

Attachment 4

VADNAIS LAKE AREA WATER MANAGEMENT ORGANIZATION

TASK ORDER (with RFP)

This Task Order is issued by Vadnais Lake Area Water Management Organization (“**VLAWMO**”) to authorize the engineer identified below (“**Engineer**”) to provide the services identified herein pursuant to the agreement identified below between VLAWMO and Engineer (“**Agreement**”). Section 2 of the Agreement indicates VLAWMO will issue a written task order for a specific project or item of work to be performed in furtherance of the services to be provided as part of the Agreement.

Engineer: SRF Consulting Group, Inc.	Agreement:
Contact Person for this Task Order: Paul Martens	Phone: 763.475.0010
Address: 3701 Wayzata Boulevard, Suite 100 Minneapolis, Minnesota 55416	Email: pmartens@srfconsulting.com

The following person is designated the Project Manager on this Task Order for VLAWMO (“**Project Manager**”):

Name: David Filipiak	Email: dfilipiak@srfconsulting.com
Mailing Address: 2550 University Avenue West, Suite 345N, Saint Paul, MN 55114	Telephone Number: 651.333.4161

VLAWMO and Engineer may hereinafter be referred to individually as a “party” or collectively as the “parties.” In consideration of the mutual promises and agreements contained herein, and subject to the terms and conditions of the Agreement, VLAWMO and Engineer hereby agree as follows:

1. **Task.** Engineer agrees to provide VLAWMO the services described in the attached Exhibit A (collectively, the “**Task**”). All services under this Task Order shall comply with the terms and conditions of the Agreement, except as further specified herein, and the RFP VLAWMO issued for the Task, which is attached hereto as Exhibit B. To the extent there are any inconsistencies in the text of this Task Order and the Agreement, the text of this Task Order shall be controlling. Any text within the attached exhibits that is not consistent with the language of the Agreement is not controlling and shall not bind VLAWMO.

2. **Schedule:** The Task shall be completed in accordance with the schedule set out in the attached Exhibit A or, if not set out therein, in accordance with the following:
3. **Compensation.** VLAWMO agrees to compensate Engineer for performing the Task as provided in the attached Exhibit C.

IN WITNESS WHEREOF, the duly authorized representatives of the parties have executed this Task Order effective as of the date of the last party to execute it.

FOR ENGINEER:

By David Filipiak Digitally signed by David Filipiak
DN: cn=David Filipiak, email=DFilipiak@vlawmo.com,
ou=VLAWRP Consulting Group, Inc., OU=Water
Resources, cn=David Filipiak
Reason: I am approving this document
Date: 2023.08.16.09:58:59-0400

Its Director

Date 08.16.2023

By Muni K Lt

Its Chief People Officer

Date 8-16-23

FOR VLAWMO:

By _____

Its _____

Date _____

By _____

Its _____

Date _____

EXHIBIT A
Description of Task

The Task is as described in the SRF proposal attached hereto and includes the following item that was identified as optional in the proposal:

- Field Survey for a cost of \$ 4,222 .

Task 8.0 Optional Tasks - VLAWMO East Vadnais Lake Subwatershed Resiliency Study

Task 8.1 Field Survey – Key Infrastructure

Task Understanding

The primary source of information for modeling includes existing GIS data for utilities and topographic surfaces. This task involves providing a limited amount of surveyor time to collect specific data in the field to enhance modeling and concept design efforts.

Scope

Includes 16 hours of a surveyor along with 8 hours of a H&H modeler to field survey utilities and other topography as directed by the team.

Assumptions

- We anticipate this work will be done prior to the arrival of snow but late enough in the fall that the leaves have fallen such that the data can be collected using a survey grade GIS data collection.
- Anticipate BMP locations may be very approximate.

SRF Deliverables

- Field data for use in the conceptual design

Schedule

- Anticipate mid to late October, 2023

Hours/Fee

- 27 hours - \$4,167 + Additional direct expenses (mileage) - \$55 = Total for Option Task = \$4,222

VLAWMO East Vadnais Lake Subwatershed Resiliency Study
 Cost Summary (Rev'd 8.15.23)

Task	Description	PROF. VIII-VII	PROF. VI	PROF. V	PROF. IV	PROF. III	PROF. II	PROF. I	TECH.	SUPPORT	TOTALS	EST. FEE
	Average Hourly Rate	\$221	\$194	\$155	\$141			\$109	\$156			
1	Project Management	52	0	20	0	0	0	0	0	0	72	\$ 14,592
2	Data Collection and Development of Base Map	1	2	5	33	0	0	20	0	0	50	\$ 6,546
3	Hydrologic & Hydraulic Model and Results	4	0	12	36	0	0	70	0	0	122	\$ 15,450
4	Conceptual Designs	6	0	12	36	0	0	46	0	0	100	\$ 13,276
4.1	Analysis of 5 BMPs for further analysis	2	0	2	4	0	0	4	0	0		
4.2	Conceptual analysis of 3 BMPs	2	0	6	12	0	0	24	0	0		
4.3	Assesment of 3 Concept BMPs	2	0	4	20	0	0	18	0	0		
5	Summary of Permitting Considerations	1	5	0	4	0	0	0	0	0	10	\$ 1,755
6	Summary of Grant Opportunities	1	7	0	8	0	0	0	0	0	16	\$ 2,707
7	Reporting and Recommendations	6	2	8	36	0	0	28	0	0	80	\$ 11,082
8	Optional Task	0	2	1	8	0	0	0	16	0	27	\$ 4,167
8.1	Perform field survey/investigation needs	0	2	1	8	0	0	0	16	0		
Total Hours		71	16	57	153	0	0	164	0	0	477	\$ 69,575
Expenses (Mileage/Printing)											\$	147
Subtotal Fee		\$ 15,691.00	\$ 3,104.00	\$ 8,835.00	\$ 21,573.00	\$ -	\$ -	\$ 17,876.00	\$ -	\$ -	\$ 67,079.00	
Total Fee											\$	69,722



EAST VADNAIS LAKE Subwatershed Resiliency Study

VADNAIS LAKE AREA WATER MANAGEMENT
ORGANIZATION





July 27, 2023

Vadnais Lake Area Water Management Organization
Attn: Lauren Sampedro
800 County Road East
Vadnais Heights, MN 55127

Subject: East Vadnais Lake Subwatershed Resiliency Study

Dear Lauren Sampedro and Members of the Selection Committee:

The Vadnais Lake Area Water Management Organization (VLAWMO) has identified priority issues in its Watershed Management Plan focused on improving its water resources, protecting the watershed and its residents by addressing flooding issues, and taking proactive measures to achieve drinking water source protection. The VLAWMO's approach to partnering with key stakeholders to meet its goals has been demonstrated through its efforts to partner with Ramsey County to address localized flooding at the intersection of Edgerton Street (CSAH 14) and Centerville Road (CSAH 59). The VLAWMO is demonstrating its leadership again by building upon the Edgerton Road Drainage Study with the East Vadnais Lake Subwatershed Resiliency Study, focusing on identifying critical Best Management Practices (BMPs) to address local flooding, build resiliency in the watershed, and protect a vital source of drinking water for the community.

SRF has gained valuable insights into the East Vadnais Lake subwatershed through our work on the Edgerton Road Drainage Study. SRF understands the important interest of the VLAWMO and its partners. This insight and knowledge of the issues in the watershed allow SRF to build upon our work addressing the flooding at Edgerton Road and Centerville Road. We have assembled a team of water resource, civil and construction engineers, and wetland and environmental staff with the depth and breadth of knowledge required to identify cost-effective, innovative solutions to achieve a resilient subwatershed.

Selecting the SRF team for this resiliency study provides the VLAWMO and its stakeholders with the following advantages:

Proven Experience. Our team of experts has addressed flooding and water quality improvements on many projects for public clients, as demonstrated by the Edgerton Drainage Study and others listed in the following proposal. The team has employed a BMP Toolbox process to explore BMP alternatives and help clients understand the pros and cons of various technologies. This experience gives decision-makers the information needed to select BMPs that accomplish the project flooding and water quality goals, are constructible, fit operations and maintenance activities, and fit into the environment.

EcoTeam Approach. SRF has formed a new interdisciplinary team called the Integrated Ecology (EcoTeam). This team utilizes ecological principles and processes in project planning and design to achieve healthy ecosystems and resilient communities. This integrated approach will help clients address challenges within resource management and incorporate resiliency into programs and projects. The team assembled for this project includes resiliency specialists and planners, water resources engineers, environmental planning and wetland staff, and GIS staff. When needed, we can pull in other specialties, such as graphic designers and communications specialists. Our clients know that project questions are handled efficiently and effectively, resulting in a successful project.

Trusted Leaders. **David Filipiak, PE**, will be our project manager. A director in SRF's water resources practice, David has successfully led numerous multidisciplinary water resources efforts, combining his excellent technical, communication, and organizational skills to deliver projects that blend the needs of multiple stakeholders in win-win solutions. He is supported by **Jacques Duval, PE** and **Delaney Moberly, PE**, both with significant design and modeling expertise in BMP analysis, design, and construction. **Kevin Bigalke, Senior Project Manager**, brings knowledge in permitting and regulatory programs as well as significant experience with grants and funding approaches.

SRF is thrilled for the opportunity to assist VLAWMO with this important study to improve water quality in East Vadnais Lake. Our team members have the technical expertise, creativity, flexibility, and availability to execute this project. If you have any questions, contact David at 651.333.4161 or dfiliapiak@srfconsulting.com.

Sincerely,

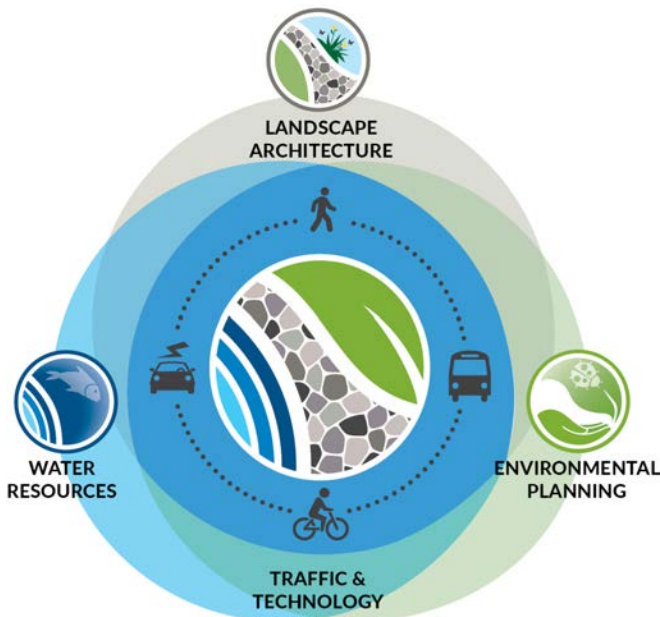
David Filipiak, PE (MN)
Project Manager

SRF Approach Philosophies

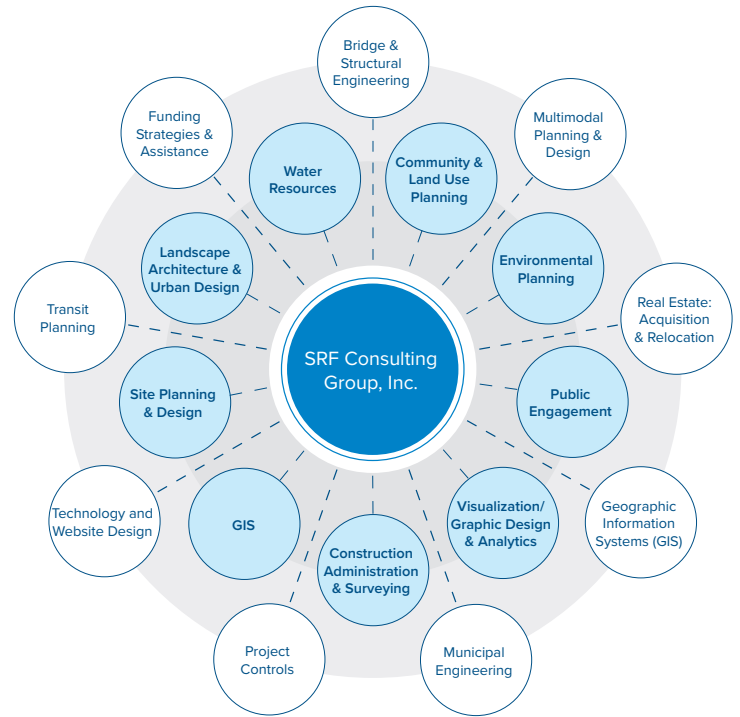
For 60 years, SRF Consulting Group has worked with public agencies and provided outstanding support to improve our communities, including with a wide range of water resource solutions. Our reputation for technical excellence demonstrates the high level of effort we put forth on every project.

SRF ECOTEAM

SRF's Integrated Ecology Team (EcoTeam) believes that utilizing ecological principles and processes in project planning and design will achieve healthy ecosystems and resilient communities. Whether incorporating green infrastructure into the public realm, enhancing ecological function through native plant restoration, or helping communities reduce greenhouse gas emissions and vehicle miles traveled, SRF works to develop solutions that address communities' complex problems.



SRF's EcoTeam considers issues related to water resource management, natural resources, parks, wetlands, urban green space, transportation, and community stakeholder engagement to provide a comprehensive approach to ecosystem restoration, protection efforts, resiliency planning, and design. This integrated approach will help clients address challenges within resource management and incorporate resiliency into projects.



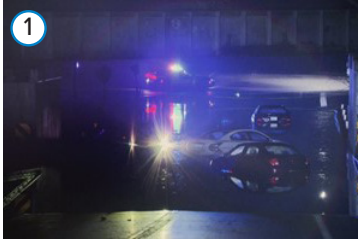
SKILLED PROJECT MANAGEMENT

SRF project managers uphold the values of stewardship, financial accountability, and technical excellence of our public agency clients, resulting in solutions that are appropriate, cost-effective, and meaningful. We identify the goals and challenges of a project and focus our solutions and determine feasibility and effectiveness to ensure a successful project for our clients, staff, and the communities that we serve. Our dedication to pursuing a sustainable future extends from day-to-day operations to promoting practices in planning, design and engineering.

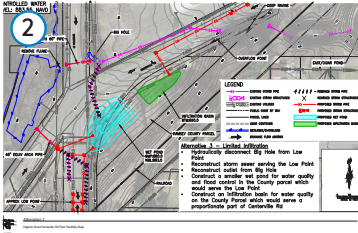
EFFECTIVE COORDINATION & COMMUNICATION

We have worked extensively with many levels of stakeholders which provides us with the expertise to effectively coordinate projects. We rely on regular communication by our project managers and staff to coordinate activities and ensure that the project is on schedule, within budget, and in accordance with the scope of work. SRF takes pride in our long-term client relationships, which reflect the trust our clients have in our work.

Project Map



Flooding at Low Point of Edgerton Road - May 12, 2022



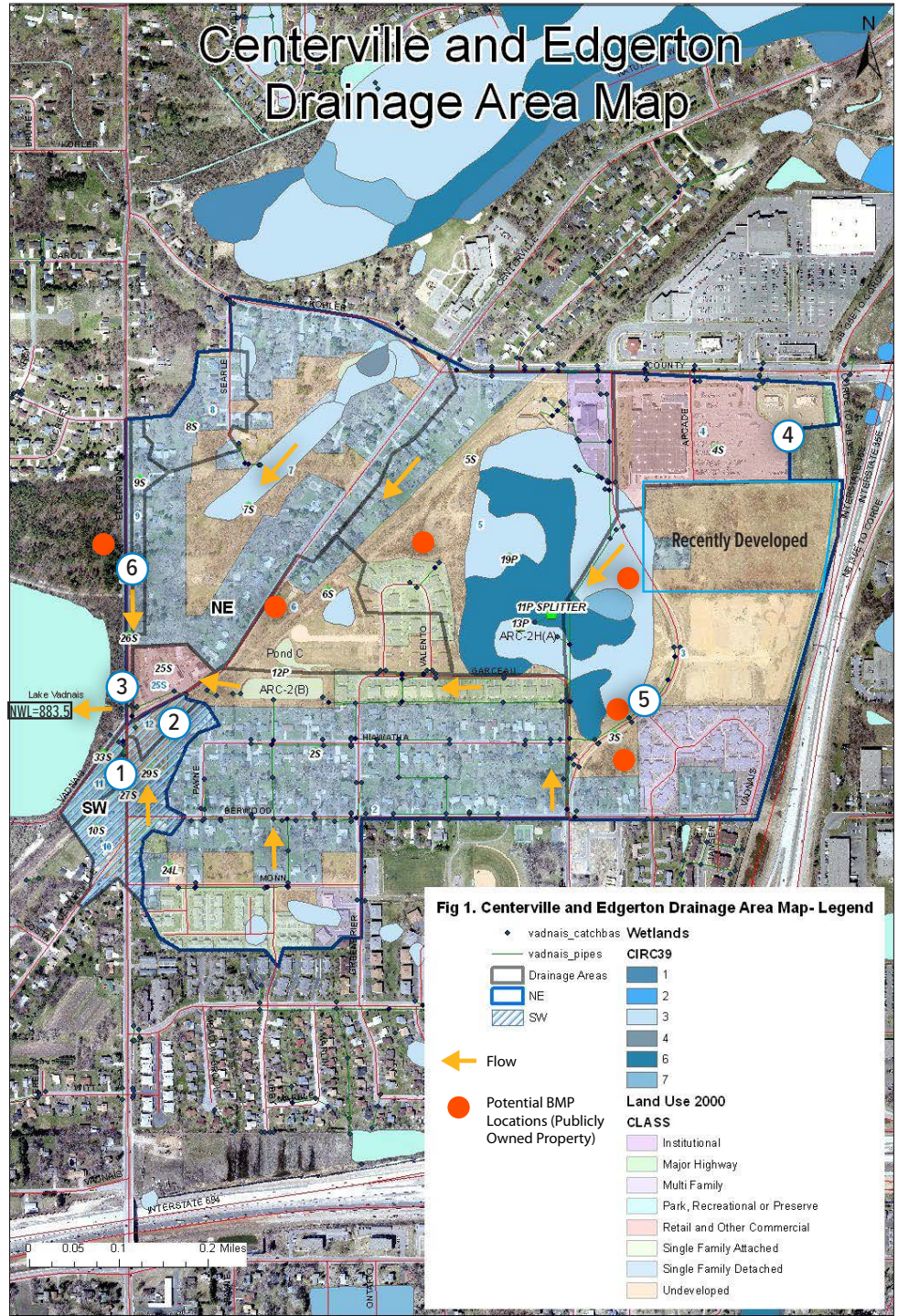
BMP Alternative 3 Selected as a Part of the Edgerton/Centerville Flood Feasibility Study Report.



East Vadnais Lake Subwatershed Outfall Location to be Rebuilt with the Edgerton Road Drainage Improvements Plan.



City of Vadnais Heights Shopping Area



Potential City owned BMP Locations



Potential SPRWS Owned BMP Location



PROJECT UNDERSTANDING

The East Vadnais Lake subwatershed provides essential resources to the residents of the VLAWMO, the City of Vadnais Heights, and Ramsey County, ranging from vital retail and commercial centers to residential areas, parks and recreation opportunities, to an important source of drinking water for the community. As the subwatershed is impacted by climate change and changing precipitation patterns, the need to identify Best Management Practices (BMPs) that will achieve resiliency by enhancing the subwatershed's ability to withstand and recover from the impacts of a changing climate while maintaining hydrological functions and protecting the subwatershed's water resources and infrastructure is becoming ever more urgent.

The Vadnais Lakes Area Watershed Management Organization (VLAWMO) is interested in building upon the recently completed Edgerton Road Drainage Study (2023) to continue the efforts to reduce flood risk and climate change impacts on East Vadnais Lake. Utilizing the information from the Edgerton Road Drainage Study will be important to address impacts from increased stormwater runoff, increased pollutant loads, and changing precipitation patterns due to climate change.

PROJECT APPROACH

Our approach to this study includes a number of key elements that lead to success.

Relationships

SRF has experience working with VLAWMO, the City of Vadnais Heights, Ramsey County, and the St. Paul Regional Water Service through our work on the Edgerton Road Drainage Study. Through this study, we have met with County and City staff to discuss the challenges of flooding in the area and discussions with VLAWMO staff about potential water quality improvement opportunities. Stakeholders from each of the entities played a significant role in providing input into the feasibility study and ultimately choosing the alternative being constructed this fall.

Understanding of the Subwatershed

Our work on the Edgerton Drainage Study included collecting much of the data listed in the RFP from the stakeholders, providing a solid start to the hydrologic and hydraulic modeling needed for this project. It allowed us to understand the nuances of the proposed study goals and objectives. We have combined this project background information with a thorough review of the RFP to develop an approach where we will deliver quality BMP concept designs that can be successfully carried forward to final design and implementation.

Ask Questions and Listen

Studies like this one require input from all stakeholders, with the design team leading the effort with questions that bring opportunities to the forefront. Asking questions to understand better the nuances of each of the stakeholders' goals, questions about available space and to confirm localized flooding, beginning to understand who owns and maintains existing and future infrastructure are all things we will explore at the onset of the project. By asking, listening and bringing our expertise to the discussions are a proven method of identifying alternatives that bring value to the communities.

Experience

Our project team brings several keys to success, including:

- Strong project management and proactive communications with VLAWMO and project partner staff.
- Water resource engineers who have designed hundreds of BMPs, that provide flood control and water quality treatment.
- Environmental and Wetland staff that understand how wetlands can be incorporated into watershed project to enhance resiliency.
- Civil engineers with decades of State Aid plan experience who will guide the final products to meet applicable requirements.
- Staff that understand local permitting requirements and have extensive experience with grants and funding opportunities.

These success factors have been woven into our proposal including staffing, experience, and work task approach.



Task 1: Project Management/Stakeholder Meetings

Effective project management, including coordination of major project activities, is critical to success. Overall project management tasks will include:

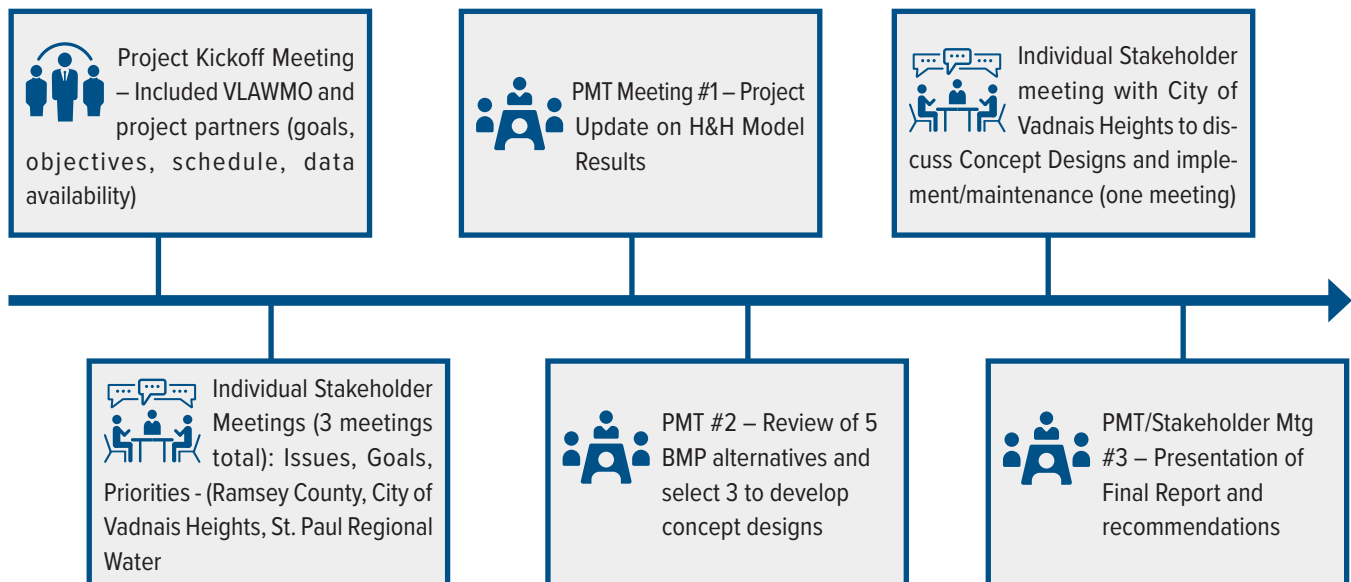
- Schedule bi-weekly conversations between the SRF and VLAWMO project managers to encourage timely coordination and collaboration.
- Regular communications with key staff at Ramsey County, City of Vadnais Heights, the Vadnais Lake Area Water Management Organization (VLAWMO) and Saint Paul Regional Water Service (SPRWS).
- Coordinate Project Management Team (PMT) meetings with stakeholders (assumes 3 meetings). Prepare agenda and materials for review by the VLAWMO’s project manager prior to the meetings and meeting notes to document the discussions and action items.
- Engagement with Individual Stakeholders to identify each project partner’s issues, priorities, and goals (assumes one meeting with Ramsey County and St. Paul Regional Water Services, and two meetings with the City of Vadnais Heights).
- Public presentation of project recommendations will be incorporated into at least one (1) PMT/Stakeholder meeting.
- Develop and maintain a project schedule including milestones that include review timelines.
- Monitoring project schedule and budget.

Project Manager David Filipiak is highly qualified to manage all aspects of the project. He has experience in all aspects of the project and will successfully guide the team and coordinate the final design process. David will maintain regular contact with County and City staff to coordinate the work and maintain the project schedule.

Quality Management Plan (QMP) – The SRF team will draw from our final design experience with similar projects to address issues and concerns that will arise. We will draw on “lessons learned” to constantly improve our project approach, and we have published an internal Quality Management Plan (QMP) that is used on every project we undertake. Overall project quality assurance (QA) is incorporated into our projects’ tasks and senior staff members conduct timely quality control (QC) reviews to ensure an accurate product.

Stakeholder Meetings – We have included multiple approaches to engaging project stakeholders throughout the study. We will host a Project Kickoff Meeting with the project team to align project goals, objectives, and schedule. We will host three Project Management Team Meetings to provide updates on the project. We will host four individual meetings with project stakeholders (one each with Ramsey County and St. Paul Regional Water Services and two meetings with the City of Vadnais Heights) to hear their specific issues, priorities, and goals.

Project Stakeholder Engagement Road Map



Task 2: Data Collection and Analysis

This task involves compiling and reviewing existing data, models, and previous studies to understand the project area's current conditions and identify opportunities and constraints for the development of concepts. The SRF team of engineers and scientists will review the existing data provided by VLAWMO and project partners. This existing data and information include, but is not limited to:

- Aerial photos and contour elevations where available
- The Edgerton Road Drainage Study
- Current development plan sets
- Current wetland delineations
- Existing H & H, stormwater, and water quality models
- Historic photos of past flood events
- VLAWMO GIS layers and other GIS data (utilities, etc.)
- 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

The review and analysis of existing data will be used to create a base map of data which will be used to develop BMP options to help achieve the project goals and to identify potential areas for BMP placement.

Optional Task: Wetland Delineation – We suggest the VLAWMO consider additional wetland delineations be conducted to update the delineation reports and confirm current conditions.

Task 3: Hydrologic & Hydraulic Model Development

This task involves the preparation of existing conditions and multiple proposed conditions hydrologic and hydraulic models. XP-SWMM models will be developed for the East Vadnais Lake subwatershed. This task also will produce a pond report table and mapping.

The models will evaluate localized flooding and define existing stormwater management to East Vadnais Lake.

The modeling will also be used to identify up to five BMP concepts that accomplish the project's goals: reducing/eliminating flooding, improving water quality to East Vadnais Lake, and building resiliency. Design elements that are considered in choosing and development include:

- Understanding Hydrologic/hydraulic conditions of the area – what method of flood reduction best suits this site?
- Pollutant Removal – choose BMP's that can reduce the pollutants important to the lake
- Topography
- Space Constraints
- Utilities
- Soils – suitable for infiltration, anticipated and observed groundwater, contamination
- Construction and Maintenance Access
- Anticipated operations and maintenance/schedule
- Potential ecologic benefit
- Probable Costs

SRF has used a BMP toolbox approach on many projects to identify BMPs that should be considered and eliminate those that may not meet the project objectives. Still, the stakeholders are not interested in owning or maintaining. This would be discussed at an early PMT meeting to provide stakeholders with an understanding of available BMPs, including common and emerging ideas, and help guide the design team to focus on the types of BMPs the stakeholders can support.

Hydrologic/hydraulic modeling will be used to provide the team with an understanding of the existing drainage patterns and their impact on existing flooding. Staff use either HydroCAD or XP-SWMM, depending on the system's complexity. Flat conveyance systems controlled by tailwater are often modeled more accurately by XP-SWMM, and based on our field visit, this will be the modeling software we will use. These same models will be used to demonstrate the effectiveness of the proposed changes and assist with the final design. This modeling effort is critical to understanding which of the three flood reduction methods, or combinations, will best solve the flooding issues and meet the water quality goals of the project.



Task 4 – Development of Design Alternatives and Conceptual Designs

This task involves the development of design alternatives and concept plans for final alternatives that accomplish the study's goals: reducing impacts from flooding, improving water quality in the subwatershed, and providing protection of East Vadnais Lake as a drinking water supply source. This will include the analysis of at least 5 BMPs in the subwatershed for further analysis, including utilization of feedback from study partners.

- Understanding Hydrologic/hydraulic conditions of the area – what method of flood reduction best suits this site?
- Pollutant Removal – choose BMP's that can reduce the pollutants important to the lake
- Topography
- Space Constraints
- Utilities
- Soils – suitable for infiltration, anticipated and observed groundwater, contamination
- Construction and Maintenance Access
- Anticipated operations and maintenance/schedule
- Potential ecologic benefit
- Probable Costs

SRF will work with VLAWMO and project stakeholders to select three final flood mitigation and water quality improvement BMPs for conceptual design. Conceptual designs will, at a minimum, include:

- A plan view layout
- Evaluation of constructability
- Major conflicts
- Other considerations for implementation

Additionally, for each of the three concept designs the following will be developed:

- Cost estimates
- Estimated pollutant load reductions
- Estimated volume control
- Estimated rate control and storm enhancements
- Anticipated maintenance requirements

In addition to the independent QC review identified under the Project Management task, we have included time in this task for our Construction Engineering staff to provide a constructability review. This independent review provides valuable input that can change how a project is constructed by altering the plans or specifications.

Optional Tasks: Field Survey, Utility Coordination and P8 Modeling – We also suggest the VLAWMO consider three additional tasks that may help the design. First, conducting a field survey will include identifying and confirming storm sewer infrastructure and site conditions. Second, identifying and coordinating with private utilities will help with constructability and cost estimating. SRF will commit a utility coordination engineer to actively engage the utility owners and work with them one-on-one to identify any relocation work necessary. Third, subwatershed P8 models would help assess the impact of each BMP's impact on the lake and the overall subwatershed health.

Task 5 – Summary of Permit Considerations

Once the three preferred design concepts are identified, the team will identify permitting requirements for the project. We anticipate the NPDES permit will be needed and expect the City of Vadnais Heights and Ramsey County to be reviewers during the plan production process. We also anticipate there will be improvements that may require coordination with the MnDNR and the submittal of the Protected Waters permit via the MPARS system. Deliverables will include a summary of stormwater regulations and anticipated permit review timelines.

Task 6– Summary of Grant Opportunities

Grants and other funding approaches are important to help with cost of implementing BMPs. The SRF team will identify grants and funding opportunities that the VLAWMO and project partners can consider pursuing to fund BMP implementation. The team will also provide an analysis of the concept designs for grant eligibility and funding success.

Project deliverables will include a summary of grant opportunities, eligibility criteria, grant application timelines, and match requirements.



Schedule

	2023				2024			
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
1 Project Management/ Stakeholder Meetings								
Kickoff Meeting	★							
Project Management Team Meetings	●			●			●	
Individual Stakeholder Meetings (one mtg with Ramsey County and St. Paul Regional Water Services, two meetings with City of Vadnais Heights)		●	● ●		●		■	
Bi-Weekly Check-In Phone Call with VLAWMO PM	■							
2 Data Collection and Analysis								
Collect and Review Existing Data		■						
3 Existing Condition and Proposed Conditions H & H Model Development								
Prepare Existing Conditions H & H Model		■						
Develop Proposed Conditions H & H and Water Quality Models					■		■	
4 Alternatives Design Analysis and Concept Plan Development								
Develop 5 BMP Alternatives for Further Analysis			■		■			
Develop Concept Plans for 3 BMPs					■		■	
Develop Cost Estimates, Water Quality Analysis, Modeling for 3 Concept Plans					■			■
Conduct Feasibility Assessment for 3 Concept BMPs					■			■
5 Summary of Permitting Considerations								
Review Permitting Requirements for 3 Concept BMPs					■			■
6 Grant and Funding Opportunity Analysis								
Investigate and Summarize Grant and Funding Opportunities							■	
Evaluate Study Findings for Grant Eligibility and Criteria							■	
7 Final Report and Project Deliverables								
Development and Submittal of Final Report							■	
Presentation of Final Report and 3 Concept BMP Plan to Stakeholders							■	

■ Work on task ■ Project/Task Completion or Deliverable

Budget and Assumptions

TASK	DESCRIPTION	PROF. VIII-VII	PROF. VI	PROF. V	PROF. IV	PROF. I	TOTALS	EST. FEE
	<i>Average Hourly Rate</i>	<i>\$221</i>	<i>\$194</i>	<i>\$155</i>	<i>\$141</i>	<i>\$109</i>		
1	Project Management/ Stakeholder Meetings	52	0	20	0	0	72	\$14,592
2	Data Collection and Development of Base Map	1	0	4	25	20	50	\$6,546
3	Hydrologic & Hydraulic Model and Results	4	0	12	36	70	122	\$15,450
4	Conceptual Designs	6	0	12	36	46	100	\$13,276
4.1	Analysis of 5 BMPs for further analysis	2	0	2	4	4		
4.2	Conceptual analysis of 3 BMPs	2	0	6	12	24		
4.3	Assessment of 3 Concept BMPs	2	0	4	20	18		
5	Summary of Permitting Considerations	1	5	0	4	0	10	\$1,755
6	Summary of Grant Opportunities	1	7	0	8	0	16	\$2,707
7	Reporting and Recommendations	6	2	8	36	28	80	\$11,082
	TOTAL HOURS	71	14	56	145	164	450	\$65,408.00
	EXPENSES (MILEAGE/PRINTING)							\$92.00
	SUBTOTAL FEE	\$15,691.00	\$2,716.00	\$8,680.00	\$20,445.00	\$17,876.00	\$65,408.00	
	TOTAL FEE							\$65,500

**SRF CONSULTING GROUP, INC.
RANGE OF HOURLY BILLING RATES
JANUARY 2023 THROUGH DECEMBER 2023**

PROFESSIONAL

Professional VIII	\$ 170 - \$ 260
Professional VII	\$ 160 - \$ 260
Professional VI	\$ 140 - \$ 245
Professional V	\$ 130 - \$ 245
Professional IV	\$ 110 - \$ 215
Professional III	\$ 100 - \$ 187
Professional II	\$ 90 - \$ 150
Professional I	\$ 85 - \$ 130

TECHNICIAN

Technician VI	\$ 130 - \$ 215
Technician V	\$ 125 - \$ 215
Technician IV	\$ 110 - \$ 197
Technician III	\$ 90 - \$ 177
Technician II	\$ 80 - \$ 145
Technician I	\$ 70 - \$ 115

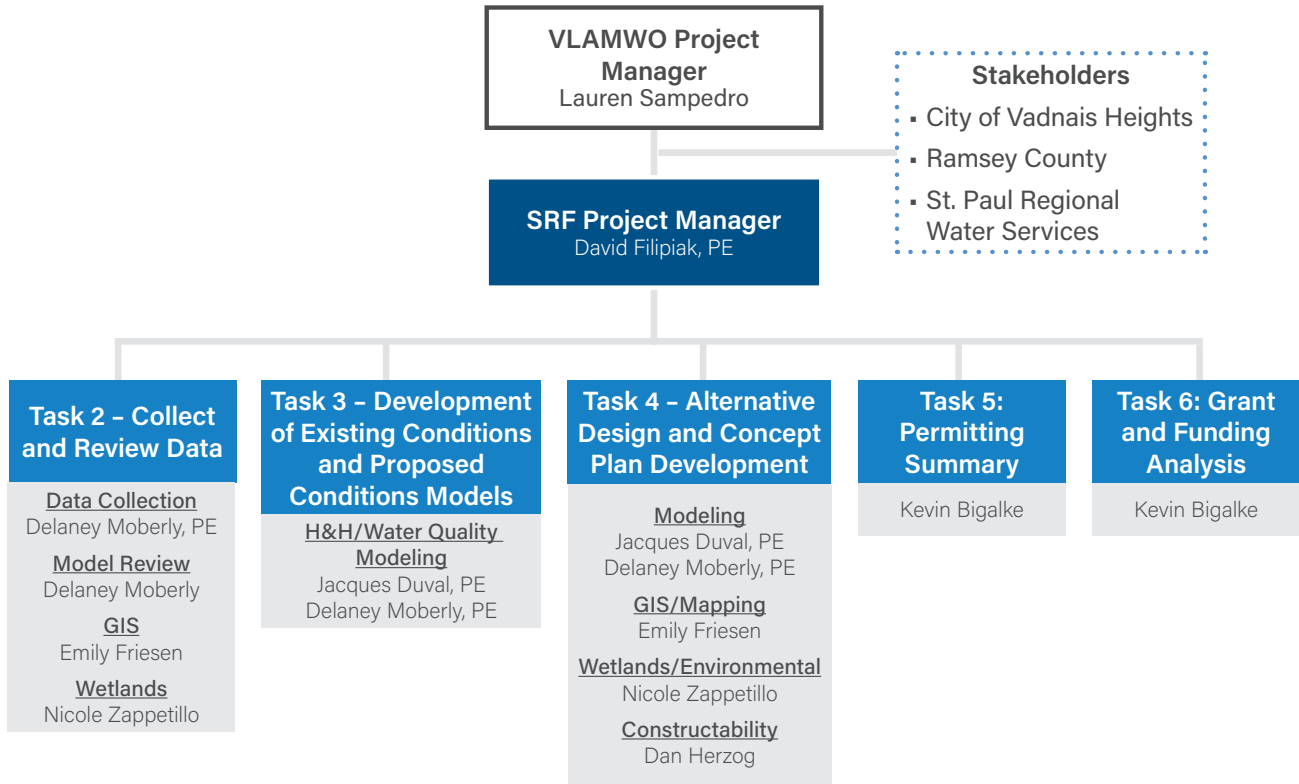
SUPPORT SPECIALIST

Support Specialist VI	\$ 130 - \$ 215
Support Specialist V	\$ 125 - \$ 215
Support Specialist IV	\$ 110 - \$ 185
Support Specialist III	\$ 80 - \$ 165
Support Specialist II	\$ 70 - \$ 140
Support Specialist I	\$ 60 - \$ 115

The Range of Hourly Rates schedule is subject to change annually. Direct project related expenses are billed at a cost and mileage is billed at a rate not to exceed the current allowable IRS rate for business miles.

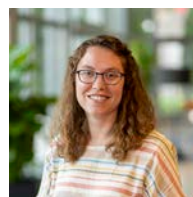
SRF Key Staff and Qualifications

The SRF team is comprised of individuals who possess the depth of knowledge and experience needed to complete the study and plans as outlined in the RFP and expanded upon in the scope. Our technical experts, led by Project Manager David Filipiak, have vast experience developing BMP feasibility studies and reports that have led to the construction of BMPs – the ultimate purpose of the study. **David will work with each task lead** to accomplish each task. Each team member is fully committed to this effort and will complete the tasks on time and within budget. A summary of key personnel, relevant experience, and qualifications is provided in this section.



DAVID FILIPIAK, PE | Project Manager

David leads SRF’s Water Resource Group, providing review and oversight with 39 years of experience in engineering and water resources planning. His expertise includes stormwater management planning for site and highway projects, hydrologic and hydraulic modeling of both urban and rural watersheds, preliminary and final design for major storm sewer projects, regional and site-specific Best Management Practice (BMP) design, and major wetland restoration projects. Dave excels at developing innovative stormwater treatment solutions that use treatment trains and evaluate performance, aesthetics, and maintenance. David is also known for assisting clients with navigating the myriad of water resource-related permits and finding common ground on complex projects with local, multiple state, and federal jurisdictions. David managed the Edgerton Road Drainage Study and construction documents and has been an advisor on many of the projects listed, including leading the water resource lead for the Gold Line BRT.



DELANEY MOBERLY, PE | Collect and Review Data, Development of Existing Conditions and Proposed Conditions Models & Alternative Design and Concept Plan Development

Delaney’s seven years of experience in water resources engineering includes hydrologic and hydraulic modeling, urban drainage design, and stormwater management at both the preliminary and final design stages. She has worked on the design of storm sewers and stormwater best management practices (BMPs). Delaney did the design and modeling for the Edgerton Road Drainage Study and has previous experience in Ramsey County with the Bruce Vento Phase 2 trail, Mounds View High School trail in Arden Hills, and as a design engineer on the Gold Line BRT.



JACQUES DUVAL, PE | Development of Existing Conditions and Proposed Conditions Models & Alternative Design and Concept Plan Development

Jacques has 14 years of water resources engineering experience, including roadway drainage, stormwater management, and stormwater permitting. He has performed preliminary design through final design on a wide variety of projects. Jacques is proficient in drainage design, hydrologic design, hydraulic analysis, streambank stabilization, wetland restoration, BMP design, water quality analysis, and construction plan preparation and review. Jacques was the lead design engineer for the Edgerton Road Drainage Study and has done many drainage-related studies and construction plans, including projects for the County such as CSAH 18 (Bailey Road), CSAH 19 / TH 61 Roundabout, and CSAH 2 (Broadway Avenue) Reconstruction. He was also a lead design engineer on the Gold Line BRT.



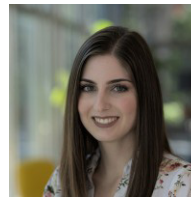
KEVIN BIGALKE | Permitting Summary & Grant and Funding Analysis

Kevin has over 25 years of water resource and watershed management experience working at local, regional, and state resource management agencies. He has previously worked as the Assistant Director for Regional Operations for the Minnesota Board of Water & Soil Resources and with two different watershed districts and the Minnesota Department of Natural Resources. Kevin brings a wealth of experience developing and leading watershed management plans, developing local water regulatory programs, and implementing water resource and watershed projects.



NICOLE ZAPPETILLO, CWD | Collect and Review Data & Alternative Design and Concept Plan Development

Nicole has 14 years of experience, including nearly five years working as an environmental scientist for the North Dakota Department of Transportation. Her strong environmental background experience includes writing and reviewing NEPA documentation for highway and trail projects, as well as completing numerous field and office wetland delineations and reports. Her work at SRF includes preparing federal and state environmental documents, wetland delineation/reports, and public involvement activities. She led the wetland delineation and permitting effort for the Edgerton Road Drainage Study.



EMILEE FRIESEN | Collect and Review Data & GIS

Emilee’s experience in Water Resources Engineering includes hydrologic & hydraulic modeling, urban & rural drainage design, and green infrastructure plans focused on water quality and flood control. She joined SRF after completing her bachelor’s degree in Bioproducts and Biosystems Engineering from the University of Minnesota in 2022. She has worked with a variety of design, modeling, and mapping platforms for site design and surface water management planning, feasibility, and assessment.

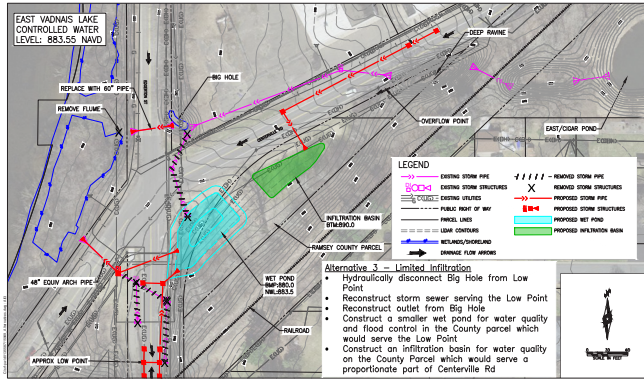


DAN HERZOG, PE | Alternative Design and Concept Plan Development

Dan has over nine years of experience on multiple Federal and State-aid civil construction projects. His contract administration responsibilities include leading weekly construction meetings, schedule coordination with contractors, managing a construction services team, producing monthly payments, processing change orders, overseeing documentation & material compliance to meet State-Aid standards, and coordination efforts with private utilities. Dan also maintains design experience, having designed and managed a wide array of projects ranging from local municipal civil construction to large-scale transit LRT projects using AutoCAD Civil 3D.

PROJECT EXPERIENCE

EDGERTON STREET/CENTERVILLE ROAD FLOOD STUDY I Ramsey County, in the City of Vadnais Heights, MN



May 12, 2022, was a day that created a tipping point for the intersection of Edgerton Street (County Road 59) and Centerville Road. On the evening of May 12, significant flooding occurred because of a 2-plus inch storm event, ponding water multiple feet deep that required drivers to be rescued from the flooded cars. This was not the first time flooding occurred at this location near the railroad trestle — photos obtained from residents from the 1950s show significant flooding damage.

Ramsey County retained SRF to assist in identifying solutions to the flooding issues and improving water quality at East Vadnais Lake. Water quality is vital in East Vadnais as the Saint Paul Regional Water Authority draws potable water from this lake.

The staff has worked alongside various stakeholders, including the City of Vadnais Heights, Vadnais Lakes Area Watershed Management Organization, Saint Paul Regional Water Authority, and other regulatory agencies, to identify solutions to reduce flooding, improve drainage and water quality. The team used XP-SWMM to evaluate the flooding and identified three alternatives to substantially reduce/eliminate the flooding recently experienced. Along with the stakeholders' unanimous approval, county staff selected the alternative that provided the most improvement, including added capacity, wet ponds, and bioinfiltration measures. SRF prepared construction documents in the Summer of 2023, with construction expected in the fall of 2023/spring of 2024.

PARKVIEW CENTER SCHOOL STORMWATER DETENTION AND FILTRATION | Capitol Region Watershed District



Previous Lake McCarrons water quality studies revealed that despite phosphorus reduction efforts, the contributing watershed remains a significant source of nutrients. Capitol Region Watershed District (CRWD) retained SRF to study the

Lake McCarrons watershed and the Parkview Center School location and recommend locations and treatment measures, focusing on removing phosphorous. Many options were considered, but

challenges with poor soils, topography, and site limitations almost ruled out any potential treatment at this site. However, Roseville Area Schools had a project at a nearby property with excess fill material. They mentioned that they wanted to place it on the Parkview site for future expansion of the parking lot. The location under a future parking lot was suitable for a detention and filter cartridge vault. The contributing watershed that drains to County Road B adjacent to the Parkview Center School property has an area of 44.2 acres of residential and institutional property. This project is estimated to remove 45 pounds of Total Phosphorous (TP) from entering Lake McCarrons.

CRWD obtained a grant to construct the project and retained SRF to do the final design. The use of filter cartridge vaults is relatively new and has shown to be an effective way to remove Soluble Phosphorous from stormwater runoff. The design consisted of geotechnical and surcharge analysis, storm sewer diversion, CMP storage facility, filter cartridge vault selection, design, analysis for future water reuse connections, and maintenance considerations. Other design elements included traffic control, electrical access, right-of-way documentation, rendering development, and educational signing used on-site and online. The project also included stakeholder facilitation with CRWD, Roseville Area Schools, Ramsey County, and City of Roseville.

GOLD LINE BUS RAPID TRANSIT (GBRT) PRELIMINARY AND FINAL DESIGN | Metro Transit

BMP	DESCRIPTION AND FUNCTION	BENEFITS	LIMITATIONS	DESIGN PERFORMANCE	REST APPLICATIONS	
				VOLUME	RATE	QUALITY
Filtration/ Infiltration Basin	<p>Constructed basin that captures, temporarily stores and filters/retains design volume of water within 48 hours or less. Drawdown of stored runoff occurs through infiltration into surrounding naturally permeable soil for infiltration basins. For filtration basins the runoff drains through filtration media and into underdrains. Infiltration basins contain flat, densely vegetated floor situated naturally permeable soils. Filtration basins have engineered media with underdrains in areas without naturally permeable soils. Runoff from larger storm events is typically routed to an overflow structure/storm sewer system.</p>	<ul style="list-style-type: none"> Can handle large amount of volume from drainage areas typically 5 to 50 acres. Reduced thermal impacts. Can be utilized as open space during dry periods. Improved habitat, air quality, urban micro-climates. Ecological benefits and enhanced aesthetics with native plantings. 	<ul style="list-style-type: none"> Functionality depends on native soil types. Pre-treatment is required prior to discharge of runoff to BMP. Performance is sensitive to construction and maintenance techniques. Not ideal for stormwater runoff for land uses/activities with potential for high sediment or pollutant loads. 	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">●</div> <div style="text-align: center;">●</div> <div style="text-align: center;">●</div> </div>	<ul style="list-style-type: none"> Natural depression areas Areas with native soils conducive to infiltration Commercial areas Park/green space areas 	

SRF staff have led the efforts for stormwater management for this nine-mile guideway project. Central to the stormwater management to date has been the Issue Resolution Team (IRT) process, where we have led a process to listen to the city, county, state, and regulatory stakeholders to understand their perspectives on stormwater management, including performance and maintenance. Using a stormwater BMP Toolbox assembled for the project, the IRT team has laid a foundation to accomplish project goals while protecting the conveyance systems and natural resources along the corridor. The team designed urban BMPs for roughly 40 locations within the four municipalities.

1NE STORMWATER IMPROVEMENT PROJECTS | Mississippi Watershed Management Organization



SRF worked with the Mississippi Watershed Management Organization (MWMO), the City of Minneapolis, and the Minneapolis Park and Recreation Board to conduct a planning and preliminary design effort to improve stormwater management, increase food resiliency, reduce pollutant loading to the Mississippi River, and improve ecological function within the 1NE Watershed in northeast Minneapolis. A Stormwater Workshop with the project partners fostered conversations and brainstorming of potential projects that will meet the project goals. Attendees looked past jurisdictional and property boundaries to collaborate on ideas to improve the watershed’s overall stormwater management and ecological function. MWMO’s watershed-wide XP-SWMM and P8 models were used to analyze and measure the benefits of potential projects within the watershed, both on an individual project and watershed-wide scale. The feasibility study/report provided a road-map to meet stakeholder objectives using gray and green infrastructure that can be implemented as funding is available. SRF is currently working with the City of Minneapolis to design a portion of the project, including using tree trenches for water quality and flood control.

HOYER HEIGHTS STREET RECONSTRUCTION PROJECT | Minneapolis, Minnesota

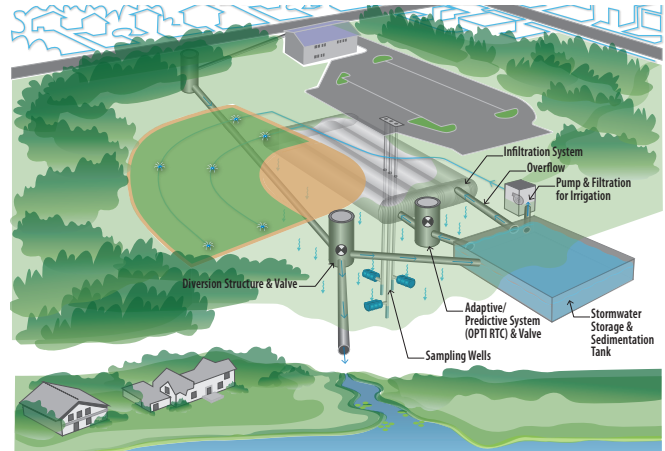


The Hoyer Heights neighborhood is located within the 1NE Watershed and experiences flooding during large storm events. This project is part of the larger 1NE Stormwater Management

Initiative led by the Mississippi Watershed Management Organization (MWMO) in partnership with the City of Minneapolis (City) and Minneapolis Park and Recreation Board (MPRB), and was initially developed during the 1NE Watershed Planning and Preliminary Design project. The City retained SRF to complete a feasibility study on implementing storm sewer improvements and tree trenches in conjunction with the planned street reconstruction project for the neighborhood. This led to the final design of the full street reconstruction project, including storm sewer improvements, implementation of tree trenches on three streets as a pilot project for the City. The roadway design replaced excess pavement with selected parking bays, provided additional boulevard width, curb extensions, and ADA complaint crossings to improve the pedestrian experience in the neighborhood. SRF coordinated the design details closely with the City’s green infrastructure coordinator, project engineer and maintenance staff to develop a design that maximizes the capture of urban runoff, provides robust pretreatment, and is maintainable. SRF’s landscape architects developed planting plans for the tree trenches that will enhance the

streetscape and will provide habitat patches in the urban watershed. SRF is also assisting the City with obtaining grant funding from the MWMO to install the tree trenches as a water quality improvement.

LAKE MCCARRONS BMP STUDY | Roseville, Minnesota



Lake McCarrons is a pristine 81-acre lake located in the southeast corner of Roseville. A popular 15-acre county park along the lake’s eastern side is located adjacent to the Villa Park Wetland system, which is a significant subwatershed for the lake. Recent water quality studies have revealed that despite previous phosphorus reduction efforts, this wetland system and its contributing watershed continue to be a major source of nutrients (phosphorus in particular) to Lake McCarrons.

The Capitol Regions Watershed District (CRWD) obtained a grant to study and construct water-quality BMPs to reduce the phosphorus loading on the Villa Park system. The District retained SRF to study the contributing watershed and recommend locations and treatment measures to reduce the loading by 45 pounds of phosphorus a year – a 28 percent reduction in the upstream loading. SRF staff worked with CRWD and the City of Roseville to study the available data using XP-SWMM and P-8 and recommend several potential solutions in a feasibility study. Of the several solutions identified, two locations were eventually chosen and BMPs constructed. The primary one involves placing a large underground infiltration system within the B-Dale softball field area in Upper Villa Park. To supplement the underground infiltration system and demonstrate its viability, the CRWD obtained additional funding to design and construct an underground concrete stormwater retention tank that will be used to pump stormwater into the ball field irrigation system. This water harvesting and reuse system also includes a predictive, active management system that proactively draws down the water level in the underground tank based on electronic weather prediction data from National Weather Service. Additional phosphorus can be removed by actively drawing down the stormwater retention tank and discharging it to the infiltration system before it rains. It is predicted that up to 53 pounds of total phosphorus per year will be removed through this integrated system.

Final construction documents were prepared, including an underground concrete tank with an irrigation system; an infiltration chamber for excess water; a predictive management system to capture more runoff from the system and provide tank health; and a monitoring system installed through an MPCA funding stream to monitor the quality of water from the infiltration system.

Assumptions/Deliverables

The following table provides a snapshot of the tasks, staff assignments, assumptions and deliverables for each task. The budget table is based on this table.

Project Services			
	Task	Key Staff/Role	Assumptions/Deliverables
1.0	Project Management and Coordination	David Filipiak Project Manager	<p>ASSUMPTIONS</p> <ul style="list-style-type: none"> Includes oversight and project direction, management of budget and schedule. Six (6) month project schedule to the final deliverable of final report with 3 preferred design concepts. Up to three (3) PMT meetings will occur virtually at an average of 1.5 hours/meeting. Four (4) individual stakeholder meetings (one each with Ramsey County and St. Paul Regional Water, two meetings with City of Vadnais Heights) Kickoff meeting held in person with a fieldwalk. <p>DELIVERABLES</p> <ul style="list-style-type: none"> Monthly schedule, monitoring and invoicing Project kick-off including notes of the meeting Develop and maintain project schedule Identify and coordinate with stakeholders (confirm with VLAWMO) General project administration and overall QA/QC
2.0	Data Collection and Analysis and Development of Base Map	Delaney Moberly Data Collection & Review of Models Nicole Zappetillo Review of Wetland Delineations	<p>ASSUMPTIONS</p> <p>VLAWMO and project partners will provide available monumentation, GIS, H&H models, water quality data, precipitation data, wetland delineations, stormwater management infrastructure information, previous drainage studies, and other information from previous work in the area</p> <p>CLIENT DELIVERABLES</p> <ul style="list-style-type: none"> 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 2010 HydroCAD model of subwatershed 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 <p>SRF DELIVERABLES:</p> <ul style="list-style-type: none"> Storm sewer Base Map Wetland Review QA/QC of base map data <p>OPTIONAL TASK</p> <ul style="list-style-type: none"> Wetland Delineation
3.0	Hydrologic & Hydraulic Model and Results	Jacques Duval Task Lead Delaney Moberly H&H Modeling	<p>ASSUMPTIONS</p> <ul style="list-style-type: none"> Preparation of existing conditions and up to three (3) 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. 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. Models will contain enough detail to evaluate localized flooding at major intersections, low points, and other areas of interest within the subwatershed. Models will define existing stormwater quality management and pollutant loading to East Vadnais Lake. Completed model will include existing stormwater BMPs and infrastructure. Ramsey County impervious data set to be used for curve numbers. May need to be supplemented with as-built and permit information. Delineate up to 25 subcatchments Generalize time-of-concentrations where appropriate Calibration of the XP-SWMM models is not included in this scope. Assume up to 10 site development plans/private storm connections <p>CLIENT DELIVERABLES</p> <ul style="list-style-type: none"> Subwatershed divides generated from other activities (small scale street reconstruction modeling, flood complaint modeling, etc.), stormwater best management practice contributing drainage area delineations, site development plan sets, private storm connection permits, etc. Review and comment on the model results Review of up to 10 site development plans/private storm connections. <p>SRF DELIVERABLES</p> <ul style="list-style-type: none"> Existing conditions and up to three (3) proposed conditions hydrologic & hydraulic models XP-SWMM models and results Pond report table and mapping GIS base maps and geodatabases

Project Services			
	Task	Key Staff/Role	Assumptions/Deliverables
4.0	BMP Alternative and Concept Design	David Filipiak Project Manager Jacques DuVal Task Lead Delaney Moberly BMP Design Emily Friesen BMP design Dan Herzog Constructability Analysis	<p>ASSUMPTIONS</p> <ul style="list-style-type: none"> Development of design alternatives analysis and concept plans for final alternatives. Analysis of at least 5 BMPs in the subwatershed for further analysis, including utilization of feedback from study partners and local community. Selection of 3 final flood mitigation and water quality improvement BMPs for conceptual design after analysis. Conceptual designs will at a minimum include a plan view layout, and evaluation of constructability, major conflicts, and other considerations for implementation. 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. MIDS Model generation for the public stormwater best management practices. Results of TSS and TP removals shall be reported by BMP type <p>SRF DELIVERABLES</p> <ul style="list-style-type: none"> Stormwater and water quality models for evaluating flood risk and water quality improvement solutions in the subwatershed Conceptual designs (plan view layouts) Conceptual cost estimates for the design alternatives <p>OPTIONAL TASKS</p> <ul style="list-style-type: none"> Field Survey Utility Coordination P8 Modeling
5.0	Summary of Permitting Considerations	Kevin Bigalke Task Lead	<p>DELIVERABLES</p> <ul style="list-style-type: none"> Review and summary of permit requirements for the 3 concept designs
6.0	Summary of Grant Opportunities	David Filipiak Project Manager Kevin Bigalke Task Lead	<p>SRF DELIVERABLES</p> <ul style="list-style-type: none"> 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. Includes evaluation of how final study could be revised (if needed) to better “fit” future grant applications.
7.0	Reporting and Recommendations	David Filipiak Project Manager Kevin Bigalke Final Report Jacques Duval Task Lead Delaney Moberly Final Report Emily Friesen Final Report	<p>ASSUMPTIONS</p> <ul style="list-style-type: none"> Inundation mapping and surcharge nodes for 100 & 500 year events only <p>SRF DELIVERABLES</p> <ul style="list-style-type: none"> Final report summarizing the analysis and recommendations from the resiliency study Electronic versions of XP-SWMM and MIDS models.

EXHIBIT B
Request for Proposals

[attached hereto]



REQUEST FOR SERVICES

East Vadnais Lake Subwatershed Resiliency Study

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.

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 (see map in attachment 1). 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 is approximately September 2023.

Submittal Requirements

Firms replying to this request are required to submit the following information in 15 pages or less:

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 of proposals will include review by VLAWMO staff and/or partners 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. Firms may be interviewed by VLAWMO and/or with partners after scoring.

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 by 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:	1:00 PM, Thursday, July 27, 2023
Format:	Include 1 electronic copy of document in PDF format, no more than 15 pages long.

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

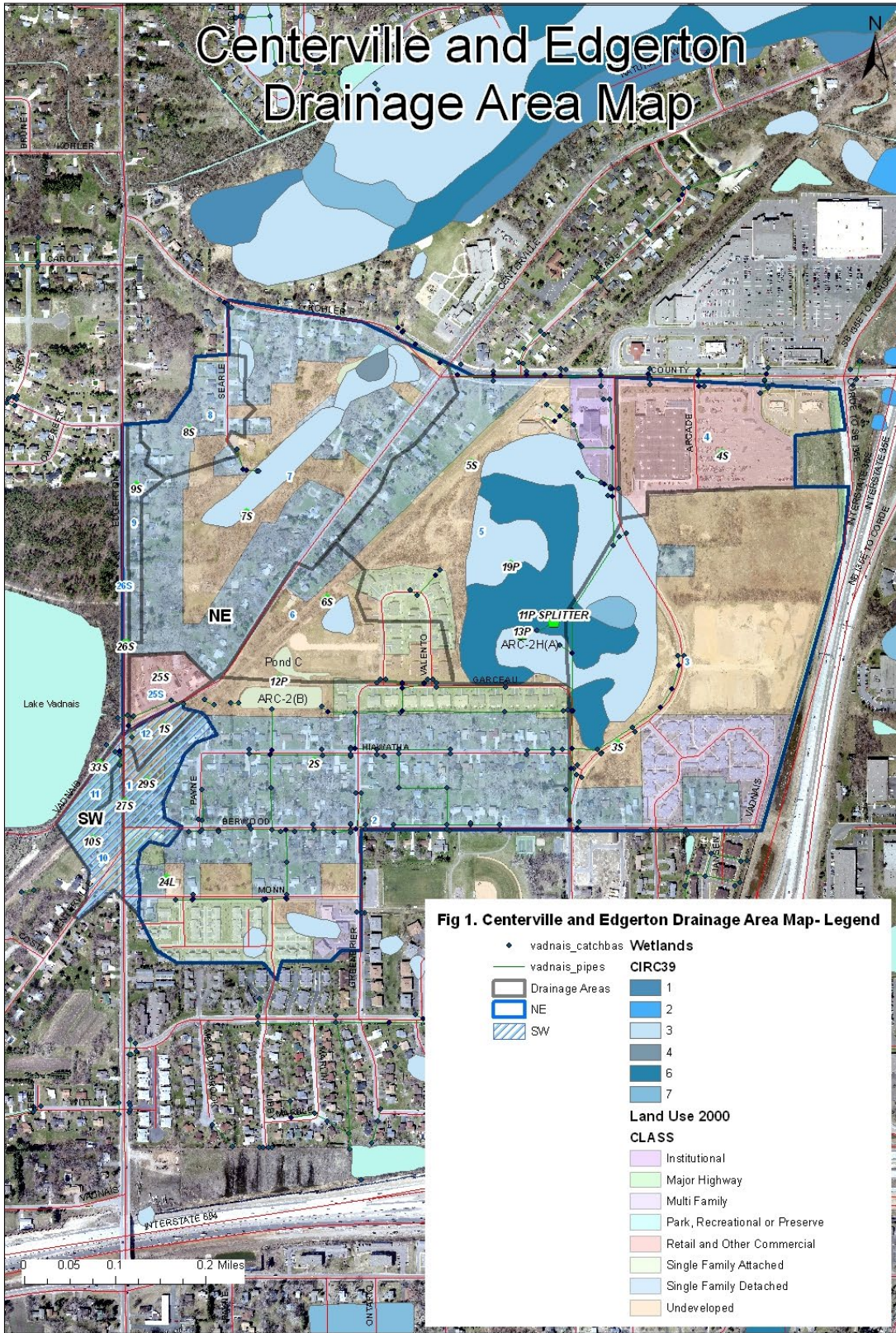


EXHIBIT C
Compensation

The amount of compensation for the Task is as set out in SRF's proposal attached as Exhibit A, and includes the optional work identified in Exhibit A for the costs identified therein.