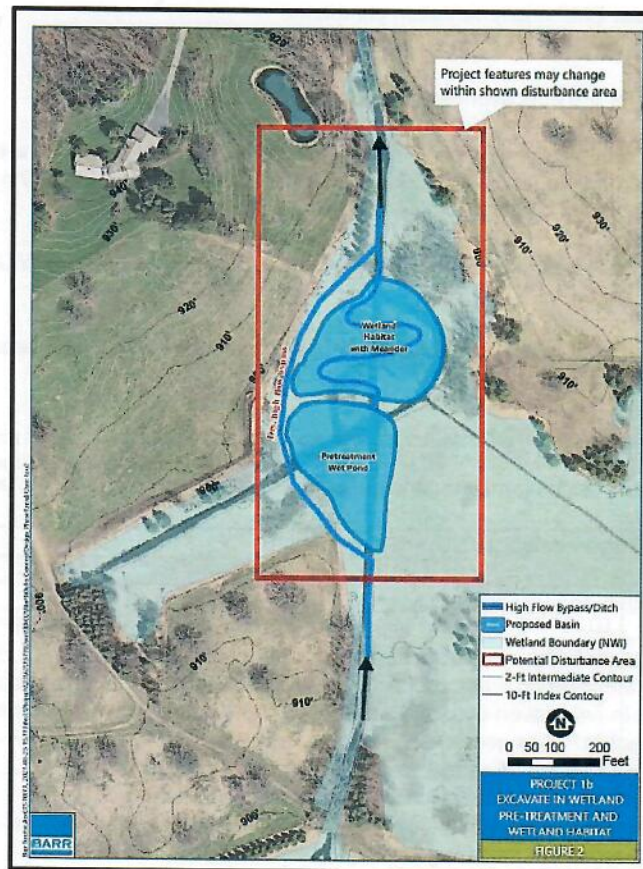


As part of project collaboration, NOC/NOF hired Barr Engineering to create conceptual designs for stormwater management projects to be implemented on company property, including land with conservation easements held through the Minnesota Land Trust (MLT). Work with NOC/NOF, VLAWMO, Barr Engineering, and MLT began in 2020 and continues to date.

Water quality monitoring (conducted by VLAWMO) shows that runoff in the agricultural ditch system that empties into Wilkinson Lake has high total phosphorus (TP) concentrations and makes up a significant portion of the loading to Wilkinson Lake. Monitoring data also suggest that the high pollutant concentration in the ditch is driven by loading from areas east of Centerville Road in the Birch and Tamarack Lake subwatersheds. Barr worked with NOC and VLAWMO to create conceptual designs that met several shared goals and would help improve the water quality in Wilkinson Lake. The focus of these efforts is on the agricultural ditch that runs through NOC property and within the MLT's agricultural and conservation easements. Centralizing the treatment along the ditch also provides an opportunity to restore degraded areas in the easements and increase recreational use through added trails and interactive design features. These additional design and restoration efforts are outside of this current grant, but are also part of a longer-term vision with planned incorporation by NOC/NOF. Designs are in the conceptual stage at the time of workplan preparation and will be updated based on survey and soil testing, permitting, stakeholder engagement, and final design considerations.

Phase I of the Stormwater Spine is located in an upstream wetland in the MLT agricultural easement. Currently, there are several agricultural ditches that intersect in this location and drain the surrounding wetlands. These ditches also convey flow from eastern subwatersheds (Tamarack and Birch Lakes) to Wilkinson Lake. There are three alternative concept level configurations for the upstream pond area that are being considered at this time. One of the possible configuration is shown below. Final design will depend upon results of summer technical analysis and testing (2021) and incorporation of agency feedback as part of permitting. In this possible configuration, a pre-treatment basin would be excavated in-line with the ditch to treat baseflow and small-event flow. A high-flow bypass would be constructed to the west of the basin to reduce the impact of high flows in the basin (scour, sediment resuspension, etc.). The pre-treatment basin would discharge into an excavated wetland basin with a meandering flow path to add improved wetland habitat and a meandering path to allow natural fluctuation and stream elements within the system.

Figure 3: A possible concept level configuration for the Phase I project depending upon results of upcoming technical design work including survey, soil testing, and continued input from permitting authorities.



3. Goals, objectives, tasks, and subtasks

Goal: Restore water quality as part of Phase I of the Wilkinson Lake Stormwater Spine, as identified in the Wilkinson, Birch, and Tamarack Lakes Nine Key Element document.

Objective 1: Engineering to complete design, permitting, and go out for bid (~\$107,061)

Task A: Complete any remaining survey, soil testing, and project design following summer 2021 investigation

Task B: Preliminary plan/spec development

Task C: Complete design to 90%

Task D: Receive and incorporate feedback from permitting authorities, make any necessary changes, and prepare final designs and specs

Task E: Develop contract between owner and contractor and facilitate bid process

Objective 1 Timeline: 12/2021 – 8/31/2023

Objective 1 Cost: Grant: \$64,237, Match: \$42,824, Total: \$107,061

Objective 1 Deliverables: Permits in place, final plans and specs, signed construction contract

Objective 2: BMP implementation/construction (~\$428,700)

Task A: Construction (~\$383,700)

Task B: Engineering oversight and inspection (~\$45,000)

Objective 2 Timeline: 8/31/2022 – 7/1/2024

Objective 2 Cost: Grant: \$257,220, Match: \$171,480, Total: \$428,700

Objective 2 Deliverables: BMP implementation completed

Objective 3: Monitoring for the effectiveness of BMP and maintenance

Task A: Monitoring with the intent of determining the effectiveness of the BMP, with the additional benefit of recommendations for maintenance. Monitoring will be conducted annually until the end of the grant timeframe with recommendations provided by contractor for following year implementation

Task B: Maintenance to be carried out as needed and in partnership between VLAWMO and NOC and possible other partners

Task C: Vegetation additions, structural monitoring, and minor remediation as needed until the new structures are stabilized

Objective 3 Timeline: 7/1/2023 – 8/31/2025

Objective 3 Cost: Grant: \$12,000, Match: \$8,000, Total: \$20,000

Objective 3 Deliverables: Ongoing maintenance needs identified, reported, and implemented

Objective 4: Project Management (\$35,000)

Task A: Administration and Reporting:

- Facilitate project management and partner interactions
- Work with engineering firm to obtain permits, make changes, and communicate with stakeholders
- Participate in finalization of specs, bid process, and construction as owner
- Track project activities according to project work plan and budget
- Complete e-LINK reporting requirements
- Track grant budget, matching funds, and expenditures for grant
- Compile, organize, and submit invoices according to grant requirements
- Authorize payment of bills for grant expenses
- Obtain matching funds documentation
- Prepare and submit semi-annual and final reports according to the grant agreement

Objective 4 Timeline: 12/2021 – 8/31/2025

Objective 4 Cost: Grant: \$0, Match (in-kind): \$35,000, Total: \$35,000

Objective 4 Deliverables: Report BMP accomplishments and pollutant reductions in e-LINK program. Submit invoices and reports according to the grant agreement

4. Project budget (attached)



MINNESOTA POLLUTION CONTROL AGENCY

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

Attachment A - Budget

SWIFT:	169280
Purchase Order:	30000XXXXX
AI:	
Activity ID:	

Project Name: Wilkinson, Tamarack, and Birch Lakes: Wilkinson Lake Stormwater Spine Phase I
Organization Name: Vadnais Lake Area Water Management Organization

Objective	Grant	In-kind match	Cash match	Total match	Budget total
Objective 1: Engineering to complete design, permitting, and go	\$ 85,236.00		\$ 21,824.00		\$ 107,060.00
Objective 2: BMP implementation/construction (~\$428,700)	\$ 257,220.00		\$ 171,480.00		\$ 428,700.00
Objective 3: Monitoring for the effectiveness of BMP and mainte	\$ 12,000.00		\$ 8,000.00		\$ 20,000.00
Objective 4: Project Management/VLAWMO staff		\$ 35,000.00			\$ 35,000.00
TOTAL	\$ 354,456.00	\$ 35,000.00	\$ 201,304.00	\$ 236,304.00	\$ 590,760.00