Memorandum of Understanding Between
Vadnais Lake Area Watershed Management Organization
and the Board of Water Commissioners of the City of Saint Paul, Ramsey County

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

Whereas, VLAWMO and the Board of Water mutually desire to partner on a resiliency study ("**Study**") within the East Vadnais Lake subwatershed ("**Subwatershed"**) in the City of Vadnais Heights in Ramsey County;

Whereas, the Subwatershed receives direct drainage from an area of approximately 300 acres;

Whereas, East Vadnais Lake in the Subwatershed is used as a primary reservoir and drinking water source for approximately 450,000 people;

Whereas, the County is developing a flood feasibility study for the Edgerton Street/Centerville Road intersection within the Subwatershed to reduce existing flooding and add water quality improvements;

Whereas, VLAWMO has expressed interest in expanding upon the County's flood feasibility study to include development of project alternatives upstream of the study area;

Whereas, the purpose of this expanded Study is to improve the resiliency in the Subwatershed by evaluating flood mitigation, water quality, and drinking water source protection project opportunities;

Whereas, the parties wish to clearly define their respective roles in the development and completion of this Study.

Whereas the Study partners including the Board of Water have reviewed the request for services for development of the Study (attachment 1) and find that it provides the necessary work items to achieve its desired Study outcomes.

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

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

    a. Coordinate the consultant hiring process for completion of the Study.
    b. Share the professional services costs with the Board of Water to complete the Study.
    c. Invoice the Board of Water at regular intervals in the Study development process for its share of the cost for professional services.
    d. Provide for management and oversight of the Study.
    e. Participate in the development of the Study and schedule partner meetings when needed.

f. Provide required notices to affected property owners and other stakeholders as may be necessary.
g. Share and distribute results and deliverables of the Study to the Board of Water.

2. Board of Water Responsibilities. The Board of Water agrees to do the following:

   a. Share about 14.3% of the professional services costs to complete the Study with VLAWMO and partners, not to exceed $10,000.
   b. Pay invoices received from VLAWMO for reimbursement of professional services costs within 35 days of receipt.
   c. Attend meetings and participate in discussion related to the development of the Study.
   d. Provide background information or data (if any) necessary for the preparation of the Study.

3. Use of Study. The reports or documents produced in whole or in part under this MOU will be subject to fair use and may not be the subject of an application for copyright by or on behalf of the Board of Water or VLAWMO. The Board of Water and VLAWMO may use, without restriction, the work products of the Study including, but not limited to, any associated reports and documents.

4. Term. This MOU is effective on the date of the last party to execute it. This MOU shall terminate upon completion of the Study and payment for the professional services costs incurred as provided herein.

5. Termination. Each party has the right to terminate this MOU at any time and for any reason by submitting written notice of the intention to do so to the other party at least thirty (30) days prior to the specified effective date of such termination.

6. Entire Agreement; Amendments. This MOU constitutes the entire agreement between the parties regarding this matter. No amendments to this MOU are valid unless they are in writing and signed by both parties.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed on the dates listed below.

VADNAIS LAKE AREA WATER MANAGEMENT ORGANIZATION

By: _____
Jim Lindner, Board Chair

Date: _____

By: _____
Phil Belfiori, Administrator

Date: _____

Approved as to form:

BOARD OF WATER COMMISSIONERS OF THE CITY OF SAINT PAUL

By: _____
Patrick Shea, General Manager
Saint Paul Regional Water Services

Date: _____

By: _____
Mara Humphrey, President

Date: _____

By: _____
David Gorski
Assistant City Attorney

Date: _____

By: _____
Mollie Gagnelius, Secretary

Date: _____

By: _____
John McCarthy, Director
Office of Financial Services

Date: _____

Request

The Vadnais Lake Area Water Management Organization (VLAWMO), in partnership with Ramsey County, the City of Vadnais Heights, and Saint Paul Regional Water Services (SPRWS), is requesting a scope of work and cost estimate from qualified consulting firms to conduct a feasibility study to evaluate opportunities to improve resiliency in the East Vadnais Lake subwatershed, including flood mitigation, water quality improvement, and drinking water source protection project opportunities, that expands on an existing Ramsey County flood feasibility study area in the City of Vadnais Heights (see map in attachment 1).

Background Information

The East Vadnais Lake Subwatershed is within the City of Vadnais Heights, which is located in the northeast section of Ramsey County, Minnesota. This subwatershed has a direct drainage area of nearly 300 acres of largely developed area with mixed land uses of single-family residential; retail and other commercial; institutional; park, recreational, or preserve; and undeveloped land. This area ultimately drains to East Vadnais Lake, which is a primary reservoir for the SPRWS and serves as the drinking water source for approximately 450,000 people.

Purpose

The development of a resiliency study is driven by the need for more resilient infrastructure to mitigate future flood and health risks to a critical drinking water supply (source water) in the face of projected climate change impacts. Within the East Vadnais Lake subwatershed, the current flood risk frequently causes the closure of the busy intersection of Edgerton Street and Centerville Road, which are both emergency vehicle routes and main local travel routes for surrounding communities. A flood feasibility study for this area is currently underway with Ramsey County to reduce the flooding of this intersection and improve water quality.

This resiliency study would expand on Ramsey County's flood feasibility study to further reduce flood risk and potential impacts to East Vadnais Lake from likely future increases in stormwater rate and volumes and pollutant loading due to climate change. After this project is complete, partner entities may construct one or more projects identified in the resiliency study in the future.

The purpose of the study is to:

1. Enhance existing flood mitigation and water quality improvement efforts in the East Vadnais Lake Subwatershed.
    a. Prevent future flooding of the Edgerton Street and Centerville Road intersection
2. Improve the overall resiliency of the East Vadnais Lake Subwatershed to climate change impacts.
3. Protect the drinking water source for approximately 450,000 SPRWS customers.
4. Identify at least 5 technically feasible BMPs/design alternatives to mitigate flooding, expand water storage, reduce stormwater rate and volume, and improve water quality.
5. Identify preferred long-term maintenance strategies for resiliency improvements that would be manageable for study partners and accomplish stakeholder goals.
6. Identify climate resiliency, drinking water protection, and /or water management focused grants programs that could be utilized to implement the study.

Scope of Work

The Scope of Services should include the following:

1. Up to 8 meetings with VLAWMO staff and study partners, including 1 meeting to kick off the project and 7 additional meetings as necessary to complete tasks detailed below.
    a. At least 1 meeting may include a public presentation for local community feedback/engagement
2. Collect and review data needed to complete a comparative analysis of BMPs/design alternatives.
    a. May include but not limited to geotechnical investigation, field verification of stormwater sewer infrastructure and outlet control structures, survey work of existing conditions and utilities, existing hydraulic and hydrologic models, stormwater and water quality models, SPRWS America Water Infrastructure Act risk assessment report, SPRWS raw water quality and water level data, wetland delineations, land use and available space, low floor and low building openings, overland EOFs, as-built conditions of existing stormwater management features, and results of Ramsey County flood feasibility study.
3. Preparation of existing conditions and multiple proposed conditions hydrologic and hydraulic models and stormwater and water quality models for defining flood risk and evaluating water quality improvement solutions in the subwatershed.
    a. Models will utilize Atlas 14 precipitation frequency modeling and other climate prediction modeling methods for a range of return intervals, such as the 500-

year event and 100 year 90th percentile events.

b. Models will contain enough detail to evaluate localized flooding at major intersections, low points, and other areas of interest within the subwatershed.

c. Models will define existing stormwater quality management and pollutant loading to East Vadnais Lake. Completed model will include existing stormwater BMPs and infrastructure.

4. Development of design alternatives analysis and concept plans for final alternatives.
    a. Analysis of at least 5 BMPs in the subwatershed for further analysis, including utilization of feedback from study partners and local community.
    b. Selection of 3 final flood mitigation and water quality improvement BMPs for conceptual design after analysis.
    c. Conceptual designs will at a minimum include a plan view layout, and evaluation of constructability, major conflicts, and other considerations for implementation.

5. For each conceptual BMP identified include planning level cost estimates, estimated pollutant load reductions, volume, rate control and storage enhancements, maintenance requirements, and a high-level assessment of feasibility of each conceptual BMP.

6. Summary of permitting considerations for any proposed improvements.

7. Summary of any relevant existing or future grant opportunities from external sources including but not limited to climate resiliency and source water protection grant programs.
    a. Include evaluation of how final study could be revised (if needed) to better "fit" future grant applications.

8. Submission of a final report and project deliverables, including attendance at stakeholder public meetings (if needed).

Deliverables

The project's final deliverables, at a minimum, must include the following:

1. Final report summarizing the analysis and recommendations from the resiliency study
2. Existing conditions and multiple proposed conditions hydrologic & hydraulic models
3. Stormwater and water quality models for evaluating flood risk and water quality improvement solutions in the subwatershed
4. Conceptual designs (plan view layouts)
5. Conceptual cost estimates for the design alternatives
6. Summary of permitting considerations for each alternative
7. Summary of external grant opportunities

Partner Entities Responsibilities

Entities will provide to the extent available:

- Aerial photos or contour elevations
- Completed Ramsey County flood feasibility study
- Current development plan sets
- Current wetland delineations
- Existing H & H, stormwater management, or water quality modeling
    a. 2010 HydroCAD model of subwatershed
    b. 2022 HydroCAD model of Edgerton St/Centerville Rd intersection area
- Historic photos of past flood events
- VLAWMO GIS layers
- Existing stormwater practices as-built surveys as available
- SPRWS America Water Infrastructure Act risk assessment report
- SPRWS raw water quality and water level data
- 2022 Soil borings
- Storm sewer and stormwater management infrastructure pipe locations
- East Vadnais Lake water quality and rainfall data
- 2013 Subwatershed Urban Stormwater Retrofit Analysis

Anticipated Timeline for Completion

The partners are requesting completion of the study within 6 months of notice to proceed. The anticipated start date is _____.

Submittal Requirements

Firms replying to this request are required to submit the following information:

1. Scope of work including proposed tasks and deliverables

2. Cost estimate with approximate rate and hours per each proposed task for each staff person and any additional expenses

3. Specify a timetable for completion of the study, including for each task of the scope of work

4. Project manager for the project

Evaluation of Proposals

Evaluation scope of work will include review by VLAWMO staff based upon, but not limited to, demonstrated success on similar projects, qualifications/expertise of staff assigned to the project, budget detail, overall cost, and references.

VLAWMO and its partners, reserve the right to reject any and or all proposals. VLAWMO and partners also reserve the right to negotiate with firm to customize considered proposals and are not required to select the low-cost proposal.

Questions

Questions should be emailed to Lauren Sampedro, Watershed Technician & Program Coordinator, at lauren.sampedro@vlawmo.org

Submittal Deadline

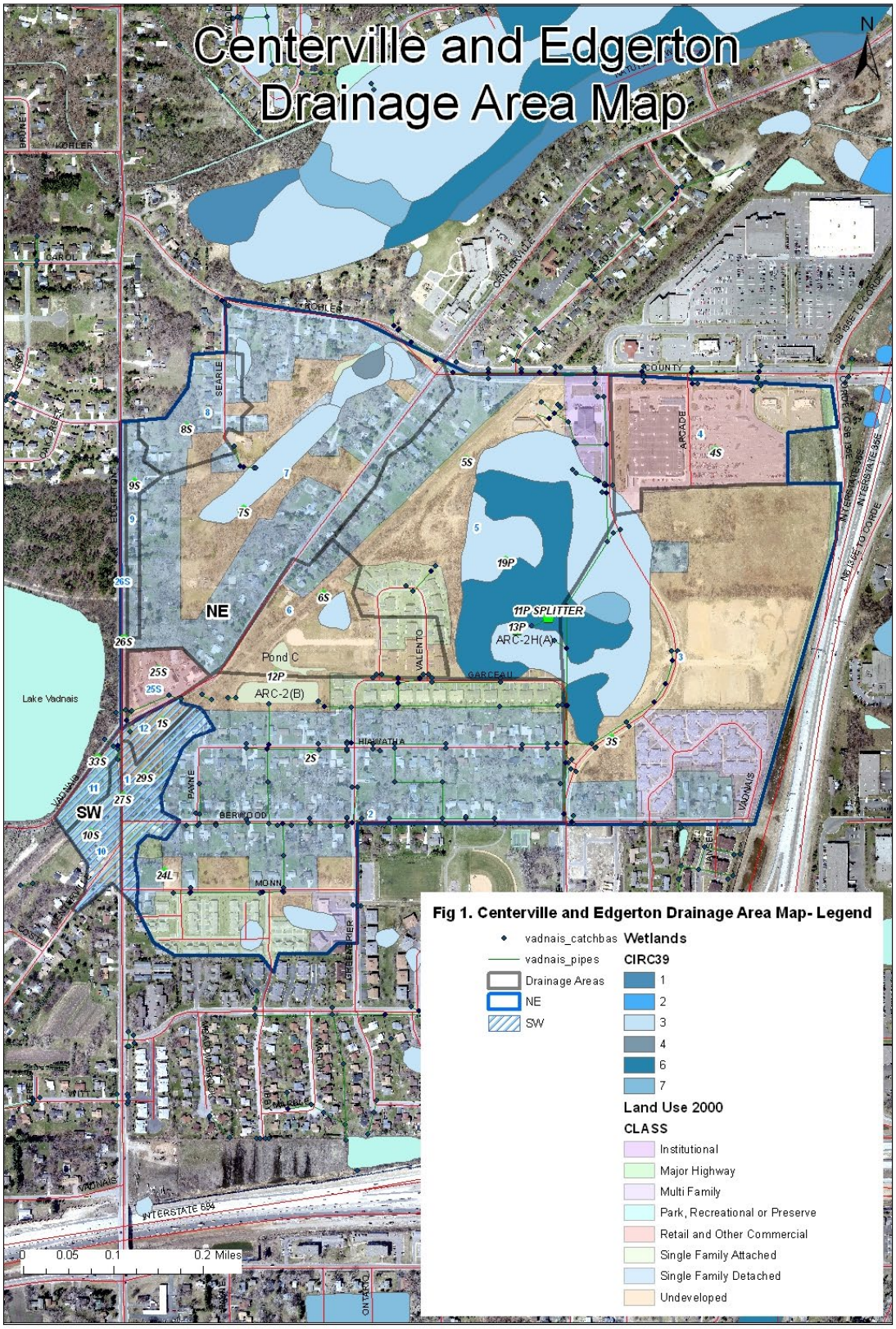
Proposals will be accepted U.S. mail or E-mail. If submitting a hard copy by mail please include one electronic copy in PDF format. Preference is for electronic copies.

Hard Copies Submit to:	Vadnais Lake Area Water Management Organization ATTN: Lauren Sampedro 800 County Rd East Vadnais Heights, MN 55127
E-mail	lauren.sampedro@vlawmo.org
Deadline:	_____
Format:	Include 1 electronic copy of document in PDF format.

The entire submittal package must be received by or before the time and date indicated above. Time and date deadlines for submittal will not be waived; however, VLAWMO reserves the right to extend the submittal deadline.

Attachments

1. Study area map


Centerville and Edgerton
Drainage Area Map
N
NE
SW
Pond C
ARC-2(B)
ARC-2H(A)
11P SPLITTER
Lake Vadnais
INTERSTATE 694
0 0.05 0.1 0.2 Miles
Fig 1. Centerville and Edgerton Drainage Area Map- Legend
vadnais_catchbas
vadnais_pipes
Drainage Areas
NE
SW
Wetlands
CIRC39
1
2
3
4
6
7
Land Use 2000
CLASS
Institutional
Major Highway
Multi Family
Park, Recreational or Preserve
Retail and Other Commercial
Single Family Attached
Single Family Detached
Undeveloped