



TECHNICAL

PROPOSAL

Mississippi River Direct Drainage
Project Prioritization Study

Prepared for



Joe Barten | Administrator via Dakota County SWCD
4100 220th St. West, Suite 102
Farmington, MN
55024

joe.barten@co.dakota.mn.us

January 26, 2024



Letter of Interest

Mr. Joe Barten
LMRWMO Administrator
Dakota County Soil and Water Conservation District
4100 220th St. West Suite 102
Farmington, MN 55024

Re: Proposal for LMRWMO | Mississippi River Direct Drainage Project
Prioritization Study

Dear Mr. Barten,

On behalf of our Professional Engineering Services, LTD (PE Services) team, we are pleased to submit our proposal for the Lower Mississippi River Watershed Management Project in response to your Request for Proposals (RFP) dated December 5, 2023. Our team is enthusiastic about the opportunity to contribute to the crucial environmental initiatives outlined in the RFP.

This proposal, inclusive of all terms and conditions, shall remain valid for a period of not less than 90 days from the date of submittal. We understand the importance of providing ample time for thorough evaluation and subsequent discussions. We are confident that our expertise and commitment to excellence align with the goals outlined in the RFP. Our proposal, as enclosed, provides a comprehensive strategy to fulfill the requirements set forth in the RFP and contribute meaningfully to the success of the watershed management project.

By signing below, I certify that I am a person authorized to bind Professional Engineering Services, LTD and our partners to the terms of this proposal. Our commitment to delivering high-quality services in accordance with the outlined project objectives is unwavering.

Thank you for considering our proposal. We look forward to the opportunity to contribute to the success of the Lower Mississippi River Watershed Management Project. Please contact me at 763.286.7336 or greg.beckius@peservicesmn.com with any questions about our qualifications or availability.

Sincerely,
PE Services



Greg Beckius, CPESC
Director of Environmental Health & Safety

CONTACT INFORMATION

Professional Engineering Services, LTD

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St. Louis Park, MN
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Rock Leaf Water Environmental LLC

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Fridley, MN 55432
Brian Jastram | Senior Water Scientist
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e | brian.jastram@rlwenvironmental.com



PROJECT UNDERSTANDING

Our comprehensive understanding of the Lower Mississippi River Watershed Management Project is rooted in the thorough analysis presented in the Request for Proposals (RFP). The project's primary focus lies in addressing two critical environmental challenges: erosion in ravines and the significant impact of urban stormwater on the water quality of the Mississippi River. These challenges shape our strategic approach and guide the key elements of our plan.

Firstly, we recognize the project's emphasis on identifying high-priority areas, specifically those prone to erosion within direct drainage tributaries to the Mississippi River. These areas are underscored for their direct influence on water quality, particularly concerning excess nutrients and Total Suspended Solids (TSS) impairing the river.

Secondly, our proposed methodology revolves around an updated watershed analysis and modeling. Leveraging advanced tools such as XPSWMMM, HydroCAD, and P8, our aim is to provide a comprehensive understanding of the watershed's hydrology. This involves the meticulous identification, classification, and ranking of erosion areas within the Mississippi River subwatersheds.

Furthermore, acknowledging the pollutants highlighted in the RFP, including floatable trash, phosphorus, and sediment, we plan to utilize existing modeling data to inform targeted strategies for addressing these pollutants and enhancing overall water quality.

Additionally, our approach extends to the identification of large-scale Best Management Practices (BMPs) for both stormwater volume reduction and pollutant reduction. We commit to conducting a thorough analysis of stabilization measures for identified erosion areas and BMPs, ensuring feasibility and effectiveness in achieving project objectives. We recognize the importance of a balanced mix of field reconnaissance and desktop analysis. Our proposal includes the recommended level of field reconnaissance, which will be outlined in alignment with project objectives and budget constraints.

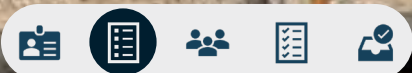
In terms of regulatory considerations, our analysis will encompass a thorough examination of regulatory hurdles, the availability of public property for BMP implementation, and other requirements for proposed strategies or BMPs. This holistic approach ensures compliance with relevant regulations and maximizes the success of proposed interventions.

Finally, our commitment extends to delivering a final report that not only prioritizes erosion stabilization and stormwater BMP projects but also provides comprehensive details on project locations, extent, constructability, estimated costs, long-term maintenance, and pollutant reduction benefits. We are confident that our understanding aligns seamlessly with project objectives, and we eagerly anticipate contributing our expertise to this vital environmental initiative.

/// Our strength lies in creating easy-to-understand materials which convey important information. ///



**Experience.
Expertise.
Execution.**



Project Objectives

The project objectives serve as a strategic roadmap for addressing the environmental concerns within the Lower Mississippi River Watershed. With a specific focus on erosion in ravines near the river and the impact of urban stormwater on the Mississippi River's water quality, these objectives provide a systematic approach to tackle key environmental challenges.

Identification of High-Priority Areas

The project is geared towards direct drainage tributaries to the Mississippi River, particularly areas prone to erosion. The emphasis lies in recognizing the direct influence of these high-priority areas on water quality, specifically concerning excess nutrients and Total Suspended Solids (TSS) that impair the river.

Watershed Analysis and Modeling

A pivotal objective is the execution of an updated watershed analysis and modeling. This involves identifying, classifying, and ranking erosion areas within Mississippi River subwatersheds. The utilization of various modeling tools, including XPSWMMM, HydroCAD, and P8, aims to provide a nuanced understanding of watershed dynamics.

Pollutants of Concern

Addressing pollutants such as floatable trash, phosphorus, and sediment is integral to the study. Existing modeling data from XPSWMMM, HydroCAD, and P8 will be shared with the selected consultant to inform strategies for pollutant reduction and enhance overall water quality.

BMP Identification and Analysis

A key objective involves locating large-scale Best Management Practices (BMPs) for both stormwater volume reduction and pollutant reduction. The consultant will conduct a thorough analysis of stabilization measures for identified erosion areas and BMPs, ensuring feasibility and effectiveness.

Field Reconnaissance and Desktop Analysis

Balancing both field reconnaissance and desktop analysis is crucial. The consultant's proposal will outline the recommended level of field reconnaissance necessary to achieve project objectives within the allocated budget.

Regulatory Considerations

The project encompasses a comprehensive examination of regulatory hurdles, public property availability for BMP implementation, and other requirements for proposed strategies or BMPs. This holistic approach ensures compliance with relevant regulations and enhances the success of proposed interventions.

Report Deliverables

The project will culminate in a final report prioritizing erosion stabilization and stormwater BMP projects. The report will provide detailed project information, including locations, extent, constructability, estimated costs, long-term maintenance, and pollutant reduction benefits.

Decision-Making and Grant Funding

The final report is designed to serve as a decision-making tool for prioritizing projects, providing valuable insights for stakeholders. The overarching goal is to utilize the report to seek grant funding for the implementation of prioritized projects, contributing to improved water quality and erosion control within the targeted watersheds.

In essence, these project objectives form a comprehensive strategy, promising a thorough assessment of water quality and erosion issues in the Lower Mississippi River Watershed. The resulting information aims to guide decision-makers and attract potential funding sources to address and mitigate environmental challenges effectively.

Project Goals

The project goals outlined for the Lower Mississippi River Watershed Management initiative represent a comprehensive and systematic approach to addressing key environmental challenges and fostering sustainable ecological practices. The overarching objectives of the project are as follows:

Watershed Health Assessment

The primary goal is to conduct a thorough analysis of the Lower Mississippi River Watershed, evaluating its current health and functionality. This assessment aims to provide a holistic understanding of the ecosystem, laying the groundwork for targeted interventions.

Erosion Identification & Prioritization

Building upon the watershed health assessment, the project aims to identify, classify, and prioritize areas prone to erosion within direct drainage tributaries to the Mississippi River. The focus is on high-priority locations that pose a significant threat to water quality, ensuring a strategic and targeted approach to erosion control.

Modeling & Hydrological Understanding

Utilizing advanced modeling tools such as XPSWMMM, HydroCAD, and P8, the project seeks to enhance the understanding of watershed hydrology. This in-depth analysis will facilitate informed decision-making, enabling the development of precise and effective interventions to address environmental challenges.

Pollutant Reduction Strategies

An essential goal is the development and implementation of effective strategies to reduce pollutants, including floatable trash, phosphorus, and sediment. These strategies aim to mitigate impairments in water quality within the targeted reach of the Mississippi River, contributing to overall ecosystem health.

Large-Scale BMP Identification

Identifying and recommending the implementation of large-scale Best Management Practices (BMPs) for stormwater volume reduction and pollutant reduction is crucial. This goal ensures that interventions are tailored to the specific needs and challenges of the study area, optimizing their effectiveness.

Feasibility Analysis & Design

The project includes a detailed analysis of erosion stabilization measures and stormwater BMPs to a feasibility level design. Factors such as constructability, estimated costs, and long-term maintenance requirements are considered, ensuring that proposed interventions are not only effective but also practical and sustainable.

Field Reconnaissance & Data Enhancement

Balancing desktop analysis with field reconnaissance is integral to enhancing the accuracy and reliability of project data. This goal ensures a well-rounded understanding of environmental conditions and project requirements, improving the overall quality of the analysis.

Regulatory Compliance

Addressing regulatory hurdles associated with proposed strategies and BMPs is paramount. The project aims to ensure compliance with local, state, and federal regulations governing water quality and environmental protection, aligning interventions with legal frameworks.

Public Property Utilization

The project strives to evaluate the availability of public property for BMP implementation, fostering collaborative efforts with local communities. Maximizing the use of public spaces for effective watershed management is a key goal, promoting community engagement and support.

Decision-Support Tool Development

The final deliverable of the project is a comprehensive report serving as a decision-support tool for stakeholders. The report will provide prioritized lists of erosion stabilization and stormwater BMP projects, along with detailed project information, empowering stakeholders with the insights needed for informed decision-making.

Grant Funding Prioritization

The project aims to provide sufficient information and justification within the final report to prioritize projects for grant funding. This goal supports the organization in securing financial resources for successful project implementation, ensuring the sustainability of environmental initiatives.

Promote Sustainable Water Quality & Erosion Control

Ultimately, the collective goals of the project seek to contribute to the long-term improvement of water quality and erosion control within the targeted watersheds. By fostering sustainable environmental practices, the project aims to enhance the overall health of the ecosystem, aligning with the mission of the Lower Mississippi River Watershed Management Organization in preserving and enhancing ecological integrity.

**WE UNDERSTAND THE
INCREASING IMPORTANCE
OF STORMWATER
MANAGEMENT
AND
ARE MINDFUL OF THEM AS
WE CONSIDER THE PROJECT
GOALS.**



EXPERIENCE & QUALIFICATIONS

Our project team brings together a wealth of experience and diverse qualifications, uniquely positioning us to address the multifaceted challenges outlined in the Lower Mississippi River Watershed Management Project. Our Project Team has a proven track record in environmental engineering, hydrology, water resource management, and sustainable infrastructure development.

Project Management

As the Director of Environmental Health & Safety for PE Services, Greg Beckius, will be the Project Manager for the LMRWMO Mississippi River Direct Drainage Project and has successfully managed and delivered numerous projects in the environmental management field. Our collect experience and expertise amongst our Project Team includes overseeing complex, multi-disciplinary projects and ensuring timely and cost-effective execution.

Hydrological Modeling & Analysis

Our Team has extensive experience using modeling tools such as XPSWMMM, HydroCAD, and P8, having applied them in previous projects to enhance watershed understanding and inform effective management strategies.

Erosion Control & BMP Design

All members of our Project Team are industry leaders in environmental management on complex projects; they specialize in erosion control and Best Management Practices (BMP) design. They have a comprehensive understanding of erosion stabilization measures and stormwater BMPs, with a successful history of designing and implementing projects that enhance ecosystem resilience. Our Team also prides themselves on building relationships with the regulators to help navigate regulatory landscapes in previous projects, ensuring that proposed strategies align with legal requirements.

Field Reconnaissance & Data Collection

With expertise in field reconnaissance and data collection, our Project Team has successfully conducted on-the-ground assessments in various ecological settings. Their work ensures that the data gathered is accurate and aligns with the project's objectives, quality standards, and safety.

Community Engagement & Public Collaboration

We have a proven record of fostering collaboration with local communities. Our Team's experience includes facilitating public meetings, gathering community input, and ensuring that proposed solutions are aligned with the needs and preferences of the community. We understand that success in grant procurement and securing funding for Mississippi River Direct Drainage Project is integral to the overall success of the entire LMRWMO.

Together, our team brings a collective commitment to excellence, ensuring that the project objectives are not only met but exceeded. We are confident that our team's experience, qualifications, and collaborative approach will contribute significantly to the success of the Lower Mississippi River Watershed Management Project.

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Years of Achievements

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1000+

Projects Successfully
Delivered

Professional Engineering Services, LTD

Professional Engineering Services, LTD (PE Services), a women owned Disadvantaged Business Enterprise (DBE) and Targeted Group Business (TGB), is a leading and distinguished firm at the forefront of innovative engineering solutions. With a steadfast commitment to excellence, we provide unparalleled expertise in a wide array of engineering disciplines. Established on the pillars of **EXPERIENCE**, **EXPERTISE**, and **EXECUTION**, our company is dedicated to delivering top-notch professional services tailored to meet the unique needs of our clients.

With decades of collective **EXPERIENCE**, our team of seasoned engineers brings a wealth of knowledge to every project. Our extensive experience equips us to tackle challenges head-on, ensuring the delivery of high-quality solutions with exceptional performance. At PE Services, **EXPERTISE** is not just a trait; it's our core identity. Our staff are leaders in their respective fields, possessing deep technical knowledge and a profound understanding of industry best practices. **EXECUTION** is where plans transform into reality, and at PE Services, we excel in turning visions into innovative and efficient solutions for our clients. We pride ourselves on our meticulous planning, precise execution, and unwavering dedication to project success. Our proactive approach, coupled with effective project management, ensures that every project is completed on time, within budget, and to the highest standards of quality.



PE Services has partnered with Rock Leaf Water Environmental LLC (Rock Leaf), a skilled and experienced subcontractor, to support our delivery of the LMRWMO Mississippi River Direct Drainage Prioritization Study.



Rock Leaf Water Environmental LLC

Rock Leaf Water Environmental (Rock Leaf) is a women owned Disadvantaged Business Enterprise (DBE) and a Targeted Group (TG) Certified Small Business which excels in providing emergency and planned environmental services across the Upper Midwest. Rock Leaf was established with a vision to *rapidly respond* to environmental emergencies and *proactively restore* the natural resources within our communities. We pride ourselves on being a one-stop shop that helps entities large and small find environmental solutions. Rock Leaf is *Driven to Excellence* and holds integrity as its principal standard.

The name “Rock Leaf Water” captures the interdisciplinary services that our team provides, including senior professionals spanning the geotechnical, natural resources, and water quality industries. This dynamic team works collaboratively across departments to provide a broad spectrum of services which contribute towards the common goal of stewarding the planet we all share. Our services include hazardous waste clean-up, environmental remediation, natural resource restoration, water monitoring, geotechnical and drilling services, and environmental assessments. As an emergency response provider, Rock Leaf is built on a culture of adaptability, flexibility, and ingenuity to solve problems. Paired with our skilled professionals who dig deep within their individual specialties, Rock Leaf is prepared to meet its customers *where, when, and how* they uniquely require environmental assistance.

Project Team

Partnering together, PE Services and Rock Leaf Water Environmental bring a comprehensive background to successfully complete this project. We will combine our respective strengths and resources to produce project deliverables within the outlined schedule and of the highest quality. Our shared commitment to excellence, owner satisfaction, and following professional requirements sets the foundation for a successful project.



Greg Beckius, CPESC | PE Services

Greg Beckius, CPESC, will be responsible for the overall contract management and completion of each of the project tasks and will serve as the primary contact for

the LMRWMO. He will also be responsible for all routine project management functions, including invoicing, task management and coordination, ensuring that the project is proceeding as scheduled, preparation and submittal of all deliverables on schedule, meeting with WMO staff and other project stakeholders as necessary and overall general project coordination. Mr. Beckius brings 10 years of industry and management experience to the team.



Brian Jastram | Rock Leaf Water Environmental

Brian is a Senior Water Scientist with over 18 years of experience in water quality monitoring and instrumentation. He is

skilled in building and operating remote telemetry systems, data analysis and management, and active monitoring techniques. Brian has nine years of experience in bathymetric mapping of ponds and the Mississippi River and has led teams to complete erosion monitoring projects. Additionally, he is experienced in identifying critical BMP and Capital Improvement Project issues and maintaining BMP effectiveness. Brian is currently pursuing a Masters of Natural Resources Degree at the University of Wisconsin Stevens Point.



Taylor Engstrom | PE Services

Taylor Engstrom is a senior environmental scientist with 7 years of experience and a background in environmental science and construction. She has experience assisting

MS4 communities in program development, reporting, training, and facility inspections. As demonstrated by her role as an Erosion Control Specialist and NPDES Expert, Taylor has an in-depth understanding of environmental permitting, inspection, and BMPs on large and complex projects.



Zach VanOstrand, PE | PE Services

As a registered Professional Engineer (IA, ID, IL, MI, MN, MS, ND, SD, WI), Zach will provide our Project Team with QAQC support to ensure the highest quality standards are

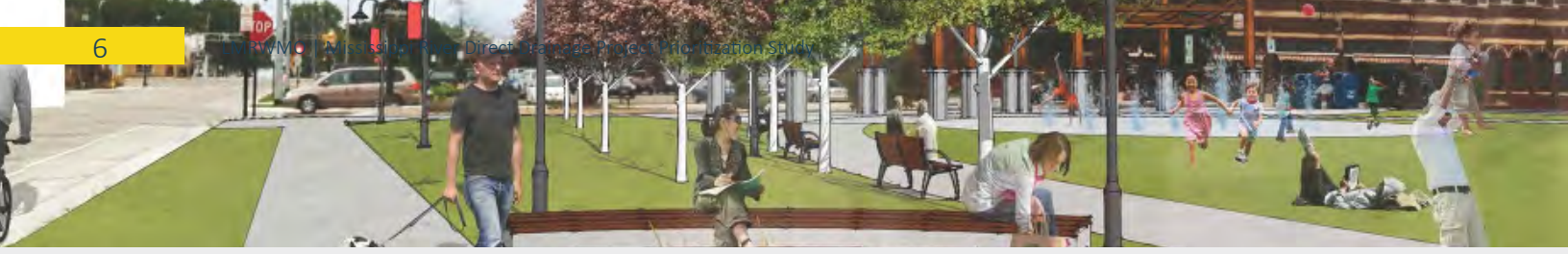
maintained, similar to all projects we deliver.



Michelle Binsfeld, President | Rock Leaf Water Environmental

Shelly Binsfeld, president of Rock Leaf Water Environmental, has a background in environmental remediation, assessments,

and various natural resources work. She is an elected board member of the Sherburne Soil and Water Conservation District and a member of the MN DNR Aquatic Invasive Species Advisory Committee. Additionally, Shelly is a certified Minnesota Wetland Professional, #5366. Shelly will offer QAQC support as key personnel to our Project Team.



Relevant Projects

Nicollet Island Restoration | Minneapolis

The Nicollet Island Restoration project involved public and private partners coming together to restore habitat and prevent erosion at an iconic location in the heart of the city. Brian Jastram worked to effectively target erosion control measures on the island by implementing a multifaceted erosion study involving desktop analysis and fieldwork to identify and classify areas of erosion. He led the installation and monitoring team to deploy erosion pins and scour chains on the riverbank and in the riverbed to directly measure erosion on-site quarterly over four years. The data collected through this rigorous monitoring process not only documented the extent of bank erosion but also served as the foundation for implementing targeted erosion control measures and habitat restoration techniques to protect the vulnerable island and river ecosystems.

Riverfront Regional Park | Fridley

In the Riverfront Regional Park project, Brian Jastram played a crucial role in addressing erosion and pollution issues affecting the Mississippi River due to stormwater runoff and land use challenges.

To comprehensively document, characterize, and prioritize riverbank erosion, Brian led a team to implement an innovative methodology. His team strategically installed erosion pins along a 1-mile stretch of the river and conducted regular monitoring to accurately calculate erosion rates. Brian's leadership and commitment to excellence was reflected in the meticulous fieldwork undertaken, utilizing both boating and on-foot field reconnaissance to facilitate the installation and access of erosion study sites.

Throughout the study, Brian's team employed a diverse set of tools and techniques, including handheld GPS, climbing, photography, hand tools, waders, manual measurements, and detailed field notes. These efforts were essential in gathering the data necessary to achieve the project objectives. Brian's dedication and expertise were instrumental in the success of the project, showcasing his ability to lead and execute complex environmental initiatives to mitigate the impact of stormwater runoff and land use issues along the Mississippi River.

SART- Monitoring & Maintenance

The [Saint Anthony Regional Treatment and Research Facility](#) (SART) was designed and built to improve the quality of stormwater runoff from 600 acres of the City of Saint Anthony, Minnesota. This treatment and research facility required a custom-built monitoring system to produce data to determine treatment efficiency. Brian Jastram not only designed and installed the real-time, automated water quality monitoring system that produced this data but operated the facility and led maintenance activities. Brian's team conducted research involving measuring sediment deposition patterns in the Swirl Chamber, monitoring sand filter infiltration rates, weighing cartridge filters, and modifying the Iron Enhanced Sand Filter installation. Using the results from this research, flow-weighted composite samples, and continuous monitoring data collected from the system, Brian's team was able to make strategic improvements to the facilities' operations and calculate the BMP's treatment efficiency. This experience enables Brian to provide expert analysis and guidance in the BMP selection and implementation process.

Penta- Superfund Site Remediation

Rock Leaf was contracted by the Wisconsin DNR to complete the excavation and surface debris mitigation of a contaminated wetland. The remediation efforts included collecting soil and water samples to monitor the depth of contaminants, removing impacted sediment to meet USEPA cleanup criteria, and grade/covering the impacted material. Rock Leaf also sourced and seeded native plants to restore the site to a vegetative landscape. This project presented a unique challenge in that it involved sloped terrain with significant erosion following rainfall events for which Rock Leaf installed additional erosion control. In addition to creating the design and work plan, Rock Leaf handled all the permitting and compliance with regulatory agencies.

Dakota Wetland Delineation | Ayres Associates Inc

In Dakota County, three construction projects, covering almost 6 miles of road, were designed and required wetland delineations. The project team was subcontracted to perform wetland delineations along these construction routes, where we delineated 21 separate wetlands. Our scientists are skilled at identifying hydrophytic plants, hydric soil, and hydrology to determine delineations. Our team has provided written reports, created maps, and assisted with permits and paperwork for customers whose property contains a wetland. These wetlands varied from Fresh Meadow to Hardwood Swamp to Shallow Marshes. Our Project Team was available for all required TEP meetings.

WORK PLAN & PROJECT APPROACH

Our work plan for the Lower Mississippi River Watershed Management Project is structured to ensure a systematic and efficient approach to achieving the project goals and objectives. The following outlines the key phases and methodologies that will guide our efforts:

01
TASK

Task 1 | Project Kickoff

The initiation phase will commence with a comprehensive desktop analysis of the project area, identifying crucial information needs. Existing data from the Cities and LMRWMO will be thoroughly reviewed, highlighting any data gaps essential for the final report's completeness. To ensure a collaborative approach, a kickoff meeting will be organized with LMRWMO, City Staff, and other stakeholders as identified by LMRWMO.

- Establish project governance, communication protocols, and team roles.
- Mobilize the project team, ensuring a clear understanding of roles, responsibilities, and expectations.
- Identify and engage key stakeholders, including the Lower Mississippi River Watershed Management Organization, local communities, regulatory bodies, and other relevant entities.
- Conduct a needs assessment to understand the expectations, concerns, and priorities of stakeholders, incorporating their input into the project design.

02
TASK

Task 2 | Watershed Analysis

Following the kickoff, the project will shift to a detailed watershed analysis. This phase involves assessing hydrologic characteristics and identifying areas of concern within the subwatersheds. The analysis will pinpoint erosion hotspots and stormwater management opportunities, prioritizing public property while also considering feasible options on private property. Identifying potential locations for large-scale stormwater management BMPs will be a key focus, factoring in existing infrastructure.

- Gather and review existing data, including hydrological models, water quality data, and any relevant studies conducted in the project area.
- Conduct field reconnaissance to validate and supplement existing data, ensuring a comprehensive understanding of the watershed.
- Enhance and update hydrological models (XPSWMMM, HydroCAD, and P8) to accurately represent the current watershed conditions.
- Perform a detailed watershed analysis to identify erosion-prone areas and assess the impact on water quality.
- Develop a detailed map of erosion-prone areas, classifying them based on severity and potential impact on water quality.
- Prioritize high-risk areas for further analysis and intervention.
- Identify and quantify sources of floatable trash, phosphorus, and sediment within the watershed.
- Integrate pollutant data with erosion analysis to inform targeted pollutant reduction strategies.
- Locate and assess large-scale BMPs for stormwater volume reduction and pollutant reduction.

03
TASK

Task 3 | Field Reconnaissance

Concurrent with the analysis phase, field surveys and assessments will be conducted to validate desktop findings, gather additional data, and assess current subwatershed conditions. The feasibility of implementing stabilization measures to reduce erosion and enhance water quality will be reviewed. Potential impacts on wetlands, park areas, private property, infrastructure, and permitting implications for identified projects will be thoroughly assessed. A project partner meeting with City and LMRWMO Staff will follow the field review, ensuring alignment and obtaining valuable feedback before finalizing the report.

- Conduct a feasibility analysis for proposed BMPs, considering constructability, estimated costs, and long-term maintenance requirements.
- Assess regulatory requirements governing proposed strategies and BMPs.
- Develop a compliance strategy to ensure alignment with local, state, and federal regulations.
- Evaluate the availability and suitability of public property for implementing BMPs.
- Engage with local communities to ensure public support and collaboration in project implementation.

04
TASK

Task 4 | Analysis & Prioritization

The subsequent phase involves developing concept to feasibility level designs, as proposed by the Consultant. Visual details for stabilizing erosion areas and stormwater BMPs will be created. An opinion of costs for conceptual designs, including pollutant calculations, priority ranking, and cost-benefit analysis using MN Board of Water and Soil Resources (BWSR) accepted tools, will be provided. A collaborative ranking system will be developed in coordination with LMRWMO and City Staff to prioritize projects based on pollutant reductions, cost-effectiveness, and alignment with project goals. A comprehensive cost-benefit analysis for erosion repair and stormwater BMPs will be conducted, encompassing future conditions modeling. Draft reports will be shared with project partners for review and feedback, allowing for modifications before finalization.

- Compile findings into a comprehensive final report that includes prioritized lists of erosion stabilization and stormwater BMP projects.
- Present detailed project information, including locations, extent, constructability, estimated costs, long-term maintenance, and pollutant reduction benefits.
- Maintain ongoing communication with stakeholders through regular progress updates, workshops, and meetings.
- Foster collaboration among the project team, stakeholders, and communities to ensure a unified approach and successful project outcomes.

Our project approach is rooted in a commitment to thorough analysis, stakeholder collaboration, and the development of practical, sustainable solutions. Through this work plan, we aim to provide the Lower Mississippi River Watershed Management Organization with the information and tools needed for effective decision-making and the successful implementation of prioritized projects.



▯▯ We value the relationships we have built with our clients over the past three decades. Excellent performance and positive relationships result in a large percentage of repeat business from our loyal client base.



DELIVERABLES

The culmination of the Lower Mississippi River Watershed Management Project will result in a comprehensive final report, meticulously detailing findings, analyses, and actionable recommendations. The deliverables are structured to ensure a thorough understanding of the project's outcomes and facilitate informed decision-making. The final report is scheduled to be delivered on December 4th, 2024.

01
TASK

Task 1 | Project Kickoff

- Detailed documentation of the project kickoff meeting, including agendas, participant lists, and key discussion points.
- Identification of information needs based on desktop analysis and initial stakeholder engagement.
- **Timeline:** End of February 2024

02
TASK

Task 2 | Watershed Analysis

- Comprehensive analysis of hydrologic characteristics within the Lower Mississippi River Watershed.
- Identification and prioritization of erosion hotspots and stormwater management opportunities.
- Preliminary mapping of potential locations for large-scale stormwater management BMPs.
- **Timeline:** April 30, 2024

03
TASK

Task 3 | Field Reconnaissance

- Detailed summary of field surveys and assessments, validating desktop analysis findings.
- Assessment of current subwatershed conditions and feasibility of proposed stabilization measures.
- Feedback received during the project partner meeting for consideration in subsequent analyses.
- **Timeline:** August 30, 2024

04
TASK

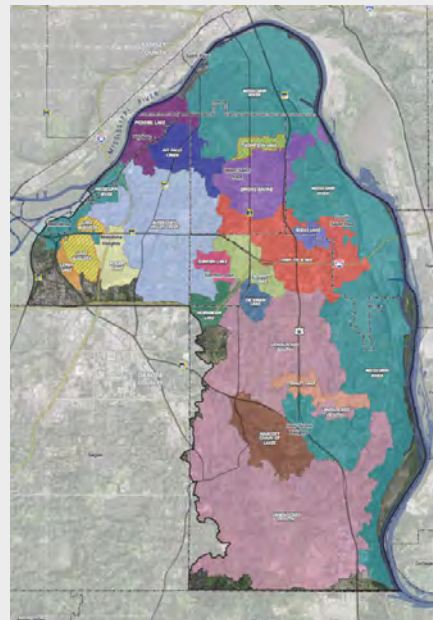
Task 4 | Analysis & Prioritization

- Concept to feasibility level designs for erosion stabilization and stormwater BMPs.
- Visual details supporting proposed designs.
- Opinion of costs for conceptual designs, including pollutant calculations and priority rankings.
- Draft report shared with project partners for review and feedback.
- **Timeline:** November 15, 2024

Final Report

- A comprehensive final report incorporating feedback from project partners.
- Detailed project information, including locations, extent, constructability, estimated costs, and long-term maintenance.
- Prioritized lists of erosion stabilization and stormwater BMP projects.
- Decision-support tools for stakeholders, aiding in project prioritization.
- Clear criteria for prioritizing projects for grant funding.
- Comprehensive cost-benefit analysis for erosion repair and stormwater BMPs, aligned with regulatory compliance.
- Recommendations for sustainable water quality improvement and erosion control.

The final report, to be delivered on **December 4th, 2024**, will serve as a valuable resource for the Lower Mississippi River Watershed Management Organization and associated stakeholders, guiding future initiatives and contributing to the long-term environmental health of the targeted watersheds.



Overall Project Schedule

The schedule above provides a general outline of the project phases and associated timeframes. It is essential to maintain flexibility, allowing for adjustments based on ongoing feedback, stakeholder input, and the need for additional analysis. Regular check-ins and progress reviews will be conducted to ensure that the project stays on track and meets the objectives within the stipulated timeframe.

CONFLICT OF INTEREST

We do not have any conflicts of interest or potential conflicts of interest that would hinder our ability to effectively work with the LMRWMO on their projects and look forward to integrating our personnel with the WMO's team.



GREG BECKIUS, CPESC

Project Manager



Education

Bachelor of Environmental Design & Planning, University of Minnesota, 2013

Registrations & Certifications

Other

Certified Professional Erosion & Sediment Control, CPESC #8296

University of Minnesota Certified, Construction Site Manager

University of Minnesota Certified, SWPPP Designer

University of Minnesota Certified, Erosion & Sediment Control – Inspector/Installer

Certified Asbestos Inspector

CDOT Transportation Erosion Control Supervisor (TECS) Certification

MnDOT Aggregate Production

BNSF Safety Certification

eRail | Canadian Pacific Safety Certification

OSHA 10-Hour Safety Training

Greg Beckius is a Certified Professional in Erosion and Sediment Control (CPESC #8296) with ten years specialty experience in the industry. Results-driven and dedicated Director of Environmental Health & Safety with a proven track record of implementing comprehensive environmental and safety programs to ensure regulatory compliance and foster a culture of safety within organizations. Strong community and social services professional with a demonstrated history of management in the civil engineering industry.

I494 AIRPORT TO TH 169 DESIGN-BUILD | BLOOMINGTON, MN

CLIENT: MNDOT

This project plans to construct future vision of E-ZPass lanes in both directions between US 169 and MSP airport along the I-494 corridor and is the largest Design-Build Project in MnDOT history. Working on the MnDOT team as the Environmental Compliance Manager (ECM) for this project, Greg is tasked with being the primary environmental point of contact for the Project's owner. In his role, Mr. Beckius helps bridge the gap between the design phase and the construction phase; he reviews contract submittals verifying the environmental commitments are met and oversees their implementation in the field. There are extensive contaminated & regulated areas of concern along the highly built-up corridor that Greg coordinates other MnDOT verification staff for their oversight responsibilities.

METRO GOLD LINE BUS RAPID TRANSIT | ST. PAUL, MN

CLIENT: MET COUNCIL

This planned 10-mile BRT line will connect St. Paul, Maplewood, Landfall, Oakdale, and Woodbury generally along I-94. Gold Line will be Minnesota's first BRT line that operates primarily within bus-only lanes. In addition, there is a large emphasis on environmental commitments to ensure the integrity of the Mississippi River and the surrounding areas are maintained. Mr. Beckius is the lead Environmental Program Administrator & Inspector on behalf of the Met Council Team for the Gold Line Bus Rapid Transit Project. Greg works in coordination with the contractor's (Ames Construction) Erosion Control Supervisor to ensure compliance is maintained throughout the construction corridor. The Met Council team of inspectors emphasize project quality, materials and workmanship, as the attribute that resonates throughout the design life of a project, impacting future budgets and potentially bus schedules.

I90 UNBONDED OVERLAY FROM HWY 169 TO HWY 22 DESIGN-BUILD | BLUE EARTH, MN

CLIENT: MNDOT

This project scope is resurfacing the I90 pavement to provide a smooth ride and extend the interstate life. Mr. Beckius is the Erosion Control Lead for the MnDOT Project Team. With this project being situated in rural southern Minnesota, it brings a variety of challenges environmentally; in his role, Greg focuses his efforts on ensuring the construction processes do not negatively impact the surrounding farmlands, numerous wetland ditches, or the Blue Earth River. He reviews contract environmental submittals, including the plans associated with the Erosion Mitigation Area along the banks of the Blue Earth River.

HWY 52 CANNON FALLS TO ZUMBROTA DESIGN-BUILD | ZUMBROTA, MN

CLIENT: MNDOT

This project consists of reconstructing the southbound Highway 52 lanes beginning south of Highway 19 in Cannon Falls and proceeding south to 1.2 miles north of Goodhue County Road. Construction involves new and reconstruction of roadway, replacement of bridges, and the investigation of intersection improvements at the junction of Hwy 57 and Goodhue County Road 8 in Hader. Greg is the Environmental Compliance Manager (ECM) for this MnDOT highway expansion project. As the ECM, Greg provides plan and inspection oversight review of all the documents submitted throughout construction. He also works closely with the contractor (Mathiowetz) environmental lead for the required environmental inspections. Greg works closely with the MnDOT verification team to assist in the management of the environmental documents on MnDOT's observation management program.

TAYLOR ENGSTROM

Senior Environmental Specialist



Education

Bachelor of Environmental Science |
Drake University

Registrations & Certifications

Other

U of M, Construction Site Manager

U of M, SWPPP Designer

U of M, Erosion & Sediment Control
– Inspector/Installer

BNSF Safety Certification

eRail | Canadian Pacific Safety
Certification

OSHA 10-Hour Safety Training

Taylor Engstrom is a senior environmental scientist with 6 years of experience and a background in environmental science and construction. She has worked with both public and private clients assisting them in environmental compliance services, including: SWPPP design, plan review, construction site permitting, on-site inspections, enforcement response, and various NPDES required documentation throughout projects. Taylor has experience assisting MS4 communities in program development, reporting, training, and facility inspections. As demonstrated by her role as an Erosion Control Specialist and NPDES Expert, Taylor has an in-depth understanding of environmental permitting, inspection, and BMPs on large and complex projects.

METRO GOLD LINE BUS RAPID TRANSIT (BRT) | ST. PAUL TO WOODBURY, MN

CLIENT: METROPOLITAN COUNCIL

The 10-mile BRT line will connect St. Paul, Maplewood, Landfall, Oakdale, and Woodbury generally along I-94. Gold Line will be Minnesota's first BRT line that operates primarily within bus-only lanes. In addition, there is a large emphasis on environmental commitments to ensure the integrity of the Mississippi River and the surrounding areas are maintained for the \$240 million dollar project. Taylor works in coordination with the contractor's (Ames Construction) Erosion Control Supervisor to ensure compliance is maintained throughout the construction corridor. The Met Council team of inspectors emphasize project quality, materials, and workmanship, as the attribute that resonates throughout the design life of a project, impacting future budgets and potentially bus schedules.

I90 UNBONDED OVERLAY FROM HWY 169 TO HWY 22 DESIGN-BUILD | BLUE EARTH, MN

CLIENT: MNDOT

This project scope is resurfacing the I90 pavement to provide a smooth ride and extend the interstate life. Ms. Engstrom is the Erosion Control Lead for the MnDOT Project Team. With this project being situated in rural southern Minnesota, it brings a variety of challenges environmentally; in her role, Taylor focuses his efforts on ensuring the construction processes do not negatively impact the surrounding farmlands, numerous wetland ditches, or the Blue Earth River. She reviews contract environmental submittals, including the plans associated with the Erosion Mitigation Area along the banks of the Blue Earth River.

I-94 DESIGN-BUILD | ST. MICHAEL TO ALBERTVILLE, MN

CLIENT: MNDOT

Construction from St. Michael to Albertville includes adding travel lanes, rebuilding bridges, constructing access lanes, improving drainage, adding an interchange, and resurfacing deteriorating pavement. Taylor is an environmental compliance inspector for this project spanning from St. Michael to Albertville. She performs routine NPDES CSW inspections to ensure compliance with permit requirements, reviews and approves environmental documentation, and attends pre-activity meetings to outline environmental expectations and requirements. She also completes follow-up site reviews to verify maintenance on site is remaining compliant with the project agreements and permits. Taylor works alongside MnDOT and the contractor to communicate environmental concerns and issues, escalating items when noncompliance is observed.

I-94 DESIGN-BUILD | MONTICELLO TO CLEARWATER, MN

CLIENT: MNDOT

This MnDOT Design-Build project is a part of improvements and upgrades being made on I-94 along a 39-mile stretch of broken road. Project activities are adjacent to numerous environmentally sensitive areas and surface waters, some of which are impaired or are infested with aquatic invasive species, requiring extra attention to detail. As the DOT Erosion Control Specialist, Taylor performs routine NPDES CSW inspections to ensure compliance with permit requirements, reviews and approves environmental documentation, and attends in-field CAP meetings and pre-activity meetings to outline environmental expectations and requirements. Taylor works closely with the contractor to manage the dynamic requirements of environmental compliance are being met throughout the project.

ZACH VANOSTRAND, PE

Senior Project Engineer



Zach is an experienced professional engineer who has a history of working successfully on complex projects through his 10 years in civil engineering industry. Zach has proven achievements in leadership roles. He has served as a manager both internally at engineering firms and externally on project sites. He is skilled in construction administration management, project management, materials science, project proposals and cost estimates. Zach has performed construction administration, observation, documentation, and material testing for private, municipal, county, MnDOT, federal, and State-Aid projects. He has strong communication and adaptability skills and has experience working with inspectors and contractors to solve issues in the field. Zach is also highly skilled in construction management software tools, interpreting engineering plans and specifications, and Bluebeam procedures.

SOUTHWEST LIGHT RAIL TRANSIT PROJECT (SWLRT) | ST. LOUIS PARK, MN

CLIENT: METROPOLITAN COUNCIL

The Southwest Light Rail Transit project, commonly referred to as the Green Line Extension, will provide light rail service from Downtown Minneapolis to the communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie. In addition to the light rail construction, this project includes the realignment of the existing freight lines, construction of new bridges, retaining walls, and tunnels, and improvements to local city streets and utilities. SWLRT is the largest infrastructure project in the history of the State of Minnesota and construction costs will surpass \$2 billion. Zach performs grading inspection and construction observation on the east and west sides of the SWLRT project. These inspections include excavations and embankment of soils, retaining wall infills, curb and gutter, concrete flat work, bituminous, cellular concrete, and other duties as well. He communicates daily with the contractor's staff and members of his team to ensure work is done in accordance with the plans and specifications. When conflicts or issues arise, he is proficient at clearly communicating the matter with the Assistant Council Appointed Representative (ACAR) and relying on his knowledge of the construction industry to provide suggestion or recommendations to the ACAR as a solution is sought.

SUNGOLD HEIGHTS INFRASTRUCTURE PROJECT | WORTHINGTON, MN

CLIENT: SUNGOLD HEIGHTS/ NORTH COUNTRY COOPERATIVE FOUNDATION

Zach served as the construction project manager for this private infrastructure improvement project to serve the community of Sungold Heights in Worthington. Zach's role on the project was to administer the construction contract that included sanitary sewer, watermain, concrete curb and gutter, grading and base. He managed the construction project to ensure specifications were followed and managed change orders, pay vouchers and project communication. The total cost of the project was \$2 million dollars.

MAYO KELLEN RESEARCH BUILDING | ROCHESTER, MN

CLIENT: MAYO CLINIC/KNUTSON CONSTRUCTION

Zach served as the special inspections and testing project manager for this 11-story research building. The project included reinforced concrete footings, columns, walls, decks, post-tension stressing, floor-level flatness, excavation, grading, utility hook-ups, and concrete flatwork. Zach managed multiple technicians, the project budget, and the testing scheduling. Zach worked closely with the contractor and the owner when challenges arose to provide cost effective solutions for the project. Zach worked and communicated with multiple parties to ensure that the project specifications were met. The total cost of the project was \$49 million dollars.

Faribault County – 2021 Federal Aid Bridges | Faribault County, MN

CLIENT: FARIBAULT COUNTY

Zach provided inspection assistance on the 2021 Federal Aid Bridges for Faribault County. His duties included providing documentation and inspection of bridge work including h-piles and c-i-p piles, rebar placement and concrete pours. He performed material testing for the concrete pours to verify compliance with the specifications. The total cost of the project was \$2 million dollars.

Education

Master of Business Administration,
University of Minnesota-Duluth, MN

Bachelor of Science in Civil
Engineering, Minnesota State
University – Mankato, MN

Registrations & Certifications

Professional Engineer
MN (No. 60062)

IA (No. P27865)

ID (No. PE12300140)

IL (No. 62.074832)

MI (No. 6201312096)

MS (No. 34636)

ND (No. PE-30021)

SD (No. 16347)

WI (No. 49901-6)

MnDOT

ADA Construction Certification

Aggregate Production

Bituminous Street

Bridge Construction

Concrete Field Tester

Concrete Field Inspector

Concrete Plant | I

Concrete Strength

Grading and Base Tester

Grading and Base Inspector

Signal & Lighting



Brian Jastram

Water Resource Scientist | Project Manager

833-762-5532 ext 706 Brian.Jastram@rlwenvironmental.com 281 Commerce Circle S, Fridley, MN 55432

"Driven to Excellence"

Senior Water Scientist with over 18 years of experience in water quality monitoring and instrumentation. Skilled in building and operating remote telemetry systems, data analysis and management, and active monitoring techniques. Nine years of experience in bathymetric mapping of the Mississippi River and numerous ponds. Experienced in identifying critical BMP and Capital Improvement Project issues and maintaining BMP effectiveness. Currently pursuing a Masters of Natural Resources Degree at the University of Wisconsin Stevens Point.

Education

Natural Resources M.S. (2020-Present), University of Wisconsin - Stevens Point
Environmental Science B.S., Minnesota State University - Mankato

Professional Experience

Senior Water Scientist, Rock Leaf Water Environmental - 2023

Superfund site remediation at the former Penta Wood Products site in Daniels WI involving site health and safety supervision, excavation, grading, and material import supervision, erosion control installation, aerial imagery capture with UAV, and soil sampling.

Lake and precipitation monitoring with custom built, solar powered, internet connected, water quality, and rain gauge monitoring stations.

Emergency Spill Response

Responding to hazardous materials spills involving containment, cleanup, and disposal while wearing proper personal protective equipment, following 40 Hour HAZWOPER protocols, and maintaining worker and environmental health.

Monitoring and Instrumentation Specialist, MWMO - 2005-2023

Designed, built, and operated remote telemetry systems that increased efficiency in data and sample collection and positively impacted data quality for watershed management decision-making. Built and installed permanent sensor stations in the Mississippi River that provide real-time conductivity, temperature, and depth data year-round. Conducted data analysis and management to extract value from data. Identified critical BMP and Capitol Improvement Project issues and maintained BMP effectiveness. Designed, installed, and operated monitoring systems at the St. Anthony Regional Stormwater Treatment and Research System to measure BMP effectiveness.

Environmental Specialist, MWMO

Conducted river and pond water quality monitoring to contribute essential data to TMDL studies and Protection Plans. Designed and built automated stormwater monitoring and remote telemetry systems that provided up-to-date water quality information. Established monitoring sites for river and pond monitoring.

Presentations

SART Monitoring and Effectiveness - MN Water Resources Conference, 2018

Real-Time Automated Stormwater Monitoring - MN Water Resources Conference, 2010



"Driven to Excellence"

Brian Jastram

Water Resource Scientist | Project Manager

833-762-5532 ext 706 Brian.Jastram@rlwenvironmental.com 281 Commerce Circle S, Fridley, MN 55432

Skills

Bathymetric Mapping
River Boat Operations
Trailing
Data Analysis
In-Stream Flow Measurement
Design Build and Deploy Monitoring Systems
FAA Unmanned Aircraft Pilot
Remote Telemetry Operations

Certifications

Hazwoper 40-Hour
Confined Space Entry
Erosion Control Inspector Installer
Inland Waterways Spill Responder
Confined Space Entry
Commercial Remote Pilot License



Michelle Binsfeld

Rock Leaf Water Environmental | President

833-762-5532 ext 700 Shelly.Binsfeld@rlwenvironmental.com 281 Commerce Circle S, Fridley, MN

"Driven to Excellence"

Shelly founded, owns and manages Rock Leaf Water Environmental LLC, which provides environmental emergency response, natural resource restoration, water monitoring, geotechnical and drilling services, and environmental waste management for private and public entities. Shelly holds a bachelors degree in Applied Leadership and has more than 20 years of organizational leadership. She serves with the Sherburne Soil and Water Conservation District as an elected board member and on several committees. Shelly holds certification in HAZWOPER Supervisor, Ecological Restoration, Wetland Professional In-Training, AIS Detector & Management, and ArcGIS Pro Foundation 2101. Shelly formed Rock Leaf in order to build an environmental company that provides quick responses to businesses and the government, with her mission being to improve hazardous and pollution situations to meet the needs of our communities.

Education

Applied Leadership B.S.

Minnesota State University, Mankato

HAZWOPER Supervisor Certification

HAZWOPER 40 Certification

UMN Ecological Restoration Certificate

Aquatic Invasive Species (AIS) Detector

MN Wetland Professional In-Training

DOT Landscape Specialist

Company Memberships & Certifications

Association of Women Contractors

SBA Women-Owned Small Business

WBENC Certified WOSB & WBE

MN Targeted Group (TG)

ESBE, SBE, & WBE Certified in St. Paul (CERT)

MNUCP DBE Certified

Professional Experience

Rock Leaf Water Environmental LLC, President (2020-Present)

Responsible for a variety of administrative tasks for the company to operate efficiently and be in compliance with safety and employment laws. This includes contract procurement and execution, hiring, maintaining company memberships and certifications, and overseeing business transactions.

Has experience managing environmental emergency response, remediation, wetland delineation, invasive species identification and control, environmental assessments and landscaping. Provides oversight and compliance in all company work operations to ensure high quality project deliverables.

Has specific expertise in wetland and aquatic resources. Assists in wetland delineation and banking credit applications and developing plans for land stewardship and easement management.

Sherburne Soil and Water Conservation District, Board Supervisor (2020-Present)

Responsible to set the goals, policies and priorities of the District and employ a staff to work toward those goals. Shelly holds multiple committee memberships, including the MN DNR Aquatic Invasive Species Advisory Committee. She also assists with financial and budget management.

Cost Proposal

LMRWMO | Mississippi River Direct Drainage Project Prioritization Study
 Professional Engineering Services, LTD | 4200 Park Glen Road, St. Louis Park, MN 55416
 Prepared 1/25/2024

Task	Subtasks	Direct Hourly Rate	PE Services Project Manager \$156.00	PE Services Senior Environmental \$139.00	PE Services QAQC Specialist \$150.00	RLW Senior Environmental Scientist \$175.00	RLW QAQC Specialist \$80.00	RLW Asst. Project Manager \$131.00	TOTAL HOURS
1.0	Task 1.0								
	1 Project Kickoff		2	2		2			6
	1.1 Kickoff meeting; meeting agenda; meeting minutes		3						3
	1.2 Desktop analysis		10	12					22
	1.3 Review of existing data		10	12					22
	<i>Subtotal</i>		25	26	0	2	0	0	53
2.0	Task 2.0								
	2 Watershed Analysis		30		10				40
	2.1 Watershed analysis			30					30
	2.2 Identification of hotspot areas and opportunities			30					30
	2.3 Identification of stormwater management locations			30					30
	<i>Subtotal</i>		30	90	10	0	0	0	130
3.0	Task 3.0								
	3 Field Reconnaissance		5	16				8	29
	3.1 Field surveys with coresponding desktop analysis					40	40		80
	3.2 Feasibility review			10		8	16		34
	3.3 Surrounding impact assessment			10		24	24		58
	3.4 Project partner meeting		4	4					8
	<i>Subtotal</i>		9	40	0	72	80	8	209
4.0	Task 4.0								
	4 Analysis & Prioritization		40		20	8			68
	4.1 Concept to feasibility level designs			52					52
	4.2 Cost analysis & ranking system			52					52
	4.3 Final Comprehensive Plan			10					10
	<i>Subtotal</i>		40	114	20	8	0	0	182
	Project Total		104	270	30	82	80	8	574

I certify that the COST PROPOSAL information associated with the attached proposal is true, correct, and reliable for purposes of evaluation for potential contract award. The total contract amount billed will be not-to-exceed the total amount.

Project Team Labor Cost			\$80,052.00
Expenses			\$327.50
Mileage	500 miles	\$327.50	
	(\$0.655 per mile)		
Subtotal			\$80,379.50
Total Contract Amount:			\$80,379.50