



LOWER MINNESOTA RIVER WATERSHED DISTRICT

Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting
Wednesday, August 16, 2023

Agenda Item

Item 6. A. – Friends of the MN Valley report on 2023 County Fair Project and 2024 program requests

Prepared By

Linda Loomis, Administrator

Summary

This item was on the August 16, 2023 LMRWD Board of Managers meeting agenda. It was tabled to the September 20, 2023 LMRWD Board of Managers meeting.

Mr. Ted Suss will be present at the meeting to report on the 2023 County Fair project. Friends of the Minnesota Valley (FMV) has requested the project be repeated in 2024, incorporating changes learned from the 2023 experience.

FMV has requested payment of \$10,000 as reimbursement for expenses incurred for the 2023 County Fair Project. Detailed itemization of expenses is contained in the final report. The Board should authorize payment of the invoice.

Additionally, FMV is requesting the LMRWD support its River Watch program and contribute \$20,000 to support this program. River Watch is a program that educates students about the health of water bodies. There are several other River Watch Programs in the State of Minnesota. The MN Board of Water & Soil Resources prepared a report to the Legislature in 2022 regarding River Watch program throughout the State. That report was included with the August 2023 meeting materials and it is not attached to this report.

FMV has provided its MN River Basin River Watch Report for the 2022/2023 school year.

Attachments

2023 County Fair Project Final report and recommendations
Request to fund 2024 County Fair Project
Friends of the Minnesota Valley Invoice 2023-01 dated July 1, 2023
Request to fund Friends of the MN Valley River Watch
Minnesota River Basin River Watch 2022-2023 Program Report

Recommended Action

Motion to receive and file Final Report on 2023 County Fair Project
The Board should provide direction to staff regarding funding requests
Motion to authorize payment of Friends of the Minnesota Valley invoice 2023-01 in the amount of \$10,000

2023 County Fair Project Report and 2024 Request

Submitted to Lower Minnesota River Watershed District

By Friends of the Minnesota Valley

September 2023

Introduction

During a span of 8 weeks in the summer of 2023, the Friends of the Minnesota Valley (FMV), through a dedicated team of young adults and adult paid staff and volunteers engaged with and educated more than 1000 residents of the Minnesota River valley at ten county fairs.

This proactive and forward-looking endeavor was undertaken by our leadership staff, paid young adults workers, young adults and adult volunteers within a highly compressed county fair schedule timeframe. Planning time was compressed due to the lateness of FMV request to LMRWD for funding. The success of the project reflects remarkable commitment of everyone involved from the youngest young adults to the most seasoned adult. Notably, the 2023 County Fair Project marked the inaugural FMV outreach project since the onset of the Covid-19 pandemic. While we commend the achievement of significant objectives, the 2023 County Fair experience has granted us valuable insights into the potential for vastly more effective outreach and education undertakings in the future.

Contained within the subsequent report is a comprehensive account of the content presented at our information booths, the staffing strategies employed, and the resulting Key Performance Indicators (KPIs) that reflect our impact. Furthermore, insights gathered from our staff and volunteers were recorded and collated to inform this report. Key Performance Indicators and the insights are analyzed within the framework of a Strengths-Weaknesses-Opportunities-Threats (SWOT) assessment. In addition, a prioritized set of recommendations, originating from our dedicated staff and volunteers, outlines strategies for optimizing future endeavors.

Crucially, this report encompasses a formal request for the continuation of this project into the 2024 County Fair season. Our proposal entails substantial revisions to messaging, materials, and staffing arrangements, all aimed at enhancing the reach and effectiveness of our outreach on behalf of the LMRWD. The conclusive section of the report features an addendum cataloging supplementary resources that have been referenced throughout.

We sincerely thank the LMRWD Board for their commitment to including and educating the people in the Minnesota River watershed about the river's challenges. The County Fair Project offers a meaningful way for people to contribute to improvement in the river and the river valley's health. Funding the 2023 County Fair project demonstrates the LMRWD Board's dedication, and we are truly grateful for the opportunity to collaborate on this effort to engage with and educate the Minnesota River basin community on important matters.

FMV Original Request and Project commitment

Text of original FMV request letter to LMRWD Board March 22, 2023

Linda Loomis
Administrator, Lower Minnesota River Watershed District

Linda

On behalf of the Friends of the Minnesota Valley (FMV), I am requesting that the Lower Minnesota River Watershed District fund a summer 2023 community outreach program modeled on the project LMRWD funded in the summer of 2017.

Our request is for \$15,000. At your request, I will provide a detailed budget. FMV is raising funds from other sources to supplement the project budget.

If funded, FMV will secure, and staff a booth/table at approximately 10 county fairs in the Minnesota River basin. Each booth will be co-labeled as FMV and Lower Minnesota River Watershed District.

One unique and exciting difference between the 2017 project and the 2023 project is that the organizing work and staffing work will be primarily conducted by members of the Minnesota Valley Izaak Walton League Youth Leadership program that is called the Green Crew <https://greencrew.club/>. One green crew member will be engaged and paid as the Project Planner/Project Manager working under my direction and supervision. Booth staffing will be provided by other high school and college young adults. Our intent would be to pay each young adults booth staffer a daily stipend paid with funds from LMRWD.

A valuable byproduct of this is that we will be providing a valuable education lesson to a number of young people, all leaders in their high school or college, on Minnesota River environmental issues.

The main purpose of the booth will be to educate the viewing public on the sediment transfer problem on the Minnesota River and educational materials that focus on solutions such as incorporating cover crops and minimum tillage as well as the importance of management of municipal storm water.

Handouts from booths will include publications and materials from LMRWD, Forever Green program at the University of Minnesota, University of Minnesota Extension, The Regional Sustainable Development Partnerships (RSDP), and any other organization that might have suitable handout materials.

I would be most pleased to attend the next LMRWD board meeting to present this request and answer questions.

Ted L. Suss
Executive Director

The Fairs Weve seen



Booth workers Sam and Larry in front of the booth

Actual 2023 Expenditures

	FMV Expenses (LMRWD Grant)	MN Valley IWLA Expenses	Volunteer/In-Kind Donations	Total
Booth Rental	\$ 2,105			\$ 2,105
Booth Setup Supplies	\$ 1,087			\$ 1,087
Fair Admissions	\$ 36			\$ 36
Planning and Support Staffing	\$ 300		\$ 5,000	\$ 5,300
Booth Staffing		\$ 20,400	\$ 6,519	\$ 26,919
Meal Reimbursement	\$ 4,150			\$ 4,150
Mileage Reimbursement	\$ 1,613			\$ 1,613
10% Admin Fee	\$ 1,000			\$ 1,000
Total	\$ 10,291	\$ 20,400	\$ 11,519	\$ 42,210

The commitment by friends of the Minnesota Valley to LMRWD to staff booths at ten fairs was kept.

During the course of the 2023 County Fair season, Friends of the Minnesota Valley placed and staffed booths at ten county fairs. The original list of fairs proposed included ten fairs; Dakota, Scott, Carver, LeSueur, Sibley, Nicollet, Renville, Blue Earth, Brown, and Redwood. Two of these fairs, Dakota and Renville, were removed due to scheduling conflicts and/or location. Two additional fairs, Watonwan and Waseca were added.

Map of MN River Valley with a star near each fair Location



Another major commitment for the Project was to engage young adults as booth staff

Friends commitment to you had two reasons:

- 1) Train the young adults themselves on Minnesota River Issues and Water Quality Issues
- 2) To add appeal to a younger demographic of fair visitors through young adults staffing.

The following is a statement from one of our young adults booth workers who is currently attending Trinity College in Dublin Ireland where she is studying as a part of a Yale University study abroad program.

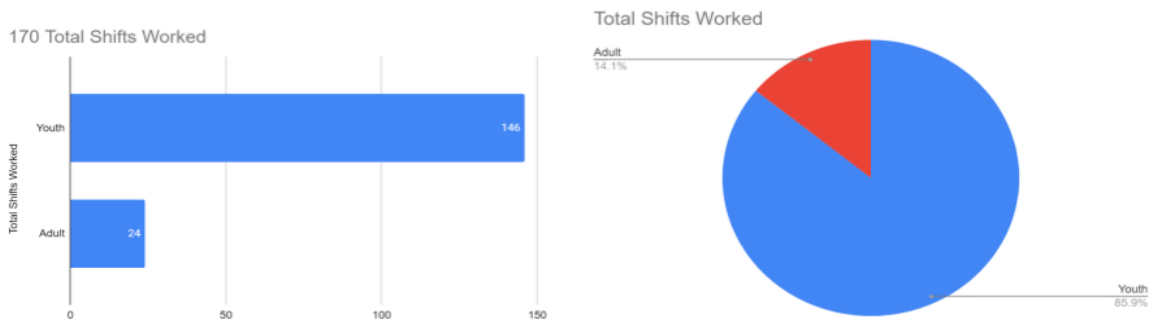
I found that working at the booth was a very rewarding and eye-opening experience. Often, the people who stopped to talk to us were sympathetic to our cause which made it easier to discuss their problems (with flooding, farming, etc.) and solutions. I was able to meet people who not only were being impacted at the frontlines of climate change, but also who were working on solutions. It was honestly very inspiring and made an issue as conceptual and big as climate change feel tangible, real, and more solvable.

Talking with farmers, homeowners, kayakers, fishermen, young people, old people, and everyone in between only deepened my understanding of the issues we are working to solve.

Kathryn Kaiser 2023 County Fair Worker
Green Crew Member and Climate Resilience Fellow

Total shifts worked 170 146 by young adults 24 by adults

Work Shift Data 1

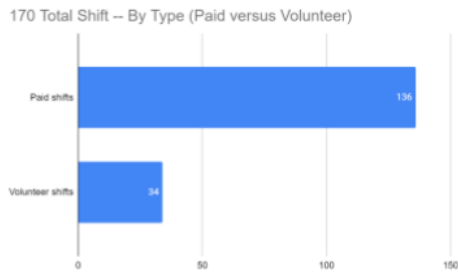




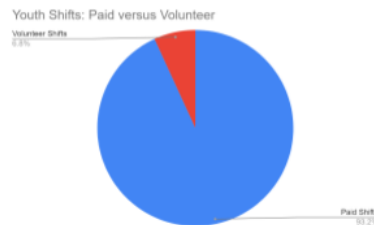
Booth young adults workers Sam and Katheryn , above Suryash below

As outlined in the original budget and proposal, most of the shifts were worked by paid young adults. The LMRWD grant was leveraged by a grant of paid staff time from project partner, the Minnesota Valley Chapter of the Izaak Walton League of America. All of the paid work shifts were worked by young adults. No adults were paid for hours worked. Several shifts were worked as volunteers by Green Crew young adults.

Paid vs Volunteer shifts



Average shift 5 hours



Value of paid youth shifts worked

Only youth were paid to work shifts

136 Paid Shifts

Average shift 5 hours

\$30 per hour paid stipend with cost of benefits

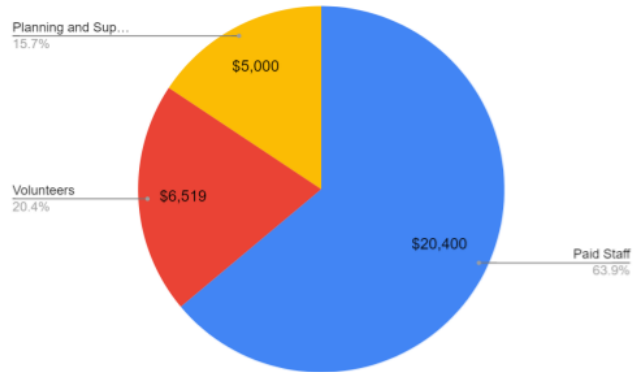
136 shifts times 5 hours per shift equals 680 hours of paid youth work

Total Value of paid fair work by youth \$20,400

This was funded by a grant, in the form of paid youth time, received by the Minnesota Valley IWLA Chapter and made available to the Friends of the Minnesota Valley

Value of Paid and Volunteer

Paid Staff	\$20,400
Volunteers	\$6,519
Planning and Support	\$5,000
	\$31,919



Total Value of Paid and Volunteer: \$31,919

Volunteer time valued at the U.S. government recommended rate of \$31.80 per hour. The \$5,000 Planning and support line item represents the value volunteer time, at \$31.80 per hour, of the Friends of the Minnesota Valley Executive Director and the Minnesota Valley Izaak Walton League Executive Director of youth programming to plan the fair booth project, gather materials, and oversee the training, scheduling, and supervision of the young adult workers.

Friends of the Minnesota Valley agreed to provide Key Performance Indicator in three visitor interaction categories;

- **Contacts**
- **Meaningful Connections**
- **Engagements/Contact Information**

In reporting to LMRWD, FMV created a sub category within Meaningful Connections included the distribution of resources to booth visitors .Resource Distribution is included within Meaningful Connections, not a separate category. The number of resources represents the number of items in inventory at the beginning of the overall project compared to the number in inventory at the end of the project. Separate resource numbers were not recorded for individual fairs.

Visitor Interaction Definition

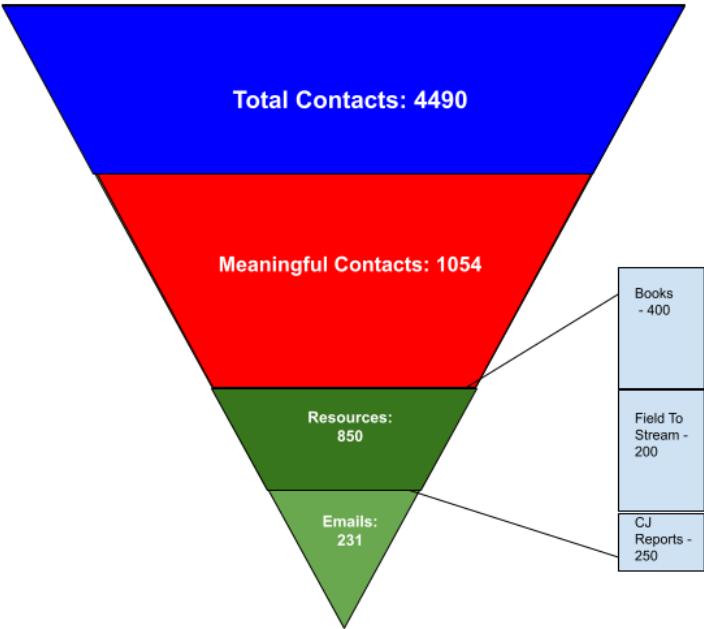
Contacts Fair Visitor Became Aware of Our Booth

Meaningful Contacts Booth Visitor participated in a substantive conversation pertaining to the well-being of the Minnesota River.

Engagements All elements of Meaningful Contact plus the person accepted a resource material such as the Book, For *Love of a River* , the U of M Research Booklet *Fields to Streams*, or the LMRWD Report by Carrie Jennings

Resources Visitor given one of the three resource documents; For *Love of a River* , the U of M Research Booklet *Fields to Streams*, or the LMRWD Report by Carrie Jennings

Received future contact information Obtained an email or phone number or they filled online form



Attention getting sample of booth contend



Lessons Learned

The 2023 County Fair Project was the first attempt at this scale of involvement with County Fairs. As soon as the Project was approved by the LMRWD and work started, we were taking notes on how things could be improved. While many of our initial plans were adjusted based on time and resource availability, our primary initial goals were also able to be met.

SWOT Analysis

We used a traditional SWOT analysis model to analyze the project. A SWOT analysis is a structured framework used to evaluate the Strengths, Weaknesses, Opportunities, and Threats of a project, organization, product, or situation. It provides a comprehensive overview of both internal and external factors that can impact the subject of analysis. Here's a breakdown of each component:

1. *Strengths (Internal):*

Strengths refer to the internal positive attributes or qualities that give an advantage to the County Fair Project. These



are the aspects that the Project excelled at, and they can be leveraged to achieve objectives in the future.

2. Weaknesses (Internal):

Weaknesses are the internal limitations or areas where the County Fair Project lagged behind. Identifying weaknesses helps in understanding where improvements are needed to enhance performance.

3. Opportunities (External):

Opportunities are external factors or circumstances that can be exploited to achieve favorable outcomes. These can arise from organizational resource allocation, market trends, technological advancements, changes in regulations, etc.

4. Threats (External):

Threats are external factors that have the potential to harm or create challenges for the County Fair Project. These can include resource constraints, partner fragmentation, changes in fair attendance patterns, etc.

County Fair Project SWOT Analysis

Strengths

1. Full Staffing at 10 County Fairs:

The project achieved full staffing coverage at all 10 fairs, demonstrating our commitment to ensuring the presence of knowledgeable staff throughout the events. A major strength was the partnership with the Minnesota Valley Chapter of the IWLA that secured a grant, in the form of paid young adults workers, who provided 136 of the 170 shifts worked.

2. Commitment to Excellence:

The project showcased a strong commitment to excellence, with every shift being successfully filled with trained workers, indicating the dedication of our FMV County Fair team to fulfilling one of our most important goals.

3. young adults Leadership and involvement:

A notable strength of the project as completed was the young adults-led approach taken. This brought energy, enthusiasm, and a fresh perspective to the project's operations. Many booth visitors reported to the adult staff how highly impressed the visitor was following a young adults-led discussion in the fair booth. Staffing the booths with young adults provided a fresh appeal to booth visitors

4. young adults Training and Mentoring:

A "super-majority" of the fairs shifts 146 of 170 total shifts benefited from the participation of trained young adults who were mentored by knowledgeable adults volunteers, highlighting our emphasis on cultivating increased knowledge among young future leaders and equipping them with valuable skills, knowledge of river and water quality issues and motivation, in some cases, to pursue water related environmental careers.

5. Resource Distribution:

Over 650 resource items were effectively distributed, including materials such as the book written by former legislator and noted environmentalist Darby Nelson "For the Love of the River", a comprehensive researched based agricultural water quality booklet titled "Fields to Streams" prepared and published by the University of Minnesota Extension Service, and a LMRWD published report drafted by Dr. Carrie Jennings on behalf of the LMRWD.

To the maximum extent possible, each of these resource items was only given to a booth guest following a meaningful discussion of at least one of the issues presented in our booth.

These resource items were the primary attraction to engage fair visitors and move them from simple contacts to meaningful discussions.

This effective use of resources demonstrated our ability to engage fair attendees with informative and educational content.

These strengths reflect the FMV project's ability to effectively staff events, empower young adults involvement, and disseminate valuable resources to fair attendees, setting a solid foundation for further development and success.

Weaknesses:

1. Insufficient Time for Comprehensive Planning and Preparation:

The project faced what we now know was a late start in planning and execution. This affected our ability to fully capitalize on all opportunities. The principal booth staff worker training and message development workshop was held on June 26. This was barely two weeks before the opening of the first three County Fairs. The primary outcomes report from that LCMRD-led workshop arrived at FMV in July, slightly over one week before the opening of three of the County Fairs. Although many excellent ideas and suggestions on booth presentation were generated at the June 26 workshop, many of those ideas, including recommended materials and the booth's appearance, could not be implemented.

Immediately following the June 26 workshop, FMV created booth materials gathered by or developed by FMV staff and assembled the booths with less than optimal appearance. This was done prior to receiving the report of the June 26 meeting. As a result of this compressed timeline, booth appearance and message clarity fell short of expectations and fell short of the desired standard and impacted the overall quality of our presence. Additionally, the absence of clear paths tailored to different audience types resulted in less than optimal booth-staff/visitor interactions.

It is noted that the lateness of the meeting, June 26, was not the result of an error or omission by anyone, but was a function of the lateness of the FMV request for funding for the 2023 County fair project.

Because the June 26 workshop was presented as the message development and booth content clarification experience, FMV chose to await the outcome of the workshop to order materials such as poster sized graphics and social media frames.

Addressing this weakness will be discussed in opportunities and recommendations.

2. Engagement and Interactivity:

Engagement and productivity fell below the expectations envisioned by FMV. The QR Code did not work in these fair settings

Our booth had fewer engagement activities than originally planned and the total number of Contacts, Significant Discussions, and Engagements were somewhat lower than expected.

One example of the problem created by the lateness of the messaging meeting was that Social Media "Selfie Frames" (examples shown later in this report under recommendations) were not ordered in May or June while awaiting the Message clarification meeting. When FMV finally

attempted to order the “Selfie Frames” after the June 26 meeting we learned there was a four week delivery timeline. The Selfie Frames would not have been delivered, even if no delay was encountered, until half of the fairs were completed. Reluctantly, the decision was made not to order the frames as their mid-project arrival would have required a reconfiguration of the booth during the already compressed timeline.

The booth's poor placement at some fairs limited visibility and accessibility, potentially hindering attendee engagement. Booth placement will be discussed in opportunities and Recommendations .

3. The project suffered from a lack of a compelling "high-powered" hook or prize to draw visitors in. The Free Book by Darby Nelson was a remarkably effective hook for persons who paddle and recreate on the river, but was not sufficient to engage other fair visitors. The absence of interactive activities. Described in the preceding paragraph, diminished opportunities for dynamic engagement.

This weakness will be discussed in opportunities and recommendations.

4. Staffing and Expertise:

Another weakness and lesson learned was that while our training of workers, including the June 26 workshop day was extensive, the training did not focus enough on the need for training on aggressiveness in gaining interaction with passerby fair visitors by our booth staff.

FMV did not purposely recruit staff specifically for fair booth and information tabling. Challenges arose from some workers being uncomfortable with the need to aggressively approach every passerby to convert those fair visitors into contacts, then into meaningful conversations, and into engagements meaning collection of an email address.

This weakness will be discussed in opportunities and recommendations.

5 Clarity of Message:

FMV originally intended that a major theme of the booth message would be the harm and damage caused by sediment transfer, and expense of dealing with that sediment whether it be in dredging costs or post flood cleanup. An equally important second theme was intended to focus on solutions. Removing sediment transfer harm and dredging costs as the primary message left us with a somewhat disjointed solutions theme.

This weakness will be discussed in opportunities and recommendations.

Opportunities:

1. Early Planning and Preparation

An immediate and advantageous opportunity lies in the early initiation of planning for the 2024 County Fair Project. Several planning steps have already been undertaken by FMV. A major move in the direction of early planning is FMV's request to LMRWD during August 2023 for requested approval of the 2024 County Fair project by LMRWD prior to the end of 2023.

This is discussed further in recommendations

2. Focused Messaging for Sediment Reduction

An opportunity exists to reshape and fine-tune the messaging of the project with a focus on sediment transfer reduction. By framing the content to emphasize solutions, positive outcomes, and community empowerment, we can effectively address citizen concerns and encourage fair attendees to participate in booth activities. This approach aligns with the project's goal of educating and involving residents while fostering a sense of collective responsibility.

This is discussed further in recommendations

3. Dedicated Staffing with Specific Recruitment:

An opportunity for improvement lies in recruiting dedicated staffing members who are specifically aligned with the project's goals. By selecting individuals with a strong passion for the project's mission, we can ensure a team that is committed, knowledgeable, and capable of effectively conveying the project's message. This strategic recruitment process can lead to higher-quality interactions and enhanced engagement.

This is discussed further in recommendations

4. Booth location

Booth location was identified as a weakness by booth staff. In one case, our first call to a county fair office resulted in FMV being told that all exhibitor booths were booked and we would be put on a waiting list. Ultimately we were given a small booth that was created by moving display cases for arts and crafts. Again early planning is a key to turning this weakness into an opportunity.

This is discussed further in recommendations

5. Greater visitor engagement

Persuading contacts to stop and engage fully with booth staff proved more difficult than expected. This lower than desired level of engagement may have reflected a magnetic interactive activity or a prize drawing.

This is discussed further in recommendations

Threats

1. Lack of In-Kind Support and Management

A significant potential threat for success in 2024 exists if there was an absence of in-kind support and management from the Minnesota Valley Chapter of the Izaak Walton League, including their Green Crew program. This partnership has been pivotal in past endeavors, providing valuable resources and expertise. Without their involvement, the project may face challenges in terms of resources, coordination, and the ability to effectively engage fair attendees.

2. Challenge in Acquiring Attractive Prizes:

Another threat for success in 2024 arises from the potential inability to acquire sufficiently attractive prizes to incentivize fair attendees. Captivating prizes play a critical role in drawing visitors to the booth and encouraging participation. The failure to secure appealing prizes may result in reduced engagement and diminish the project's potential reach and effectiveness.

3. Inability to secure purpose-engaged booth staffing.

Should Friends of the Minnesota Valley be unable to secure personnel highly interested in River and Water issues who are engaged primarily to staff booths, this would present a serious threat to future success.

Recommendations for an Even More Successful County Fair Project in 2024

1. Early Planning

Starting the planning process early, no later than January 1, 2024, allows for meticulous strategizing, resource allocation, material acquisition, partner engagement, and timeline management. This proactive approach ensures that all elements of the project are well-prepared, reducing the risk of hasty decisions and providing ample time for adjustments based on insights gained during the planning phase.

A key element for a successful project in 2024 would be a LMRWD Leadership meeting with Friends of the Minnesota Valley Leadership in January of 2024 to clarify the message and booth elements.

Booth staff training can begin with a focus on imparting issue knowledge on the selected themes and increasing visitor engagement.

In anticipation of hoped for funding for the 2024 County Fair Project, contacts have already been made with potential partners, especially the Minnesota Valley Chapter of the IWLA.

2. Clear Messaging

- a. Simple meaningful message on sediment transfer
- b. Strong message on positive solutions; water storage and cover crops
- c. Message Encouraging Use of the River; Paddler maps other?
- d. Degraded vs clear water stream display

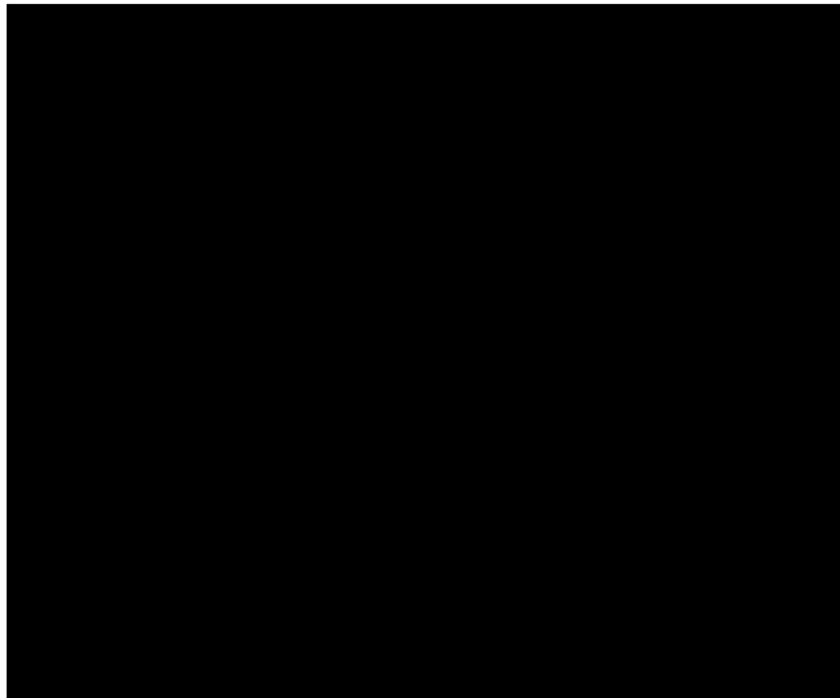
FMV recommends a January 2024 meeting at the LMRWDD and FMV administrative level to clarify messaging and review potential booth content.

3. Greater Opportunity for visitor Interaction

- a. Selfie frames for visitor social media posts, several frames are already tentatively designed. This one draft frame is shown as an example



Friends of the Minnesota Valley



 **I farm
along the Minnesota River**

- b. Interactive exercises connecting booth visitors with the river
DNR State Water Trail Paddler Maps
- c. Displays of water from different points along the river; in sediment jars
Water will be collected by FMV River Watch teams during spring 2024 water sampling.
- d. Cover crop seed samples in jars
- e. Loaned displays from Forever Green and MPCA shown below:



Display by MPCA, loan requested for 2024 fair booths



Display by Forever Green Institute U of M Loan requested for 2024 project.

4. Premium Prizes

A promising strategy involves securing highly desirable prizes, valued at approximately \$1,000 each, to act as a hook for engaging fair attendees. Such incentives can significantly enhance visitor interest and interaction at the booth. By offering prizes that resonate with several different target audiences, we can increase participation in meaningful discussions, and leave a lasting impression on booth visitors, thereby maximizing the project's impact.

There is no one prize that will draw all demographics of fair visitors into the booth. FMV does not have the fiscal resources to purchase and give away even one \$1,000+ value prize, much less numerous \$1,000 prizes. With fall 2023 commitment by LMRWD, FMV staff can immediately begin soliciting Prize Partners. Preliminary contact has been made with some potential prize partners

Prize Partners will be businesses or companies with products and services that coincide with the mission of LMRWD and FMV. Prize Partners will be asked for a cash donation in return for signage in the booth as well as a discount on a prize purchased from the Prize Partner by the drawing winner. Prize Partner donations will cover the prize purchase price..

While several Prize Partners and premium prizes will be displayed, see below, only one prize winner will be drawn and that prize winner will select the single prize he or she wishes to claim. The drawing will occur at the 2024 Minnesota State Fair in a booth staffed by either the Minnesota Valley IWLA Green Crew, River Watch, or both.

2024 Booth Prize attractions

One prize from selection
Conversations with prize donors have begun. Cash Donation \$250 discount on prize
Want a major prize that will appeal to each visitor demographic

Paddlers:	Kayak or Canoe
Anglers	Fish Finder
Landowners	Seed Gift Certificates
Farmers	Electric Chain Saw
Recreation	Electric Bicycle



Registering for the prize will require each registrant to submit contact information including name and email address and specify their special interest in the Minnesota River on the registration form.

5. Booth Placement

. Booth location was identified as a weakness by booth staff.

Again early planning is a key to turning this weakness into an opportunity. In one case, our first call to a county fair office resulted in FMV being told that all exhibitor booths were booked and we would be put on a waiting list. Ultimately we were given a small booth that was created by moving display cases for arts and crafts.

By starting booth booking early, as soon as a decision is made to proceed with a 2034 fair project, every county fair chosen for participation will be contacted and a desirable booth secured. Every county in the Minnesota River basin, with the exception of Hennepin County which we have no intention of including in future outreach projects, has a County Soil and Water Conservation District SWCD. Nearly every County SWCD presents a booth at the county fair. Due to the strong correlation between the Mission of the LMRWD, FMV, and SWCDs, our first 2024 fair contact with a fair administrator will include a request that the FMV/LMRWD booth be placed immediately adjacent or as close as possible to the county SWCD booth. At the same time, SWCDs in every county will be contacted to gain their support for nearby booth location.

This will provide an additional benefit in that FMV/LMRWD booth staff can converse with and build a positive relationship with those staffing the SWCD booth.

6. Purpose Recruited and Better Trained Fair Staffing for Summer:

A valuable avenue for progress involves purpose recruiting staff who are dedicated to the summer events. This should be completed well in advance of the first fair. This approach enables a more comprehensive preparation phase, where staff members can become well-acquainted with the project's objectives, booth content, and best practices. Consequently, these staff members can engage with visitors more confidently and knowledgeably, elevating the overall fair experience.

Desirable location is influenced by being located in the highest traffic exhibit building and adjacent to similar booths such as county SWCD booths.

7. Expanded Partnerships

- a. Prize Partners have been discussed above
- b. Soil and Water Conservation Districts discussed above under booth placement.
- c. Forever Green; During the 2023 County Fair project, the booth featured the Forever Green Institute of the University of Minnesota. During 2023 planning, the Forever Green Institute was contacted seeking materials that could be used in the booth. This contact was made near the end of Spring Semester 2023, a very busy time for university staff and students. Ultimately, items were downloaded from the Forever Green Institute web site and posted in the booth. As part of that conversation, the FMV staff person who made the contact asked if Forever Green would be interested in providing materials for future outreach efforts. The response was non committal but positive.

If LMRWD chooses to enable a 2024 County Fair project, Forever Green will be contact again early in the 2023-2024 academic year with a goal of Forever Green becoming a partner in the booth. Our request would include high quality, purpose-produced posters and handout materials and actual jar sized samples of Forever Green grain crops such as Kernza and Pennycress. The University of Minnesota operates a summer employment/internship project that supplies interns to university departments. FMV staff will suggest and encourage the leadership of Forever Green to secure a summer 2024 intern who would be assigned to staff our booth as part of a partnership.

- d. MPCA; MPCA has a variety of high quality materials, see picture above of clean water board, Discussions have already begun about securing these materials for loan for use in county fair booths in 2024.

Conclusion

The 2023 County Fair project sponsored by the Lower Minnesota Watershed District was a success in that Friends of the Minnesota Valley was able to place a booth at a total of ten fairs, staff each booth during the entirety of each fair, and made thousands of contacts.

Many lessons were learned that are discussed in this report.

Continuation of the County Fair project in 2024 will enable FMV to implement several changes that will increase booth visitation, increase the number of persons who can be educated about important river and water quality issues, and will strengthen the outreach capability of the Lower Minnesota River Watershed District.

The final conclusion is to restate the request from Friends of the Minnesota Valley to the Lower Minnesota River Watershed District Board to approve the \$10,000 requested grants for the 2024 County Fair Project at the September meeting of the LMRWD Board.



Friends of the Minnesota Valley

PO Box 20697
Bloomington, MN 55420

Invoice

Invoice #: 2023-01
Invoice Date: 7/1/2023
Due Date: 7/1/2023

Bill To:

Lower Minnesota River
Watershed District
Attn: Linda Loomis
112 E 5th Street #102
Chaska, Minnesota 55318

Description	Amount
<p>The purpose of this project is to provide LMRWD with an outreach project educating citizens of the Minnesota River Basin upstream from the LMRWD geographic footprint.</p> <p>Friends of the Minnesota Valley (FMV) proposes a summer 2023 County Fair Outreach Project on behalf of LMRWD. The goal and plan is to place staffed information booths at 10 county fairs in the Minnesota River Basin.</p>	10,000.00
Total	\$10,000.00
Payments/Credits	\$0.00
Balance Due	\$10,000.00



Friends of the Minnesota Valley

Post Office Box 20697
Bloomington, MN 55420
FriendsMNValley@gmail.com
Ted L. Suss, Executive Director
507-828-3377

August 7, 2024

To: Members of the Lower Minnesota River Watershed District Board to Directors

From: Ted L Suss

Subject: 2024 County Fair Project

As of this date, the 2023 County Fair Project has been proceeding with excellent success. LMRWD/FMV fair booths have been staffed in Waseca, Redwood, Scott, Watonwan, Blue Earth and Sibley Counties. This week, fair booths will be staffed in Nicollet, Carver, and Brown Counties. The project will wrap up the following weekend at the Le Sueur County Fair.

I request a spot on the LMRWD Board agenda for a formal final 2023 Fair Project report at the September meeting of the Lower Minnesota Valley Watershed District Board.

We have learned a great deal during the 2023 fairs which will be invaluable should the LMRWD Board choose to support a similar project in 2024. I personally worked five day-long shifts at two fairs to date and will be working another five days this coming weekend and probably three days at the LeSueur County Fair. This work has given me a deep insight into how we can increase traffic to our booths and increase the impact of our message in future years.

I formally request that the LMRWD support a repeat of the County Fair Project during the summer of 2024 and ask that as the LMRWD prepares your 2024 budget, you include an allocation of \$10,000.

As I mentioned above, we are learning a great deal while staffing the fair booths in 2023. This knowledge can make our 2024 efforts even more effective.

First, we have learned that our booths need a **HOOK**, most likely in the form of a significant prize drawing or gift item, to draw people to the booth. We used the Darby Nelson book to great effect this summer. On behalf of Friends of the Minnesota Valley, I will begin to solicit 1-3 significant prize donations that might include a gift certificate for Cover Crop seed, perhaps up to \$1,000, a Kayak or Canoe, and an Electric Powerboat engine. I will begin this solicitation if and as soon as LMRWD commits to 2024 sponsorship.

Second, I would like to work with LMRWD to develop a fair-specific handout and support materials that fully describes the harm done and costs to downstream areas by increased flow on the Minnesota River.

Third, given more time, I hope to secure on-message handout materials from other organizations.

If a fair project support commitment is made by the LMRWD Board before the end of 2023, we can have adequate time to accomplish each of the objectives described above.

Thank you again for the support LMRWD provided for the 2023 County Fair Booth Project.

Ted



Friends of the Minnesota Valley

Post Office Box 20697
Bloomington, MN 55420
FriendsMNValley@gmail.com
Ted L. Suss, Executive Director
507-828-3377

August 7, 2023

To: LMRWD Board

From: Ted L. Suss, FMV Executive

Subject: River Watch Support

As I believe you are aware, the Friends of the Minnesota Valley operates a youth Water Quality Monitoring and River Education Program called River Watch in the Minnesota River basin.

Funding this program is a challenge each year. On behalf of the Friends of the Minnesota Valley, I am requesting funding from LMRWD in the amount of \$20,000 in 2024 for River Watch programming that FMV will provide through school districts that overlap the LMRWD boundaries.

At present, River Watch serves students from Prior Lake and Shakopee High Schools and elementary and middle school programs for students from Bloomington, Burnsville, and Shakopee. In Shakopee and Prior Lake, we work with multiple classrooms of students.

With support from LMRWD, I am quite confident we can expand our high school teams to include Bloomington Kennedy and Jefferson, Eden Prairie, Chanhassen and Chaska.

It costs FMV approximately \$2,500 per year in consumable materials and staff time to conduct four "at the river" water quality sampling events. LMRWD support would fund two sampling events in spring of 2024 and two sampling events in fall of 2024 with students from each school. I expect we will expand participation to at least five schools in the LMRWD area in 2024 at a total cost in the LMRWD area of \$12,500. We may exceed five schools in the LMRWD area. In addition to the water quality monitoring, Friends has worked with a professional curriculum developer to develop a comprehensive Water Quality Curriculum that aligns with the Minnesota Science standards. this curriculum is taught in participating schools by our River Watch staff.

One hindrance to school participation is the cost of transporting students from their schools to and from the river. Should LMRWD chose to fund secondary school River Watch programs in the LMRWD, FMV will set aside a portion of any LMRWD funds help offset some of school-incurred student transportation expense. For planning purposes, I would suggest FMV set aside \$2,500, assuming a \$20,000 LMRWD support level, for River Watch student transportation during 2024.

During the summer of 2023, Friends of the Minnesota Valley, working in cooperation with the Minnesota Valley Chapter of the Izaak Walton League, began a program called Green Summer. Through this program, students enrolled in school-based summer-school programs come to the Minnesota Valley Ikes Chapter house one day each week for an intensive day of education including water quality monitoring, water quality education, macro invertebrate surveys, and other related environmental subjects. Two of the schools that participated in this inaugural 2023 Green Summer program are LMRWD area schools Burnsville and Bloomington.

Again, the "lesson" portion of these Green Summer days is based on the professionally developed Water Quality curriculum and is aligned with Minnesota state Science standards.

As part of this \$20,000 request, I am requesting \$5,000 that will be devoted to providing Green Summer 2024 programming for schools from the LMRWD area. This \$5,000 would help offset a portion of the 2024 Green Summer for LMRWD area schools.

With the support of LMRWD, Green Summer 2024 can provide an extensive and intensive summer long water quality and macroinvertebrate education to many dozens. likely over 200, of students from school districts, that overlap territory with LMRWD.

Thank you in advance for your consideration.

Ted

Minnesota River Basin River Watch

2022-2023 PROGRAM REPORT



Prepared For
MPCA & FMV





Table of Contents

- 3) Program Overview
- 4) Program Area Descriptions
- 5) Water Quality Monitoring
- 6) Water Sampling Fieldwork
- 7) River of Dreams
- 8) Leave No Trace Statement
- 9) Community Engagement
- 10) Program Management & Reporting
 - Appendix A: 2022 River Watch Water Monitoring Participation Data
 - Appendix B: Educational Material Samples
 - Appendix C: Curriculum Alignment with MN's Next Generation Science Standards
 - Appendix D: Project Workplan

Program Overview

River Watch (RW) engages high school, middle school, and elementary school students in a multidisciplinary study of Minnesota's water health and management through hands-on, field based experiential watershed science. Schools across the Minnesota River Basin monitor the quality of their local river and stream, and investigate potential impacts to the water. The in-class and field activities are designed to prepare future scientists and stewards to understand the complex nature of water quality and advocate for solutions to improve the health of our most important resource.

Funding for River Watch during the current FY22-FY23 biennium is provided by the Minnesota Legislature through an appropriation of the Clean Water Legacy Funds to the Minnesota Pollution Control Agency. Beginning during the 2018-2019 school year with five high school teams, River Watch has grown to a program including twenty-two high school teams. Over the 5 years River Watch has operated in the Minnesota River Basin, it has engaged an increasing number of students in water quality data collection, which is shared with the MPCA to supplement their Surface-Water Database. Across 2022- 2023 school year, River Watch Staff worked with nearly 3300 students from the following 22 high school teams, 2 middle school classes. and 10 elementary classes, to collect water quality field data and investigate topics in water science.

- The Blake School
- Bloomington - Jefferson
- Burnsville
- Cedar Mountain
- Comfrey
- Eden Prairie
- Madelia
- Mankato East
- Mankato Loyola
- Minnesota Valley Lutheran
- Morgan
- Nicollet Middle School
- New Ulm Cathedral
- MN Valley Izaak Walton League Green Crew Team
- New Ulm Public
- Prior Lake
- Redtail Elementary
- School of Environmental Studies
- Sibley East
- Shakopee
- Sleepy Eye Public
- Sleepy Eye St. Mary's
- Springfield
- Tri-City United
- Waseca

When possible, River Watch empowers its teams to act as educators of younger students and the greater community. The "River of Dreams" workshops pair student leaders with younger learners to explore topics in water science. One macroinvertebrate workshop partnered 167 high schoolers with 379 elementary students to study benthic macroinvertebrate (water bugs). The "Community River Walks" had students leading hikes focused on educating community members on the history and health of the Minnesota River watershed. The expansion of activities is the result of River Watch's partnership with the Minnesota Valley Chapter of the Izaak Walton League, which provides outdoor classroom facilities, and access to the Minnesota River floodplain.

Water Quality Monitoring

Students collect and record water quality conditions of local rivers and streams using state-of-the-art YSI Sonde monitors to gather “Grab” Samples. Teams also collect and identify macroinvertebrates to further assess the health of the river or stream.



River of Dreams Workshops

Student leaders facilitate water science workshops and day camps for middle and elementary school students. The workshops cover a wide range of water conservation topics, focusing on hands-on exploration of water conservation, aquatic fauna, and their natural environment.



Community River Walks

Student-led hikes, supervised by professional River Watch staff, along the floodplain of the Minnesota River aimed at educating community members on water conservation practices and human-driven impacts on the Minnesota River.



Project Progress

This report is for the Minnesota River Basin River Watch Project covering January 2022 through June 2023. The Friends of the Minnesota Valley is the project sponsor with programmatic support provided by the Izaak Walton League. The remainder of this report is organized by activities undertaken between 2022-2023.

Water Quality Monitoring

The beginning of the Spring 2022 sampling season welcomed a new Program Coordinator, Tom Crawford. In preparation for the imminent sampling, MN River Watch staff redesigned the educational materials, creating a more visually engaging and academically thorough in-class presentation (Appendix A). River Watch staff also completed the “Getting Ready for the New MN Science Standards” program offered by the Minnesota Department of Education. Every effort was made to incorporate Minnesota STEM standards into the classroom instruction and the hands-on water quality monitoring and macroinvertebrate identification (Appendix B).



The in-class lesson includes discussions on the following topics: water monitoring equipment, proper field-sampling methods, water quality metrics (pH, temperature, dissolved oxygen), pollutants (nitrates, phosphates, sediment, salt), the impact of natural and constructed environments on water quality, personal water conservation measures, common macroinvertebrates, and their varying sensitivity to pollution.



Water Sampling Fieldwork

All of these topics are revisited as students participate in collecting water quality field data and making environmental observations of the riparian ecosystem surrounding their local sampling site. Students are separated into groups and rotate between using the various pieces of equipment to collect water quality data.

A field sampling event includes the use of:

- YSI Sonde Handhelds - to collect water quality measures
- A Van Dorn sampler - to collect water samples from the middle of the watercourse
- A Secchi Tube - to assess the turbidity or clarity of the water sample
- A Phosphate Test Kit - to assess the level of phosphate in the water sample
- A Weighted Tape Measure - to determine the stage, or height of the water level in relation to the sampling point
- Aquatic D-Nets - to collect macroinvertebrates from the watercourse
- Macroinvertebrate Assessment Tools: Collection Tray, Taxonomy Charts, Magnifying Lens, Macroinvertebrate Pollution Sensitivity Index



Beginning in May 2022, River Watch partnered with 12 schools across 23 sampling events. By the end of October 2022, we added 6 more new River Watch teams, bringing the number of participants up to 1450 across 48 sampling events. After a productive winter building partnerships and curriculum, River Watch brought on 4 more high school teams, 2 middle school teams, and partnered with 10 elementary classes for a one day “River of Dreams” [RoD] workshop. In 2023 the number of participants from the 25 schools, across 50 sampling events and 4 RoD workshops, totaled 1613. River Watch is thrilled to have engaged so many young minds in hands-on investigation of complex water systems across our state and world; and to have collected crucial water quality data for the MPCA.



River of Dreams Workshops

Summer 2022 marked the start of the “River of Dreams” program, aimed at involving middle and elementary school students in a hands-on, place-based investigation of the basics of hydrology. “River of Dreams” events included: a Cross-grade Collaborative Workshop (CCW) exploring the importance of macroinvertebrates; and Green Camp, a multi week day camp exploring topics in water science and conservation. All “River of Dreams” activities were designed to fulfill the Next Generation Science Standards content requirements, and structured to emphasize the three dimensions of science learning: core knowledge, scientific practices, and crosscutting concepts.

Cross-Grade Collaborative Workshop

As a year-end project, the River Watch team from Prior Lake High School took on the role of an educator, preparing and facilitating a lesson for Redtail Elementary students. To prepare, the River Watch team members had to learn about macroinvertebrates: how to collect and identify them, what their populations can tell us about the health of the water, and how to communicate these ideas to younger learners. Once the lesson content was established, the River Watch members collected and identified macroinvertebrates to share with the young learners.

The day of the workshop, the young learners were paired off with River Watch members, who led the chosen activity, a game of memory using macroinvertebrates. Each learner tried to collect pairs of the bugs associated with low pollution tolerance/high quality water. The goal was to show how populations of macroinvertebrates can indicate high or low water quality. After the activity, the young learners were able to observe the real macroinvertebrates (collected by the River Watch team) under microscopes. It was amazing to see both groups of students, young and old, energize each other and share their growing knowledge of water and conservation in general. Overall, the one workshop involved over 550 participants.



River of Dreams Workshops (Continued)

Green Camp

Green Camp is a multi-week day camp that partners with school district summer programs to provide an outdoor, hands-on, place-based exploration of water science, environmental ethics, and conversation service. Piloted with Blake Schools during the summer of 2022, the 2023 Green Camp program grew to include 4 summer programs (Blake Schools, Burnsville, Bloomington, and Hiawatha College Prep HS). Each week campers explore a new topic in water science through hands-on experiments, and spend the afternoon collecting water quality data from streams in the Minnesota River Valley.

Green Camp is located on the Izaak Walton League of America’s Minnesota River Valley Chapter (IWLA-MNV) property along the border of the Minnesota Valley National Wildlife Refuge. This proximity to a designated wildlife refuge allowed students to explore the natural riparian environment and directly observe the seasonal changes in the nearby wetlands, floodplain, and river channel.

Green Camp was implemented in partnership with the IWLA-MNV Chapter’s Green Crew and the AmeriCorps Climate Resilience Fellows. The IWLA-MV Chapter Green Crew is a youth environmental and conservation leadership training program for high school and college students. The Green Crew, which draws young leaders from across the state, has its own River Watch team within the Friends of the Minnesota Valley program.



Leave No Trace Statement

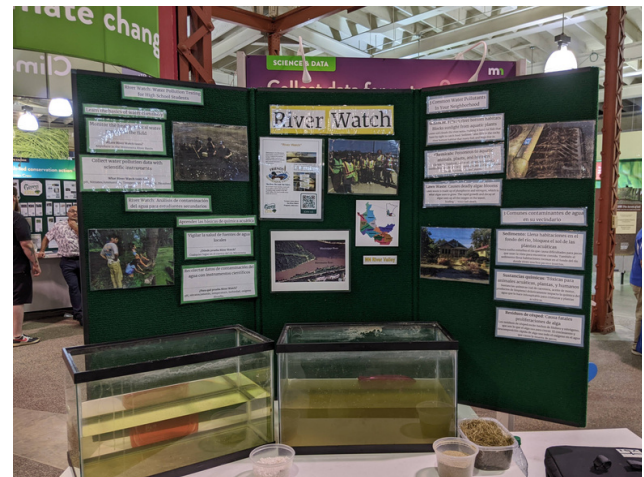
Friends of the Minnesota Valley believes the River Watch program must not only engage the scientifically minded individuals, but also the environmentally conscious ones. As such, we integrate the Leave No Trace principles into every facet of our outdoor education programs.

The seven Leave No Trace principles support ethical and environmentally conscious decision-making in both natural and constructed environments. Furthermore, Leave No Trace provides a framework for stewardship that will serve students throughout their whole personal and professional lives.

Community Engagement

In an effort to build awareness of water quality issues in the broader community, River Watch, in collaboration with the Green Crew River Watch team, hosted a number of outreach events in 2022-2023. During the warm months, the high school students of the Green Crew River Watch team led Community River Walks; a hike along the Minnesota River from the Izaak Walton property to a MPCA testing site at the Bloomington Ferry Bridge. These events were open to the Public, which provided the Green Crew team members an opportunity to share the lessons learned from River Watch, and deepen their understanding of water science through teaching others. The aim of these River Walks was both networking with other young scientists interested in water conservation and educating community members on the importance of water quality and the extent of human's impact on our natural water resources. This Community Engagement effort reached over 50 community members across 8 River Walk events.

Presenting at the Minnesota State Fair as part of the MPCA's Eco-Experience Showcase allowed River Watch Professional Staff to interact with individuals and families across the US, prompting them to consider the health of Minnesota's largest rivers, the Mississippi and the Minnesota. Due to the geographically diverse audience, the exhibit was designed to encourage conversations around how one can reduce their impact on water quality, instead of focusing on recruitment to the program. As such, the day was filled with conversations about peoples' past and present experiences with the Minnesota and Mississippi Rivers.



Project Management & Reporting

This final 2022 report is to be submitted to the MPCA project manager. The report will also be submitted to the Board of Friends of the Minnesota Valley. Invoices have been submitted quarterly and the final summary of the project budget is shown below.

Line Item	Adjusted MPCA Funds Awarded	MPCA Funds Expended	Balance	Budget Expended (%)
Personnel	\$69,958.75	\$69,958.75	\$0.00	100%
Travel Reimbursement	\$4,700.07	\$4,700.07	\$0.00	100%
Equipment & Supplies	\$25,273.61	\$25,243.38	\$30.23	100%
Lodging and Meals	\$67.57	\$67.57	\$0.00	100%
Total:	\$100,000.00	\$99,969.77	\$30.23	100%



Appendix A: 2022-2023 River Watch Water Monitoring Participation Data

School	Sampling Events	Students Involved
Bloomington - Jefferson	2	49
Burnsville	2	29
Cedar Mountain	3	75
Comfrey	2	28
Eden Prairie	2	41
MN Valley Izaak Walton League Green Crew Team	7	40
Madelia	6	67
Mankato East	4	50
Mankato Loyola	5	80
Minnesota Valley Lutheran	2	40
New Ulm Cathedral	8	139
New Ulm Public	11	297
Prior Lake	25	747
School of Environmental Studies	4	113
Sibley East	1	4
Shakopee	9	267
Sleepy Eye Public	4	39
Sleepy Eye St. Mary's	1	7
Springfield	4	83
Tri-City United	3	68
Waseca	3	20
22 River Watch Teams	104 Sampling Events	2,368 Students
<i>River of Dreams Workshops</i>	<i>10</i>	<i>645 Participants</i>
<i>Community River Walks</i>	<i>8</i>	<i>50 Participants</i>
Totals	122 Learning Events	3,063 Participants

Appendix B: Newly Developed Educational Materials

URBAN DRAINAGE SYSTEMS

Rainwater flows across impermeable surfaces: Rooftops, Sidewalks, Streets, Cars. Rainwater collects the pollutants resting on these surfaces as it travels, then drains into natural waters via storm drains along city streets.

Rain Runoff

Sanitary Sewer

Storm Drain

Common Pollutants in Urban Runoff:
Decomposing Organics (Lawn Waste)
Gas/Oil | Road Salt | Fertilizers | Trash

River Watch
Minnesota Department of Natural Resources

AGRICULTURAL DRAINAGE SYSTEMS

The drainage system quickly moves water above and below ground away from the field to drain excess water in the soil. Rainwater collects pollutants from the surface, and is drained before it can be filtered. No water is stored in the ground, increasing the amount and velocity of the moving water which increases flood risk.

Top Soil

Tile Drainage

Buffer Strip

Crops

Tile Drainage
The tile drainage tubing has little holes to allow water that has drained through the surface into the pipes.

Agricultural Surfaces:
Compacted Topsoil - Low Infiltration, Increased Surface Runoff/Erosion
Loose Topsoil - High Infiltration, Increased Erosion
Vegetation - High Infiltration, Decreased Erosion

River Watch
Minnesota Department of Natural Resources

Appendix C: Curriculum Alignment with MN's Next Generation Science Standards

Program Level	Applicable Standards	Benchmark
High School	9E.4.2.2.1	Apply place-based evidence, including those from Minnesota American Indian Tribes and communities and other cultures, to construct an explanation of how a warming climate impacts the hydrosphere, geosphere, biosphere, or atmosphere.
	9C.2.1.1.1	Analyze patterns in air or water quality data to make claims about the causes and severity of a problem and the necessity to remediate or to recommend a treatment process.
Middle School	6E.3.2.1.3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
	6E.3.1.1.3	Develop a model, based on observational and experimental evidence, to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
	7L.3.2.1.1	Construct an explanation based on evidence for how environmental and genetic factors influence the growth of organisms and/or populations.
Elementary	1E.4.2.1.1	Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.
	4E.1.2.1.1	Make observations and measurements to provide evidence of the effects of weathering or the rate of erosion by the forces of water, ice, wind, or vegetation.

Appendix D: Project Workplan



Friends of the Minnesota Valley Project Workplan

Doc Type: Contract

SWIFT Contract number:
Purchase Order number:
Agency Interest ID:191308
Activity ID:PRO20210001

Project title: Friends of the MN Valley River Watch

1. Project summary:

Organization: Friends of the MN Valley
Contractor contact name: Thomas Crawford
Title: Project Coordinator
Address: 6601 Auto Club Rd Bloomington, MN 55438
Phone: (763)-656-9179
Email: tom@friendsmnvalley.org

MPCA project manager: Kelly O'Hara
Title: Program Coordinator
Phone: (651) 757-2226
Email: kelly.ohara@state.com

Project information

Counties: Blue Earth, Carver, Chippewa, Cottonwood, Dakota, Hennepin, Lac qui Parle, Lyon, Martin, Nicollet, Renville, Scott, Sibley, Swift, Waseca, Watonwan, Yellow Medicine.
Start date: 09/20/21
End date: 06/30/2023
Total cost: \$100,000.00
Full time equivalents: 1.4

Major watershed(s):

- | | | | | |
|---|--|--|---|--|
| <input checked="" type="checkbox"/> Chippewa River | <input checked="" type="checkbox"/> Lac qui Parle | <input checked="" type="checkbox"/> Pomme de Terre | <input checked="" type="checkbox"/> Yellow Medicine River | <input checked="" type="checkbox"/> Hawk Creek |
| <input checked="" type="checkbox"/> Redwood River | <input checked="" type="checkbox"/> Cottonwood River | <input checked="" type="checkbox"/> Watonwan River | <input checked="" type="checkbox"/> Le Sueur River | <input checked="" type="checkbox"/> Blue Earth River |
| <input checked="" type="checkbox"/> Middle MN River | <input checked="" type="checkbox"/> Lower MN River | | | |

Organization Type Non-profit

Project type: Education/Outreach/Engagement Monitoring Research

Brief project summary

River Watch (RW) enhances watershed understanding and awareness for tomorrow's decision-makers through direct hands-on, field-based experiential watershed science. High School based teams throughout the Minnesota River Basin participate in a variety of unique and innovative watershed engagement opportunities such as Water Quality Monitoring and Macroinvertebrate surveys that are suited to their school, community, and watershed needs.

Goal of project

Provide classroom instruction and a hands-on learning experience on water quality and water quality monitoring to 16 high school based teams during the 2021-2022 school year and 20 high school based teams during the 2022-2023 school year. These students, tomorrow's adult citizens and decision makers, will learn about water quality, science skills, and the importance of water quality.

2. Workplan Detail/Measurable Outcomes

OBJECTIVE 1: Develop and Implement Science, Technology, Engineering, and Mathematics (STEM) Curriculum for River Watch Team Water Quality and Macroinvertebrate Monitoring Programs. Curriculum to Include MPCA Water Quality and Macroinvertebrate Standard Operating Procedures.

Task 1: Implement STEM education into professional teacher development training in the 2022-2023 program year. Provide professional teacher development on Water Quality Monitoring and Macroinvertebrate Monitoring through one-on-one training sessions between teachers and FMV staff during fall of 2021. Regional summer or fall kick-off training in summer/fall of 2022.

- *Measurable Outcome 1; Develop and secure a STEM curriculum suitable for training teachers of High School level, Middle School level, and Elementary School level education. Completed May 2022 (Elementary/Middle School) Completed December 2022 (High School)*
- *Measurable Outcome 2; 16 teachers trained. At least one teacher in each of 16 different teams will be engaged in and complete a River Watch Training session during late summer/early fall of 2021. Completed August 2022.*
- *Measurable Outcome 3; 20 teachers trained. At least one teacher in each of 20 different teams will be engaged in and complete a River Watch Training session during late summer/early fall of 2022. Completed May 2023*

Task 2: Utilize STEM curriculum while engaging 16 River Watch Teams during the 2021-2022 school year in at least four monitoring events during the school year and engaging 20 River Watch Teams in at least four monitoring events per team during the 2022-2023 school year.

- *Measurable Outcome 1; 16 teams will be recruited and will participate in four Water Quality and Macroinvertebrate monitoring events during 2021-2022. Completed June 1, 2022.*
- *Measurable Outcome 2; 20 teams will be recruited and will participate in four Water Quality and Macroinvertebrate monitoring events during 2022-2023. Completed June 1, 2023.*
- *Measurable Outcome 3; Water Quality monitoring data will be submitted to MPCA for each of the planned 64 monitoring events in 2021-2022. Completed November 2022.*
- *Measurable Outcome 4; Water Quality monitoring data will be submitted for each of the planned 80 monitoring events in 2022-2023. Data submittal will be completed using the EQUIS platform by 11/1/21, 11/1/22 and 6/30/23 respectively. Completed June 2023*

OBJECTIVE 2: Development of Elementary/Middle School River Education Program

Task 1: Design and test implement an elementary and middle school component (possibly River of Dreams) that engages High School River Watch students in teaching younger students.

- *Measurable Outcome 1; Identify and secure a curriculum suitable for use by High School team members teaching younger students. Completed January 1, 2022.*
- *Measurable Outcome 2; Create and share media from educational events via River Watch website and social media, these posts can include photo images, maps, and participant observations at least 1 time per month. In Progress January 2023.*

Task 2: Secure participation and Implement Elementary and Middle School Program Component

- *Measurable Outcome 1; During the 2021-2022 school year, test and implement the elementary/middle school program in at least 4 schools. Completed June 2022.*
- *Measurable Objective 2; During the 2022-2023 school year, implement the elementary/middle school program in at least 10 schools. Completed June 2023.*

Objective 3: Project Oversight, Reporting, and Invoicing

Task 1: Track project grant-related expenditures. Compile and organize invoices, pay bills and submit for expense reimbursements in a timely manner.

- *Grant-related expenditures tracked, bills paid, and expense reimbursements submitted quarterly at-minimum.*

Task 2: Track objectives, tasks, and FTE to ensure outcomes are being met. Prepare and complete reports and results from the program as follows:

- *Interim report and initial evaluation to MPCA, Legislative and Education Committees by February 15, 2023.*
- *Final report of project outcomes, budget/FTE, and final evaluation results by June 15, 2023 to all entities who are receiving the February 15, 2023 report noted above.*
- *Annual site visit with MPCA project manager completed by Spring 2022 and Spring 2023.*

3. Project Budget

<i>Staff total cost*</i>		\$68,000.00 \$70,021.25 <u>\$69,958.75</u>
<i>Travel reimbursement**</i>		\$4,000 \$4,519.29 <u>\$4,700.07</u>
<i>Equipment, supplies, and shipping (see detailed list below)</i>		-\$27,500 \$25,391.89 <u>\$25,273.61</u>
<i>Meals***</i>		\$500 <u>\$67.57</u>
	Total:	\$100,000.00
<i>Estimated FTE: 1.4 (Final Report shall include actual FTE)</i>		
<i>* Staff rates shall not exceed the following:</i>		
<i>Staff 1 rate: Project Coordinator</i>	\$ 30.00	
<i>Staff 2 rate: Contracted Area School Monitoring Coordinator (4 staff)</i>	\$ 25.00	
<i>Staff 3 rate: Contracted Project Fiscal and Accounting</i>	\$ 25.00	

**Mileage billed at current IRS Mileage Rate

*** Meals billed at current Commissioner's Plan Rate

Equipment and Supplies List			
<i>Equipment - limited to items greater than \$500 with a life expectancy greater than 1 year</i>	<i>Quantity needed</i>	<i>Unit Cost</i>	<i>Total Cost</i>
<i>YSI Sonde Monitor with Probes</i>	2	\$5,500	<u>\$11,000</u>
<i>Supplies (Field and Safety) - items less than \$500 Consumable chemicals, replacement parts, shipping.</i>			\$16,500 \$14,391.89 <u>\$14,273.61</u>
Total:			-\$27,500 \$25,391.89 <u>\$25,273.61</u>