Please note the meeting will be held in person at the Carver County Government Center on the Wednesday, August 16, 2023. The meeting will also be available virtually using this link.

# LOWER MINNESOTA RIVER WATERSHED DISTRICT

## Lower Minnesota River Watershed District

7:00 PM

Wednesday, August 16, 2023

Carver County Government Center

602 East Fourth Street, Chaska, MN 55318

| Agenda Item | Discussion |
|---|---|
| 1. Call to order | A. Roll Call |
| 2. Approval of agenda | |
| 3. Citizen Forum | *Citizens may address the Board of Managers about any item not contained on the regular agenda. A maximum of 15 minutes is allowed for the Forum. If the full 15 So are not needed for the Forum, the Board will continue with the agenda. The Board will take no official action on items discussed at the Forum, with the exception of referral to staff or a Board Committee for a recommendation to be brought back to the Board for discussion or action at a future meeting.* |
| **4.** Consent Agenda | *All items listed under the consent agenda are routine by the Board of Managers and will be enacted by one motion and an affirmative vote of a majority of the members present. There will be no separate discussion of these items unless a Board Member or citizen request, in which event, the items will be removed from the consent agenda and considered as a separate item in its normal sequence on the agenda.*<br>A. Approve Minutes June 21, 2023 and July 19, 2023 Regular Meeting<br>B. Receive and file July 2023 Financial reports<br>C. Approval of Invoices for payment<br>i. Clifton Larson Allen (CLA) – Financial services through July 2023<br>ii. TimeSavers Off Site Secretarial – Preparation of June 2023 meeting minutes<br>iii. Rinke Noonan –July 2023 Legal Services<br>iv. Daniel Hron – September 2023 office rent<br>v. US Bank Equipment Finance – August 2023 copier lease payment<br>vi. Young Environmental Consulting Group, LLC – July 2023 technical, and Education & Outreach services<br>vii. Naiad Consulting, LLC – June 2023 and July 2023 administrative services, mileage & expenses<br>viii. Barr Engineering – July 2023 services related to Area #3 (wetland delineation & geotechnical investigation)<br>ix. 106 Group – July 2023 services related to Area #3<br>x. 106 Group – July 2023 services related to Vernon Avenue<br>xi. Inter-Fluve – July 2023 Area #3 Design Services |

| | |
|---|---|
| | xii. ISG – June 2023 services related to Vernon Avenue Project<br>xiii. 4M Fund – May 2023 Bank service charges<br>D. Report on Citizen Advisory Committee<br>E. LMRWD Permit Renewals – no permit renewals this month<br>F. LMRWD Permit Program Summary |
| 5. New Business/ Presentations | A. LMRWD Permit Inspections<br>B. LMRWD Gully Inventory and Condition Assessment Final Report<br>C. Friends of the MN Valley report on County Fair project and 2024 request<br>D. 2024 LMRWD Budget Discussion<br>i. Financing of Area #3 |
| 6. Old Business | A. 2021/2022 Financial Audit<br>B. Lower Minnesota River East One Watershed One Plan<br>C. City of Carver Levee<br>D. Dredge Management<br>i. Vernon Avenue reconstruction and culvert replacement project<br>E. Watershed Management Plan – no new information since last update<br>F. 2024 Legislative Action<br>G. Education & Outreach – no new information since last update<br>H. LMRWD Projects<br>*(only projects that require Board action will appear on the agenda. Informational updates will appear on the Administrator Report)*<br>i. Area #3<br>ii. Spring Creek<br>I. Permits & Project Reviews<br>*(only projects that require Board action will appear on the agenda. Informational updates will appear on the Administrator Report)*<br>i. Xcel Driveway (LMRWD No. 2022-015)<br>ii. Burnsville Sanitary Landfill Expansion – Amendment (LMRWD No. 2022-040)<br>iii. 5250 Eagle Creek Boulevard, Shakopee – work without a permit<br>iv. 535 Lakota Lane, Chanhassen – work without a permit |
| 7. Communications | A. Administrator Report<br>B. President<br>C. Managers<br>D. Committees<br>E. Legal Counsel<br>F. Engineer |
| 8. Adjourn | Next meeting of the LMRWD Board of Managers is 7:00 pm Wednesday, September 20, 2023. |

Upcoming meetings/Events

*Managers are invited to attend any of these meetings. Most are free of charge and if not the LMRWD will reimburse registration fees.*

- USACE River Resource Forum – Tuesday, August 15, and Wednesday August 16, 2023 – Prairie du Chien Library, 125 S. Wacouta Avenue, Prairie du Chien, WI (virtual option)
- Lower MN River East 1W1P Advisory Committee meeting, Wednesday, August 16, 2023, 10:00 am to 1:00pm – in-person at Scott SWCD, 7151 190th Street West, Jordan, MN

- Lower MN River East 1W1P Steering Committee meeting – Wednesday, August 16, 2023, 1:30 pm to 3:30pm – in-person at Scott SWCD, 7151 190th Street West, Jordan, MN
- UMWA (Upper Mississippi Waterway Association) monthly meeting – August 17, 11:30 am to 1:00 pm, Lilydale Pool & Yacht Club – in-person only
- Lower MN River East 1W1P Policy Committee meeting – August 17, 2023, 3:00pm to 5:00 pm, in-person at 181 W Minnesota Street, Le Center, MN or virtual (MS Teams)
- LMRWD Citizen Advisory Committee meeting – Tuesday, September 5, 2023, 6:00pm,

For Information Only

- **WCA Notices**
  - Scott County – City of Savage – Notice of Application – LMRWD Vernon Avenue Reconstruction
  - Dakota County – City of Eagan – Notice of Decision – MCES Siphon Outlet Improvement Project Wetland Delineation- Boundary/Type

- **DNR Public Waters Work permits**
  - Scott County – City of Shakopee – Request for comments – emergency repair of boat ramp
  - Scott County – City of Savage – CHS – amended permit – for maintenance of barge slip
  - Carver County – Xcel Energy – Request for comments - Piling/Anchors/Footings for power line repair
  - Scott County – City of Savage – Riverland Ag – Request for comments & permit issued - for barge/wharf/anchor/fleeting excavation

- **DNR Water Appropriation permits**
  - Carver County – City of Chaska – CenterPoint Energy/Merjent – permit issued & amended for new natural gas line at Chaska Boulevard and Walnut Street

Item 4A
LMRWD 7-19-2023

# LOWER MINNESOTA RIVER WATERSHED DISTRICT

**Minutes of Regular Meeting**
**Board of Managers**
**Wednesday, June 21, 2023**
**Carver County Government Center, 602 East 4th Street, Chaska, MN 7:00 p.m.**
**Approved _____**

1. **CALL TO ORDER AND ROLL CALL**
   On Wednesday, June 21, 2023, at 7:00 PM CST, in the Board Room of the Carver County Government Center, 602 East 4th Street, Chaska, Minnesota, President Hartmann called to order the meeting of the Board of Managers of the Lower Minnesota River Watershed District (LMRWD).

   President Hartmann asked for the roll call to be taken. The following Managers were present: Manager Laura Amundson, Manager Joseph Barisonzi, President Jesse Hartmann, Manager Theresa Kuplic, and Manager Lauren Salvato. In addition, the following attended the meeting in-person: Linda Loomis, Naiad Consulting, LLC, LMRWD Administrator; Della Schall Young, Young Environmental Consulting Group, LLC, LMRWD Technical Consultant; John Kolb, Rinke Noonan, LMRWD legal counsel; Steve Albrecht, Operations Administrator – Land, Shakopee Mdewakanton Sioux Community; and Jake Hendel, Water Resources Design Engineer, Bolton & Menk.

   Manager Ben Burnett, Prior Lake/Spring Lake Watershed District, Scott County Commissioner Jody Brennan, and Gregg Thompson, Watershed Specialist, City of Eagan, joined the meeting virtually. Hannah LeClaire, Young Environmental Consulting Group joined the meeting virtually at 7:05 pm.

2. **APPROVAL OF THE AGENDA**
   Administrator Loomis asked for the addition of three invoices. Items 4. C. xvi. – TimeSavers Off Site Secretarial – for preparation of the May 2023 meeting minutes, 4. C. xvii. – Braun Intertec – for geotechnical investigation at Vernon Avenue project and 4. C. xviii. – I & S Group, Inc. – for wetland delineation at Vernon Avenue. She asked to remove Item 4. B. – May 2023 financial report.

   **Manager Amundson made a motion to approve the agenda with the addition to the consent agenda of Items 4. C. xvi. – TimeSavers Off Site Secretarial – for preparation of the May 2023 meeting minutes, 4. C. xvii. – Braun Intertec – for geotechnical investigation at Vernon Avenue project and 4. C. xviii. – I & S Group, Inc. – for wetland delineation at Vernon Avenue and to remove Item 4. B. – May 2023 Financial Report. Manager Barisonzi seconded the motion. Upon a vote being taken motion carried unanimously.**

3. **CITIZEN FORUM**
   Administrator Loomis said she had not received communication from anyone that wished to address the Board, and no one present at the meeting asked to address the Board.

4. **CONSENT AGENDA**
   President Hartmann introduced the item.

**A. Approve Minutes April 19, and May 9, 2023 Regular Meeting**

**~~B. Receive and file May 2023 Financial Report~~**

**C. Approval of Invoices for payment**

i. **Clifton Larson Allen (CLA) - Financial services through May 2023**
ii. **Daniel Hron – July 2023 office rent**
iii. **Rinke Noonan, Attorneys at Law – May 2023 Legal Services**
iv. **Metro Sales – May 2023 payment on copier maintenance agreement**
v. **TimeSaver Off Site Secretarial, Inc. – Preparation of April 2023 meeting minutes**
vi. **US Bank Equipment Finance – June 2023 payment on copier lease**
vii. **Young Environmental Consulting Group, LLC – May 2023 technical, and Education and Outreach services**
viii. **Naiad Consulting, LLC – May 2023 administrative services, mileage, and expenses**
ix. **Barr Engineering – May 2023 services related to Area #3 (wetland delineation & Threatened and Endangered Species Review)**
x. **Bolton & Menk – May 2023 services related to Vernon Avenue**
xi. **I & S Group, Inc. – April 2023 services related to Vernon Avenue**
xii. **106 Group – May 2023 services related to Area #3**
xiii. **106 Group – May 2023 services related to Vernon Avenue**
xiv. **RailPros – May 2023 invoice for railroad flagging services related to Vernon Avenue**
xv. **4M Fund – April Bank service charges**
xvi. **TimeSavers Off Site Secretarial – for preparation of the May 2023 meeting minutes**
xvii. **Braun Intertec – for geotechnical investigation at Vernon Avenue project**
xviii. **I & S Group, Inc. – for wetland delineation at Vernon Avenue**

**D. Report on Citizen Advisory Committee**

**E. LMRWD Permit Renewals**

**F. LMRWD Permit Program Summary**

**G. Request to reimburse 2022 Educator Mini-grant for Black Hawk Middle School**

**H. Concourse G Infill Pods 2-3 Phase 1 & 2 (LMRWD No. 2023-012) Administrative Approval**

**President Hartmann made a motion to approve the Consent Agenda as amended under the approval of the agenda. Manager Salvato seconded the motion. Upon a vote being taken motion carried unanimously.**

**5. NEW BUSINESS/PRESENTATIONS**

**A. Eagan River Valley Acres (RVA) Funding request review**

Administrator Loomis introduced this item. She shared the City of Eagan's request for financial support on this project and details of the project.

Ms. Young discussed the budget for the Watershed Resource Restoration Fund and explained that there has traditionally been a line item in the budget for these types of projects. She noted that nothing has been spent from this fund so far this year. She shared that she has discussed with Administrator Loomis how they will receive these projects in the future as the current process is not as organized or competitive. She discussed the methodology used to determine the recommendation for 15% funding.

Gregg Thompson with the City of Eagan attended the meeting via Zoom and shared that he was happy to answer any questions.

**Manager Barisonzi made a motion to approve recommendation to fund up to 15% of the project cost for Eagan River Valley Acres (RVA). Manager Salvato seconded the motion. Upon a vote being taken, the motion carried unanimously.**

**B. Lower Minnesota River East One Watershed One Plan Governance**

Administrator Loomis introduced and provided background on this item. She shared that they are part of the Lower Minnesota River East One Watershed One Plan planning process. The Policy Committee is at the point where it is looking at difference governance models for the creation of an entity that will oversee the implementation of plan once it has been approved. She shared that the Lower Minnesota River East One Watershed One Plan would like to have a discussion of this at their July Policy Committee meeting. She stated that Manger Amundson cannot attend this meeting and that the Committee would like to see if any of the other Managers could attend in her absence. She explained that she does not think that they have fully explored all of the potential governance models that are out there. She added that she, Manager Amundson, and legal council have discussed this and she is not sure what the best alternative would be for the LMRWD. She shared that the LMRWD requested that it be noted somewhere in this plan that the LMRWD has their own plan and this new plan is not going to override their plan.

Manager Amundson reviewed more of the information concerning the governance models with the Board.

LMRWD Attorney John Kolb reviewed and gave background on what a One Watershed One Plan is. He stated that the Lower Minnesota River East One Watershed One Plan does not include the LMRWD's whole district and that they may be split between three different joint powers entities. He noted that they do not have to participate in a particular governance structure as they already are their own governance structure. He shared that he, Administrator Loomis, and Manager Amundson discussed putting a placeholder in this plan as nothing in this plan that takes away from the LMRWD. He reviewed his presentation on the One Watershed One Plan operational arrangements. He also recommended that the LMRWD may want to enter into a Memorandum of Agreement with whatever entity is formed as a result of the planning process.

The Board discussed that there are unanswered questions that they would like to have the answers to before they decide. Attorney Kolb stated that he is not sure that they will be able to get these answers from BWSR.

The Board discussed the understandings between the parties in this agreement. Attorney Kolb shared that there is a memorandum of agreement already in place to plan.

Administrator Loomis explained that there are many other similar plans like this out there with other governance models.

The Board asked how far along in the process the Lower Minnesota River East One Watershed One Plan is. Manager Amundson stated that the planning and areas of focus have already been established.

Administrator Loomis explained that the advisory group has set goals and found resources. She added that they have also discussed goal measures and resource protection. She noted that they are close to having a plan together. She stated that they have not discussed how this will be staffed, implemented, and funded.

Attorney Kolb reviewed his presentation on the One Watershed One Plan operational arrangements. He discussed joint power entities, determining an appropriate structure, and the decisions that need to be made prior to entering one of these agreements. He also discussed the key elements of implementation for a One Watershed One Plan. He stated that they do not have to decide tonight on whether or not they participate in this, but they will need to make the decision soon.

Administrator Loomis discussed that part of this has to do with the amount of sediment and nutrients that are coming from upstream, in areas that are outside of a certain district. She gave the example of Scott County and how the upper part of Sand Creek is outside of their county, and they are not able to do projects in that area. She added that it is possible that this plan may impact the LMRWD's ability to get watershed-based implementation funding as funding may be split.

The Board discussed the values and the drawbacks of this plan.

Attorney Kolb reviewed the difference between a joint powers collaboration or a joint powers entity.

Administrator Loomis shared that the LMRWD has given funding to projects that were outside of the district and stated that there is nothing prohibiting them from giving these funds as long as they see it as beneficial to the district.

The Board gave feedback on the information that was presented at this meeting. No action required.

**6. OLD BUSINESS**

**A. 2021 Financial Audit**

Administrator Loomis introduced this item and shared that Redpath and Company has agreed to doing a two year audit which will cost $25,000 per year. She shared the recommendation from legal counsel to get the legislature to give resources to the Office of the State Auditor so that they can provide audit services to some of the smaller, local governmental units, such as watershed districts. Legal counsel noted that the LMRWD is not alone in its difficulty finding auditors and getting audits prepared. She stated that they will be sending a letter to the former audit firm. Attorney Kolb stated that this letter should go out within the next week.

**President Hartmann made a motion to authorize a request for proposals to provide audit services for FY 2023. Manager Amundson seconded the motion. Upon a vote being taken, the motion carried unanimously.**

**B. 2027 World EXPO – "Healthy People, Healthy Planet – Wellness and Well Being for All"**

Administrator Loomis introduced and provided background on this item. Bloomington was not chosen as the site of the 2027 World Expo.

**C. 2023 Cost Share Applications**

Administrator Loomis reviewed the five applications for cost share projects. She stated that the total of all five projects would come to over $21,000 and funding could come from the Water Resource Restoration fund.

The Board asked if they would not accept any other applications for the rest of the year. Administrator Loomis explained that decision is up to the Board. She noted that there is an applicant that is interested in submitting an application, but that is for a project for 2024.

The Board discussed potentially limiting funding to the same groups to every other year and not back to back years.

Administrator Loomis shared that she has looked into cost share programs for other watershed districts and stated that the LMRWD is the most conservative. She added that there will be a draft budget at the July meeting.

The Board discussed the May deadline being a little late in the year for these applications to be submitted.

**Manager Amundson made a motion to approve all cost share applications as presented and the amounts requested. Manager Kuplic seconded the motion. Manager Salvato offered a friendly amendment to the motion, asking that LMRWD staff evaluate cost share programs offered by other watershed districts and recommend changes to the LMRWD. Managers Amundson and Kuplic accepted Manager Salvato's amendment. Upon a vote being taken, the motion carried unanimously.**

**D. City of Carver Levee**
No new information to report since the last update.

**E. Dredge Management**

**i. Vernon Avenue Dredge Material Management site**
Administrator Loomis introduced this item and provided an update on the project to improve Vernon Avenue.

**ii. Private Dredge Material Placement**
No new information to report since last update.

**F. Watershed Management Plan**
No new information to report since the last update.

**G. 2023 Legislative Action**
Administrator Loomis introduced and provided background on this item. She discussed the projects that received funding.

The Board asked about the funding provided for water storage. Administrator Loomis explained that BWSR is going to try to identify larger projects and how they can make more of a difference with water storage.

**H. Education and Outreach Plan**
No new information to report since the last update.

**I. LMRWD Projects**
***(Only projects that require Board action will appear on the agenda. Informational updates will appear on the Administrator Report)***

**i. Area #3**
Administrator Loomis introduced and provided background on this item. She shared that she met with the property owners on site at the propety and she asked them to consider selling the portion of their property or allowing an easement for the property in the City's right-of-way for Riverview Road and the river. She noted that State funds can be used for this purchase. She stated that they will need to determine how they can raise their match from the State. She added that she contacted a consulting firm who may be able to assist and

there is a meeting set up with the firm next week. She gave an update on the progress of the project.

**ii. Spring Creek**

Administrator Loomis introduced this item. She shared that they have requested proposals for some design work at Sites 1 and 2. She noted that they received a proposal from ISG for the work.

Della Schall Young explained that only one response was received from the firms in engineering pool that were qualified to do this type of work. Other firms responded that they did not have the capacity at this time to undertake an additional project.

**Manager Barisonzi made a motion to approve ISG as the firm to design the Spring Creek Sites 1 and 2 for a total fee of $79,930 with an additional $10,000 to allow for geotechnical soil borings, as needed for a total cost of $89,930. Manager Kuplic seconded the motion. Upon a vote being taken, the motion carried unanimously.**

**iii. LMRWD 2023 Gully Assessment**

Administrator Loomis introduced and provided background on this item. She stated that the Young Environmental interns are conducting these assessments and will make a presentation to the Board at the July Board of Managers meeting.

**J. Project/Plan Reviews**

***(Only projects that require Board action will appear under this item. Informational updates will appear under item 4.G – LMRWD Permit Program Summary)***

**i. Shakopee Mdewakanton Sioux Community Organic Recycling Facility (LMRWD No. 2022-016)**

Administrator Loomis introduced and provided feedback on this item. She shared that Young Environmental has reviewed this project and recommended conditional approval for Rule B.

The Board noted that work has already started at this site and asked if that was appropriate prior to granting this permit. Ms. LeClaire stated that she was not aware that site preparations have already started. She asked if it extended beyond tree removal. The Board noted it was just tree removal.

Operations Administrator – Land, Shakopee Mdewakanton Sioux Community, Steve Albrecht, came forward and stated that the only things that have been done at this site were approved by Scott County. He gave an updated on other work and permits for this site.

Ms. Young noted that if they are not disturbing soil then the tree removal is not harmful.

**Manager Barisonzi made a motion to conditionally approve a permit for LMRWD Rule B for Shakopee Mdewakanton Sioux Community Organic Recycling Facility Relocation (LMRWD No. 2022-016) contingent upon receipt of a copy of the NPDES permit. Manager Kuplic seconded the motion. Upon a vote being taken motion carried unanimously.**

**ii. AT & T Bloomington to Eureka Fiber (LMRWD No. 2023-009)**

Administrator Loomis introduced and provided background on this item. She shared the recommendation for approval with the stipulation that the LMRWD be notified upon the discovery of disturbed groundwater or any release of lubricant fluid.

Ms. LeClaire shared examples of when disturbed groundwater or lubricant fluids were released.

The Board asked about the risk assessment analysis of this work. Administrator Loomis stated that she does not have that answer but the stipulation could be expanded upon to include a plan in case there is any disturbed groundwater or lubricant fluids released. Ms. LeClaire stated that AT&T does have a plan for if there is any kind of release of groundwater or lubricant fluids.

The Board asked if the Board has always approved these permits in the past. Della Schall Young stated that since the LMRWD has had a permitting program an application like this has not been denied. She shared that this project has more risk than the other projects that have been approved but the applicant has worked to mitigated some of the risk. Legal Counsel provided additional information and noted the MPCA has a protocol for releases for as little as 80 gallons and will show up with an entire response team.

Administrator Loomis explained that there are already a number of these types of lines under the river that range from sewer lines and fiber optic lines to natural gas pipelines.

**President Hartmann made a motion to approve a permit for AT & T Bloomington to Eureka Fiber (LMRWD No. 2023-009) with the stipulation that the LMRWD be notified immediately upon the discovery of disturbed groundwater or any release of lubricant fluid. Manager Salvato seconded the motion. Upon a vote being taken motion carried. Manager Barisonzi abstained.**

**iii. Lilydale LGU Permit**

Administrator Loomis introduced and provided background on this item. She noted that Lilydale is within the Mississippi River Critical Corridor Area and state regulation within that area are more prescriptive than LMRWD rules.

**Manager Salvato made a motion to conditionally approve an LGU Permit for the City of Lilydale contingent upon the City's adoption of the draft SWMP and official controls presented in the City's application and to adopt Resolution 23-06 - Approving the Surface Water Management Plan for the City of Lilydale. Manager Kuplic seconded the motion. Upon a vote being taken, the motion carried unanimously.**

**iv. 535 Lakota Lane, Chanhassen – work without a permit**

Administrator Loomis introduced and provided background on this item. She noted that the LMRWD has not heard from the property owner since the beginning of May. He retained the services of a surveyor, and we received a surveyor that provided a survey that was deficient to the LMRWD needs.

**Manager Kuplic made a motion to recommence legal action against the property owner. Manager Salvato seconded the motion. Upon a vote being taken, the motion carried unanimously.**

Attorney Kolb explained the process that will follow this motion.

**6. COMMUNICATIONS**

A. **Administrator Report:** Administrator Loomis stated that she didn't have anymore to add. She noted that she attended the Minnesota Association of Watershed Administrators Tuesday in Albert Lea. Based on observations from the meeting, she thinks the decision to not rejoin Minnesota Watersheds was the correct decision for the Board.

B. **President:** No report

C. **Managers:** Manager Salvato announced that she has determined what her presentation at the Metro Children's Water Festival will be. Manager Barisonzi reminded the Board that the Board will meet on Monday at the Izaak Walton League Chapter House.
D. **Committees:** No report
**E. Legal Counsel:** No report
F. **Engineer:** No report

**7. ADJOURN**

**At 8:52, President Hartmann made a motion to adjourn the meeting. Manager Salvato seconded the motion. Upon a vote being taken, the motion carried unanimously.**

**The next meeting of the LMRWD Board of Managers meeting will be 7:00, Wednesday, July 19, 2023, and will be held at the Carver County Government Center, 602 East 4th Street, Chaska, MN. Electronic access will also be available.**

Attest: _____
Lauren Salvato, Secretary

_____
Linda Loomis, Administrator

Item 4A
LMRWD 8-16-2023

# LOWER MINNESOTA RIVER WATERSHED DISTRICT

**Minutes of Regular Meeting**
**Board of Managers**
**Wednesday, July 19, 2023**
**Carver County Government Center, 602 East 4th Street, Chaska, MN 7:00 p.m.**
**Approved _____**

## 1. CALL TO ORDER AND ROLL CALL

On Wednesday, July 19, 2023, at 7:00 PM CST, in the Board Room of the Carver County Government Center, 602 East 4th Street, Chaska, Minnesota, President Hartmann called to order the meeting of the Board of Managers of the Lower Minnesota River Watershed District (LMRWD).

President Hartmann asked for the roll call to be taken. The following Managers were present: Manager Joseph Barisonzi, President Jesse Hartmann, Manager Theresa Kuplic, and Manager Lauren Salvato. Manager Laura Amundson was absent. In addition, the following attended the meeting in-person: Linda Loomis, Naiad Consulting, LLC, LMRWD Administrator; Della Schall Young, Young Environmental Consulting Group, LLC, LMRWD Technical Consultant; Al Friedges, Shakopee Mdewakanton Sioux Community (SMSC); and Jake Hendel, Water Resources Design Engineer, Bolton & Menk on behalf of SMSC; Tim Gillitzer, KTI Fencing; Stefanie Gronlund, Faith Breeden and Leila Khalid, Young Environmental Consulting Group, LLC; and Hannah Barisonzi, Alec Holbeck, and Daniel Linder, Izaak Walton Green Crew Member. Ben Burnett, Prior Lake Spring Lake Watershed District Manager, Scot County Commissioner Jody Brennan and Hannah LeClaire, Young Environmental Consulting Group, LLC attended the meeting virtually.

Manager Ben Burnett, Prior Lake/Spring Lake Watershed District; Scott County Commissioner Jody Brennan; and Hannah LeClaire, Young Environmental Consulting Group joined the meeting virtually.

## 2. APPROVAL OF THE AGENDA

Administrator Loomis asked that Item 4.C.xiii – I & S Group – June 2023 services related to Vernon Avenue Project, Item 4.J. – Accept Quote and authorize payment of premium for Director's & Officer's Insurance, and Item 5.C. – Report from Friends of the MN Valley on County Fair Project be added to the Agenda. She asked to remove Item 4. A. – June 21, 2023, meeting minutes and Item 4.C. vii – Naiad Consulting, LLC – June 2023 administrative services, mileage & expenses invoice be removed from the Agenda.

**Manager Barisonzi made a motion to approve the agenda with two amendments, the first to move Item 6. I. to be the first item reviewed under Old Business and the addition of Item 4.C.xiii – I & S Group – June 2023 services related to Vernon Avenue Project, Item 4.J. – Accept Quote and authorize payment of premium for Director's & Officer's Insurance, and Item 5.C. – Report from Friends of the MN Valley on County Fair Project to the consent agenda and removal of Item 4.A.– June 21, 2023, meeting minutes and Item 4.C. vii – Naiad Consulting, LLC – June 2023 administrative services, mileage & expenses invoice. Manager Salvato seconded the motion.**

**President Hartmann offered a friendly amendment to move Item 6. I. iii. ahead one position to then follow Item 6. I. i. - Shakopee Mdewakanton Sioux Community Organic Recycling Facility (LMRWD No. 2022-016), on the agenda. Manager Barisonzi and Salvato accepted the friendly amendment. Upon a vote being taken motion carried unanimously.**

3. **CITIZEN FORUM**
Administrator Loomis said she had not received communication from anyone that wished to address the Board, and no one present at the meeting asked to address the Board.

**4. CONSENT AGENDA**
President Hartmann introduced the item.

~~**A. Approve Minutes June 21, 2023 Regular Meeting**~~

**B. Receive and file May 2023 and June 2023 Financial Reports**

**C. Approval of Invoices for payment**

i. **Clifton Larson Allen (CLA) - Financial services through June 2023**
ii. **Rinke Noonan, Attorneys at Law – June 2023 Legal Services**
iii. **Daniel Hron – August 2023 office rent**
iv. **Frenette Legislative Advisors – May, June & July 2023 legislative services**
v. **US Bank Equipment Finance – July 2023 payment on copier lease**
vi. **Young Environmental Consulting Group, LLC – June 2023 technical, and Education and Outreach services**
~~vii. **Naiad Consulting, LLC – June 2023 administrative services, mileage, and expenses**~~
viii. **Barr Engineering – June 2023 services related to Area #3 (wetland delineation & Threatened and Endangered Species Review)**
ix. **106 Group – June 2023 services related to Area #3**
x. **106 Group – June 2023 services related to Vernon Avenue**
xi. **Inter-Fluve – June 2023 Area #3 Design Services**
xii. **Dakota County Soil & Water Conservation District - Q2 2023 monitoring, cost share and education services**
xiii. **I & S Group, Inc. – June 2023 services related to wetland delineation at Vernon Avenue**
xiv. **4M Fund – May Bank service charges**

**D. Report on Citizen Advisory Committee**

**E. LMRWD Permit Renewals**

**F. LMRWD Permit Program Summary**

**G. Authorize replacement of copier at Chaska Office and entering into a new lease agreement**

**H. Reimburse Coalition for a Clean MN River for second half of Water Storage Initiative**

**I. Reimburse Peggy Thomsen for Cost Share project at 11533 Palmer Circle**

**J. Accept Quote and authorize payment of premium for D & O Insurance**

**President Hartmann made a motion to approve the Consent Agenda as amended under the approval of the agenda. Manager Salvato seconded the motion. Upon a vote being taken motion carried unanimously.**

**5. NEW BUSINESS/PRESENTATIONS**

**A. LMRWD Gully Assessments**

Administrator Loomis introduced this item and turned the meeting over to interns from Young Environmental Consulting Group to present the findings of the gully and ravine assessment and evaluation.

Stefanie Gronlund, Faith Breeden and Leila Khalid, introduced themselves and presented the results of the work they completed this summer assessing the very high and high gullies throughout the Lower Minnesota River. They reviewed their findings from all 315 gullies and shared their recommendations for restorations moving forward.

Manager Barisonzi asked if the map of the gullies would be available. Ms. Young explained that once this report has run through QC the information will be made available. She added that the Board would need to decide if they wanted this information on the gullies to be made available to the public.

Manager Barisonzi asked if the gullies that are inaccessible by foot are accessible by water. The interns stated that it would be dependent on which gully they were trying to access. Ms. Young discussed the use of drones for these gullies.

President Hartmann asked about accessing private land and if property owners turned them away. The interns stated that most property owners were very friendly and agreeable to letting them on the property. Manager Salvato asked if the information they received from the residents would be included in the report. The interns said that that information is in their notes.

Manager Barisonzi asked if any of the critical gullies were in the wildlife refuge. The interns stated that none of the top four were in the wildlife refuge; however, they did visit some sites in the refuge.

Manager Barisonzi asked if the River Bottoms bike trail was considered a trail for the purpose of safety. The interns stated that if it was a marked trail they counted it as a safety concern.

Manager Salvato asked when they will be pulling the trigger on these restorations after years of assessments. Ms. Young stated that they would be looking to the Board for direction on this. She stated that the ones that are considered high priority, they need to coordinate with the municipality to make sure that they have a partnership before bringing the recommendation to the Board. She noted that many projects will be coming out of this assessment.

Manager Salvato asked for more information on what other watershed districts do for these types of projects.

Manager Kuplic asked about the sites that are hazardous and if they are ranked. The interns explained that they gave all hazardous sites the same value and did not rank them. They explained that these areas have contamination potential.

Ms. Young explained that the interns will be at the next meeting and will be able to continue to discuss this and how they will be moving forward with these gullies.

The Board thanked the interns for their work and presentation.

**B. 2024 LMRWD Budget Discussion**

Administrator Loomis recommended tabling this item.

**President Hartmann made a motion to table the 2024 LMRWD Budget Discussion to the August 16, 2023, meeting. Manager Barisonzi seconded. Upon a vote being taken motion carried unanimously.**

**C. Report by Izaak Walton Green Crew on Friends of the Minnesota Valley County Fair Outreach Project**

Daniel Linder and Alex Holcomb from the Green Crew reviewed their report on the outreach project at the County Fairs so far this summer. They shared the successes and findings. They highlighted the remaining County Fairs.

Manager Kuplic asked about the primary age range of the individuals that they engaged with at the Fairs. Mr. Linder stated that the average age was around 65 years old. Manager Kuplic asked if these individuals seemed receptive to what was being shared. Mr. Linder stated that some of them were and others were not.

The Board thanked Mr. Linder for his report and shared that they look forward to his next report.

**6. OLD BUSINESS**

**A. 2021/2022 Financial Audit**

Administrator Loomis introduced and provided an update on this item. The LMRWD entered a letter of engagement with Redpath and Company. She shared that the audit will be getting started and will be underway by the next meeting. She reviewed a copy of the letter that was sent to Global Portfolio Consulting.

Manager Barisonzi requested that Mr. Kolb come prepared to the next meeting with the plan for the next legal action step forward.

**B. Lower Minnesota River East One Watershed One Plan Governance**

Administrator Loomis introduced and provided background on this item. She shared that she met with BWSR and they discussed the future watershed based implementation funding. And according to BWSR becoming a party to an organization to implement a 1W1P will not impact future allocation of Watershed-based Implementation Funding. She stated that the Board needs to determine if they want to be assessed dues to be a part of an organization.

Manager Salvato shared that she will be attending the policy meeting on behalf of the Board.

Manager Barisonzi asked how disruptive politically would it be for the LMRWD to go in and say that they want an MOU rather than participating in this. Administrator Loomis stated that she does not think it is a big deal either way. She noted that the reason an MOU makes sense is that this 1W1P has specifically excluded features in the LMRWD that are part of the planning area.

Manager Kuplic asked if the 1W1P wouldn't be better off if the LMRWD was not part of a JPO. Administrator Loomis is not sure. When applying for grants, if the LMRWD was not part of the JPO, but was a partner in a project applying for grant funds, grant requests may rank higher.

**C. City of Carver Levee**

No new information to report since the last update.

**D. Dredge Management**

Administrator Loomis shared that dredging at Peterson's Bar will begin on July 24 and 25. She noted that there was a breach of continental marsh by the Minnesota River. She shared that the USACE has requested to store the materials needed to restore the breach on the LMRWD dredge site.

Manager Barisonzi asked when breaches like this happen if anyone does have environmental assessment to look at this. Administrator Loomis explained that since this was a part of a project that did go through a review ahead of time, it will just be viewed as a restoration or a repair of a project recently completed. There was discussion of oversight of repair projects conducted by others within the LMRWD.

**i. Vernon Avenue Dredge Material Management site**

Administrator Loomis introduced this item and provided an update on the project.

**ii. Private Dredge Material Placement**

No new information to report since last update.

**E. Watershed Management Plan**

No new information to report since the last update.

**F. 2023 Legislative Action**

Administrator Loomis introduced this item. She shared that she spoke with Lisa on figuring out a way to have the State auditor have small governmental units like the LMRWD be able to find auditors that are reasonably priced. She added that they will need to continue to request money for the dredge funding if they want to continue with this. She stated that she attended the Metro Minnesota Watersheds meeting and Mr. Hanson from BWSR reported that they will be taking the $17 million that the State allocated for water storage and leverage it to get some federal funding to increase what is available to use in the Minnesota River Basin. She asked if there were any other items that they would like to add to the legislative agenda.

Manager Salvato said she is interested in limited liability for winter maintenance.

Manager Barisonzi asked if there is a deadline for having a legislative agenda put together. Administrator Loomis said just before the legislative session starts. She stated that this year is a bonding year. Manager Barisonzi asked if something comes to mind that fit within the mission of the LMRWD should those topics be forwarded to the Administrator? Administrator Loomis said that is correct.

The Board discussed potential legislative action items. The Board asked to learn what lobbying efforts have been made in the past.

**G. Education and Outreach Plan**

Administrator Loomis introduced and provided background on this item. She reviewed the request for approval of a sign for the Lower Minnesota River at the Riley Creek Crossing.

Manager Salvato stated that the LMRWD logo on the signs is very small and asked if it could be made bigger. Administrator Loomis stated that they will work on this part of it.

**Manager Barisonzi made a motion to approve signage at the Riley Creek Crossing of Flying Cloud Drive, with or without Riley Purgatory Bluff Creek Watershed District as a partner and to maximize the visuals for the LMRWD. Manager Salvato seconded the motion. Upon a vote being taken motion carried unanimously.**

Administrator Loomis shared that Staff has been looking at doing some updates to the website, including featuring the managers on the website and social media.

The Board was in consensus to move forward with this.

Administrator Loomis shared that an individual from the city of Carver who has applied to be on the CAC.

**Manager Salvato made a motion to adopt Resolution 23-07. President Hartmann seconded the motion. Upon a vote being taken motion carried unanimously.**

**H. LMRWD Projects**

***(Only projects that require Board action will appear on the agenda. Informational updates will appear on the Administrator Report)***

**i. Area #3**

Administrator Loomis introduced and provided an update on this project. She noted that they received the wetland delineation report today. She noted that the LMRWD has prepared a grant application for A Hennepin County Opportunity grant, that should be approved by the Board and submittal of the application should be authorized by the Board.

She noted she has received communication from the property owner who has asked what the extent of the project is exactly and how much the LMRWD is willing to pay for a permanent interest in the property, either an easement or outright fee ownership of the property. She recommended that the LMRWD retain right-of-way services professional to guide this activity.

**Manager Barisonzi made a motion to approve the Hennepin County Opportunity Grant Application and authorize submittal of the grant application. President Hartmann seconded the motion. Upon a vote being taken, the motion carried unanimously.**

**Manager Barisonzi made a motion to authorize staff to survey property needed to complete Area #3 Minnesota Riverbank Stabilization Project and Appraised. He would like an appraisal not only of the land to be purchased, but also the total of the primary parcel with and without the portion needed for the project. Manager Salvato seconded the motion. Upon a vote being taken, the motion carried unanimously.**

**I. Permits and Project Reviews**

**i. Shakopee Mdewakanton Sioux Community Organic Recycling Facility (LMRWD No. 2022-016)**

Administrator Loomis introduced and provided background on this item. She shared the recommendation to conditionally approve a permit for the facility. She stated that representatives from the facility are present to answer any questions.

**Manager Barisonzi made a motion to conditionally approve a permit for LMRWD Rule B for Shakopee Mdewakanton Sioux Community Organic Recycling Facility Relocation (LMRWD No. 2022-016) contingent upon receipt of a copy of the NPDES permit. Manager Salvato seconded the motion. Upon a vote being taken, the motion was carried unanimously.**

**a. Maintenance Agreement between the LMRWD and Shakopee Mdewakanton Sioux Community**

Administrator Loomis introduced and provided background on this item. She shared the recommendation to authorize the maintenance agreement.

**President Hartmann made a motion to authorize execution of the Maintenance Agreement between the Lower Minnesota River Watershed District and the Shakopee Mdewakanton Sioux Community. The motion was seconded by Manager Salvato. Upon a vote being taken, the motion was carried unanimously.**

**ii. Peterson Wetland Bank (LMRWD No.2022-037)**

Administrator Loomis introduced and provided background on this item. She shared the recommendation for conditional approval.

Manager Barisonzi asked how this related historically to other wetland banks and if they were similar in size or scope. Ms. Young shared that she has not seen another wetland restoration like this one during her time on the Board. Administrator Loomis added that she also does not think they have ever done a restoration project like this in the past. Ms. Young stated that she can get back to the Board with more information on this.

Manager Barisonzi stated that he was surprised by the scope of this project. He asked if there was any conversation concerning the long term plans of this site. Ms. LeClaire noted that it appears as though they would be looking to keep this property in their family and they have a long term maintenance plan for the wetland.

Manager Barisonzi asked if there is relevant grant money that could be requested. Administrator Loomis stated that there was never any mention of financial participation.

**President Hartmann made a motion to conditionally approve Peterson Wetland Bank permit (LMRWD No. 2022-037) contingent upon the receipt of final construction plans signed by a professional engineer, a copy of the NPDES Construction Stormwater Permit, the name and contact information for all contractors undertaking land disturbing activities, the name and contact information for the person(s) responsible for erosion and sediment control inspections and maintenance, and documentation of approval or applicable permits from the cities of Eden Prairie, Chanhassen and Shakopee. Manager Salvato seconded the motion. Upon a vote being taken motion carried.**

**iii. KTI Fencing Property (LMRWD No. 2023-014)**

Administrator Loomis introduced and provided background on this item. She shared the recommendation for conditional approval. She noted that a representative from KTI Fencing is present to answer any questions.

**Manager Barisonzi made a motion to conditionally approve KTI Fencing Property (LMRWD No. 2023-014) contingent upon the receipt of a copy of the NPDES Construction Stormwater Permit, contact information for the contractor(s), contact information for the person(s) responsible for erosion and sediment control measures and documentation that the applicant has received full approval for the project from the City of Savage. Manager Kuplic seconded the motion. Upon a vote being taken, the motion was carried unanimously.**

**iv. Bloomington Storm Sewer Maintenance (LMRWD No. 2023-015)**

Administrator Loomis introduced and provided background on this item. She shared the recommendation for the conditional approval of the permit.

**President Hartmann made a motion to conditionally approve Bloomington Storm Sewer Maintenance (LMRWD No. 2023-015) permit contingent upon receipt of the following: final construction plans signed by a professional engineer, name and contact information for all contractors undertaking land disturbing activities, name and contact information the**

**person(s) responsible for erosion control inspections and maintenance, a copy of the contractor's water management plan with erosion and sediment control measures, and a copy of the approved MnDNR permit. Manager Salvato seconded the motion. Upon a vote being taken, the motion was carried unanimously.**

**v. Chaska Tech Center – Amendment (LMRWD No. 2023-008)**

Administrator Loomis introduced and provided background on this item. She shared that this item was given approval at a previous meeting but there have now been some changes made to the plans. She shared the recommendation of approval for the amendment to the permit with a special stipulation.

Manager Barisonzi asked if the amendment to the permit is the addition of the language about the infiltration rates. Ms. LeClaire stated that this is retained from the original permit and the amendment is because Chaska Tech Center changed their stormwater management to be gutter flow rather than a storm sewer.

**Manager Barisonzi made a motion to approve a permit amendment for the Chaska Tech Center (LMRWD No. 2023-008). If minimum infiltration rates cannot be achieved on site, removal of the clay layer and replacement with appropriate soils will be required. Manager Salvato seconded the motion. Upon a vote being taken, the motion was carried unanimously.**

**vi. Chaska Local Surface Water Management Plan**

Administrator Loomis introduced and provided background on this item.

**President Hartmann made a motion to adopt Resolution 23-08 Approving the Surface Water Management Plan for the City of Chaska with the recommendations found in Technical Memorandum – City of Chaska Stormwater Requirement Updates Review dated July 12, 2023. Manager Salvato seconded the motion. Upon a vote being taken, the motion was carried unanimously.**

**vii. 535 Lakota Lane, Chanhassen – work without a permit**

Administrator Loomis introduced and provided an update on this item.

**Manager Barisonzi made a motion to authorize legal counsel to undertake the appropriate steps to resolve the situation if the legal letter is not responded to within the given timeframe. Manager Salvato seconded the motion. Upon a vote being taken, the motion was carried unanimously.**

## 6. COMMUNICATIONS

A. **Administrator Report:** Administrator Loomis reviewed her Administrator's report, including information on the One Watershed One Plan meetings. She shared that there was a property owner in Shakopee who was doing work without a permit on Deans Lake. The property owner had placed fill in the wetland. The City has inspected the property and found violations of the wetland conservation act. The property owner has been ordered to remove the fill. She stated that the CAC had an outreach event at the Eagan farmer's market. She noted that she and Ms. LeClaire met with representatives of the U.S. Army Corp of engineers to discuss the floodplain model, there may be an opportunity to get assistance from the USACE on this project. She stated that the U.S. Fish and Wildlife Service has sent out a request for proposals using a scope of work that the LMRWD developed. She noted that she met with consultants on site to walk this area and answer questions. She stated that the U.S. Fish and Wildlife is working with Kelly Farms owners and the possibility that USFWS acquiring an easement or outright ownership. She added that the Scott WMO had a technical advisory committee meeting in June to kick-off its

groundwater management plan and its Comprehensive Watershed Management Plan. And the Scott County Association for Leadership and Efficiency formed a water committee which met for the first time in July and shared that they are looking at water issues in Scott County. She stated that there was a kickoff meeting on-site for the Spring Creek project. She has a meeting scheduled with the City of Chaska to discuss proposed project in Seminary Fen.

B. **President:** No report
C. **Managers:** No report
D. **Committees:** No report
**E. Legal Counsel:** No report
F. **Engineer:** No report

**7. ADJOURN**

**At 9:06, President Hartmann made a motion to adjourn the meeting. Manager Salvato seconded the motion. Upon a vote being taken, the motion was carried unanimously.**

**The next meeting of the LMRWD Board of Managers meeting will be 7:00, Wednesday, August 16, 2023, and will be held at the Carver County Government Center, 602 East 4th Street, Chaska, MN. Electronic access will also be available.**

Attest: _____
Lauren Salvato, Secretary

_____
Linda Loomis, Administrator

Lower Minnesota River Watershed District
General Fund Financial Report
Fiscal Year: January 1, 2023 through December 31, 2023
Meeting Date: August 16, 2023

(UNAUDITED)

Item 4.B.
LMRWD 8-16-2023

| | | | | |
|---|---|---|---|---|
| **BEGINNING BALANCE** | **30-Jun-23** | | | **$ 1,358,690.61** |
| **ADD:** | | | | |
| **General Fund Revenue:** | | | | |
| July 2023 Dividend | | $ | 6,642.44 | |
| Tax Settlement - Hennepin County - 1st half payable 2023 | | $ | 158,915.66 | |
| Tax Settlement - Dakota County - 1st half payable 2023 | | $ | 40,955.92 | |
| Tax Settlement - Carver County - 1st half payable 2023 | | $ | 25,014.07 | |
| Permit review fee for Peterson wetland Bank (LMRWD No. 2023-014) | | $ | 1,500.00 | |
| Permit review fee for Xcel Energy Driveway (LMRWD No. 2023-014) | | $ | 750.00 | |
| **Total Revenue and Transfers In** | | | | **$ 233,778.09** |
| DEDUCT: | | | | |
| **Debits/Reductions** | | | | |
| Young Environmental Consulting | June 2023 invoices for technical services | $ | 80,712.09 | |
| CLA (Clifton Larson Allen) | June 2023 financial services | $ | 2,904.25 | |
| Daniel Hron | August 2023 office rent | $ | 650.00 | |
| US Bank Equipment Finance | June 2023 copier lease payment | $ | 168.10 | |
| Barr Engineering Co. | June 2023 Area #3 technical services | $ | 3,412.00 | |
| 106 Group | June 2023 Archeological services for Area #3 | $ | 6,353.00 | |
| 106 Group | June 2023 Archeological services for Vernon Avenue | $ | 8,772.00 | |
| I & S Group, Inc. | June 2023 services for Vernon Ave. project | $ | 470.00 | |
| Dakota County SWCD | Q2 2023 Monitoring, TACS, & Education services | $ | 3,375.00 | |
| Frenette Legislative Advisors | May, June, & July 2023 legislative liasion services | $ | 5,000.01 | |
| Inter- Fluve, Inc | June 2023 design services for Area #3 | $ | 1,949.76 | |
| Rinke Noonan | June 2023 legal services | $ | 2,381.00 | |
| Margaret Thomsen | reimbursement for 2022 Cost Share Project | $ | 2,500.00 | |
| Coalition for a Clean MN River | grant for work on Water Storage Initiative | $ | 5,000.00 | |
| The Horton Group | 2023/2024 D & O Insurance Premium | $ | 1,095.00 | |
| 4M Fund | Bank Service Charges | $ | 40.00 | |
| **Total Debits/Reductions** | | | | **$ 124,782.21** |
| **ENDING BALANCE** | **31-Jul-23** | | | **$ 1,467,686.49** |

Lower Minnesota River Watershed District
General Fund Financial Report
Fiscal Year: January 1, 2023 through December 31, 2023
Meeting Date: August 16, 2023

FY 2023

| | 2023 Budget | July Actuals | YTD 2023 | Over (Under) Budget |
|---|---|---|---|---|
| **Administrative expenses** | $ 250,000.00 | $ 25,787.36 | $ 170,494.21 | $ (79,505.79) |
| **Cooperative Projects** | | | | |
| Eden Prairie Bank Stabilization Area #3 | $ - | $ 15,071.26 | $ 99,887.91 | $ 99,887.91 |
| Gully Erosion Contingency Fund | $ - | $ - | $ - | $ - |
| Seminary Fen Ravine Restoration site A | $ - | $ - | $ - | $ - |
| Seminary Fen Ravine Restoration site C-2 | $ 20,000.00 | $ - | $ - | $ (20,000.00) |
| **509 Plan Budget** | | | | |
| *Resource Plan Implementation* | | | | |
| Watershed Resource Restoration Fund | $ 100,000.00 | $ - | $ - | $ (100,000.00) |
| Gully Inventory | $ 90,500.00 | $ 35,535.92 | $ 47,475.92 | $ (43,024.08) |
| MN River Corridor Management Project | $ - | $ - | $ - | $ - |
| Gun Club Fen Intrusion investigation | $ - | $ - | $ - | $ - |
| Assumption Creek Hydrology Restoration | $ - | $ - | $ - | $ - |
| Groundwater Screening Tool Model | $ - | $ - | $ - | $ - |
| MN River Floodplain Model Feasibility Study | $ 75,000.00 | $ 1,933.25 | $ 8,534.50 | $ (66,465.50) |
| Schroder Acres Park | $ - | $ - | $ - | $ - |
| Downtown Shakopee Stormwater BMPs | $ 50,000.00 | $ - | $ - | $ (50,000.00) |
| PLOC Realignment/Wetland Restoration | $ - | $ - | $ - | $ - |
| Spring Creek Project | $ 90,000.00 | $ 1,329.67 | $ 2,473.42 | $ (87,526.58) |
| West Chaska Creek | $ - | $ - | $ - | $ - |
| Sustainable Lakes Mgmt. Plan (Trout Lakes) | $ - | $ - | $ - | $ - |
| Geomorphic Assessments (Trout Streams) | $ - | $ - | $ - | $ - |
| Fen Stewardship Program | $ 75,000.00 | $ 4,405.00 | $ 45,061.75 | $ (29,938.25) |
| District Boundary Modification | $ - | $ - | $ - | $ - |
| MN River Sediment Reduction Strategy | $ - | $ - | $ - | $ - |
| Local Water Management Plan reviews | $ 5,000.00 | $ - | $ 31.25 | $ (4,968.75) |
| Project Reviews | $ 50,000.00 | $ 12,384.25 | $ 74,749.81 | $ 24,749.81 |
| *Monitoring* | $ 75,000.00 | $ 1,800.00 | $ 37,540.94 | $ (37,459.06) |
| *Watershed Management Plan* | $ - | $ 4,032.00 | $ 16,761.25 | $ 16,761.25 |
| *Public Education/CAC/Outreach Program* | $ 85,000.00 | $ 6,923.00 | $ 50,551.74 | $ (34,448.26) |
| *Cost Share Program* | $ 20,000.00 | $ 7,725.00 | $ 8,344.00 | $ (11,656.00) |
| **Nine Foot Channel** | | | | |
| Transfer from General Fund | $ - | $ - | $ - | $ - |
| Dredge Site Improvements | $ 240,000.00 | $ 7,855.50 | $ 228,316.97 | $ (11,683.03) |
| Total: | $ 1,225,500.00 | $ 124,782.21 | $ 790,223.67 | $ (435,276.33) |

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 4. D. – Report on Citizen Advisory Committee**

**Prepared By**
Linda Loomis, Administrator

**Summary**
The Citizen Advisory Committee (CAC) held its August meeting at the home of Marilynn & Tom Torkelson. The Torkelson's live next to a pond in Eden Prairie and the majority of the yard is planted with native plants. Marilynn is President of the Prairie's Edge Chapter of the Wild Ones, a gardening group that focuses on planting, preserving, and restoring native plants.

The CAC found the visit very educational. The next meeting of the CAC will be September 5, 2023. More information on the CAC meeting will be forthcoming.

**Attachments**
No attachments

**Recommended Action**
No action recommended

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 5. A. – LMRWD Permit Inspections**

**Prepared By**
Linda Loomis, Administrator

**Summary**
Young Environmental Consulting Group, on behalf of the LMRWD, is inspecting projects permitted by the LMRWD for compliance with the LMRWD permit issued for the project. Technical Memorandum – Lower Minnesota River Watershed District 2023 Permitted Projects' Inspections is attached for the Board's review. The Technical Memorandum summarizes the inspection protocols and the details the findings of inspections conducted to date.

Young Environmental Consulting staff will be present at the Board meeting to present the findings and answer any questions Managers may have.

**Attachments**
Technical Memorandum – Lower Minnesota River Watershed District 2023 Permitted Projects' Inspections dated August 9, 2023

**Recommended Action**
No action is recommended

# Technical Memorandum

Young Environmental Consulting Group, LLC

**To:** Linda Loomis, Administrator
Lower Minnesota River Watershed District

**From:** Faith Breeden, Water Resources Intern
Stefanie Gronlund, Water Resources Intern
Leila Khalid, Water Resources Intern
Karina Weelborg, Water Resources Scientist
Hannah LeClaire, PE, Project Manager

**Date:** August 9, 2023

**Re:** Lower Minnesota River Watershed District (LMRWD) 2023 Permitted Projects' Inspections

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In February 2020 the LMRWD adopted rules to govern soil erosion and sediment control, floodplain and drainage alteration, stormwater management, and development on steep slopes within the boundaries of the LMRWD. Since May 1, 2020, the LMRWD, through its technical consultant and district engineering team at Young Environmental Consulting Group LLC (Young Environmental), has been reviewing construction projects and issuing permits to ensure compliance with its rules. The LMRWD completed its first year of on-site project inspections in the summer of 2022, and this year Young Environmental continued project inspections to ensure projects were in compliance with LMRWD rules. These inspections are in accordance with the LMRWD's Administrative and Procedural Requirements (Rule A), under which it reserves the right to conduct periodic audits, inspections, or both. The project review and permit approval processes are thorough; however, on-site inspections confirm compliance with the LMRWD's rules during and after the construction of a permitted project.

Team members involved in this project included the following:

Project team: Faith Breeden, Stefanie Gronlund, and Leila Khalid, who conducted the project inspections.
Project manager: Hannah LeClaire
Water resource scientists: Karina Weelborg and Erica Bock
GIS analyst: Chris Ross

## Preparation and Inspections

To ensure the project team was well equipped and prepared to safely conduct their site inspections, they completed the 10-hour Occupational Safety and Health Administration (OSHA) General Industry Outreach training. This training provided the project team with insight into how to safely conduct fieldwork, specifically within construction sites. Rather than conducting individual research regarding construction site best management practices to manage stormwater and erosion, the 2023 project team had the opportunity to take the EM2001 Construction Site Management course offered by the University of Minnesota before going into the field. Completion of the course provided the team with the following knowledge: methods of erosion control (silt fence, sediment control logs, inlet protection, hydromulch, etc.), proper methods to complete erosion control surveys, and the permit requirements for erosion and stormwater management on construction sites. Ultimately, this course streamlined learning and enhanced the project team's knowledge of erosion and sediment control, specifically regarding construction sites.

After training, the project team initiated the project by creating an inspection schedule (Attachment A) using the permits database. The permits database is a geodatabase Young Environmental created in 2022 to reduce inefficiencies within the permitting program. Prior to the creation of the permits database, several spreadsheets and other documents were required to maintain permitting program activities. The permits database houses information such as permittee contact information, project size and status, rules triggered, permit issue and renewal dates, inspection data, and associated geographic location for each project.

As part of the first year of inspections, Young Environmental developed an inspection process, which is summarized in Attachment B. The project team conducted the 2023 inspections using a similar process to the one used in 2022; however, use of the permits database increased the efficiency of the inspection process. The permits database reduced the effort required to determine the number of projects requiring inspection, determine project status, find permittee and contractor contact information for inspection notification, develop an efficient inspection schedule, record items received, and monitor violation status. Additionally, the permits database will be used to automate the inspection reporting system. Rather than creating individual technical memorandums, as done in 2022, Young Environmental created a template using the permits database to automate the reporting process and reduce creation and editing efforts.

## Summary of Results

During the 2023 inspection season a total of 44 project sites required inspection. The project team inspected 26 project sites (including seven reinspections from the 2022 inspection season) from July 25 to August 2, 2023, visiting approximately six sites per day to confirm compliance with LMRWD rules.

Project Status Summary

Of the 26 project sites, seven were construction complete, 18 were active, and one was expired. Construction-complete sites are sites that no longer have active construction. These sites have the potential to be closed out after this inspection season if the project meets all close-out requirements outlined in Attachment B. Active sites have ongoing construction and will be reinspected again next year to confirm continued compliance. Expired sites are sites that have let their permit expire. These sites are handled on a case-by-case basis. For expired permits, if the site is inspected and final stabilization is complete and no violations are found, the project can continue with close-out processes. If the site is under construction or not fully stabilized or there are violations found on-site, then the LMRWD will pursue corrective action.

Project Violation Summary

The project team found 14 total violations at seven different sites, and six of the sites had multiple violations (Figure 1). A description of the possible violations is included in Table 1. All observed violations were in violation of Rule B, Erosion and Sediment Control, and were present at active construction sites. A summary of the violations is shown in Figure 2. The most common violations found were Missing Inlet Protection and Poor/Damaged Perimeter Control (Figure 3).

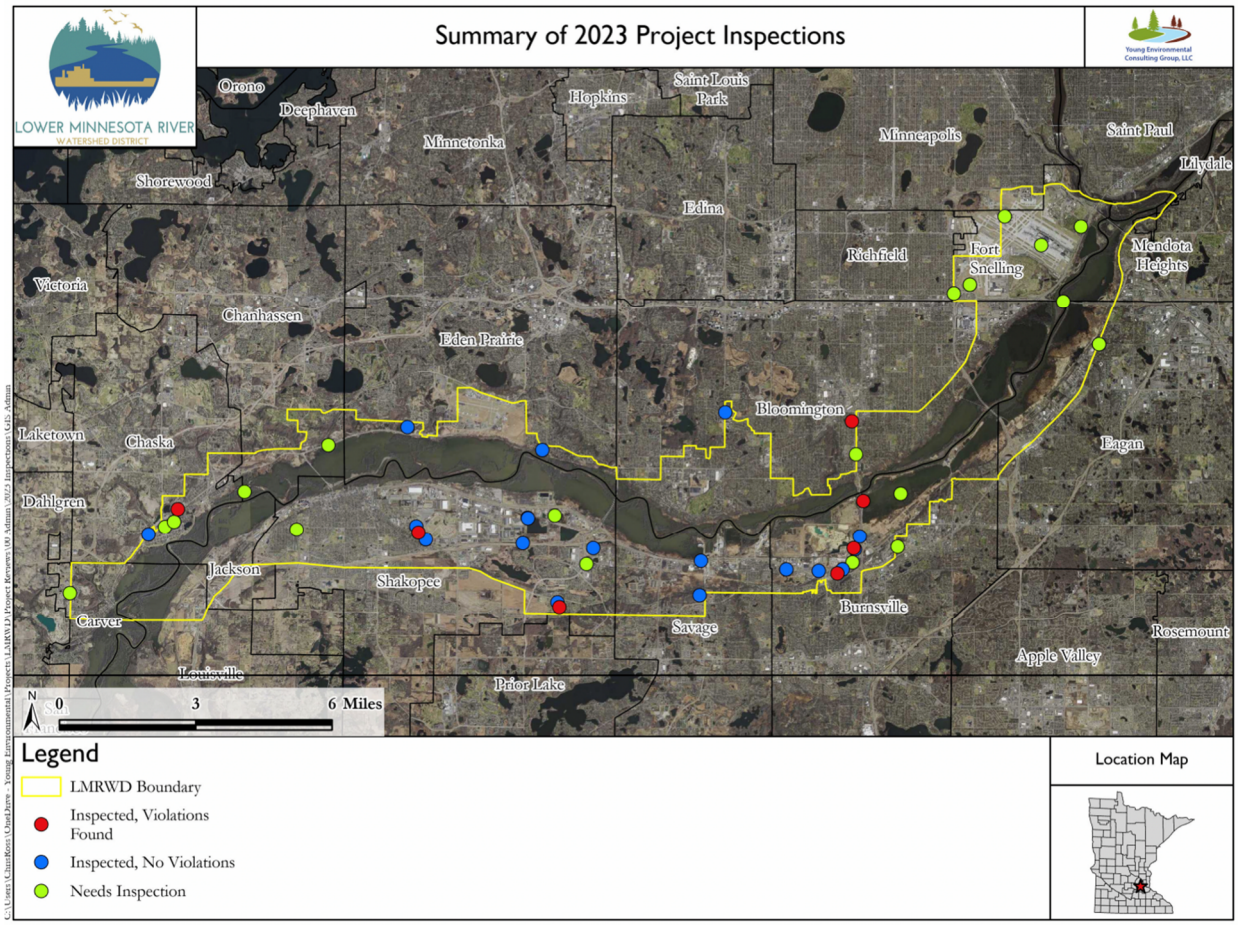


*Figure 1. Map of all 2023 project inspection locations, project sites inspected, and location of sites with violations.*

*Table 1. Description of violations found at construction sites.*

| Violation | Description |
|---|---|
| General Erosion/Sedimentation | Any signs of erosion or sedimentation found on site that do not fall into any of the categories below |
| Rills Present | Formation of a group of small streams along a slope |
| Gully Formation Present | Formation of a deep incision from erosion creating a small ravine |
| Site Sediment Tracking | Sediment being tracked off site |
| Missing Stabilization BMPs | Missing stabilization BMPs such as erosion control blankets, sediment control logs or hydromulch in areas in areas without 70% vegetation |

| | |
|---|---|
| Poor/Damaged Stabilization BMPs | Unmaintained stabilization BMPs such as erosion control blankets, sediment control logs or hydromulch in areas in areas without 70% vegetation |
| Poor Vegetation | Lack of vegetation in areas where vegetation is planned |
| Missing Perimeter Control | Missing stabilization BMPs along the perimeter of the site such as silt fence or sediment control logs |
| Poor/Damaged Perimeter Control | Poor or damaged BMPs along the perimeter of the site such as silt fence or sediment control logs |
| Unprotected Stockpiles | Piles of sand, dirt, or other sediment without proper erosion control BMPs such as sediment logs |
| Missing Entrance/Exit BMPs | Construction entrance/exits missing, entrance/exit consists of sediment rather than a rock entrance/exit |
| Poor/Damaged Entrance/Exit BMPs | Construction entrance/exits that are not properly maintained to effectively remove sediment from construction equipment tires |
| Missing Inlet Protection | Catch basin inlets missing proper sediment control such as a sediment log covering the basin or bag to catch sediment entering the basin |
| Poor/Damaged Inlet Protection | Catch basin inlets without proper sediment control such as a sediment log covering the basin or bag to catch sediment entering the basin or inlets that require additional maintenance to function properly. |
| Other | Any other violations that do not fall into the categories above |

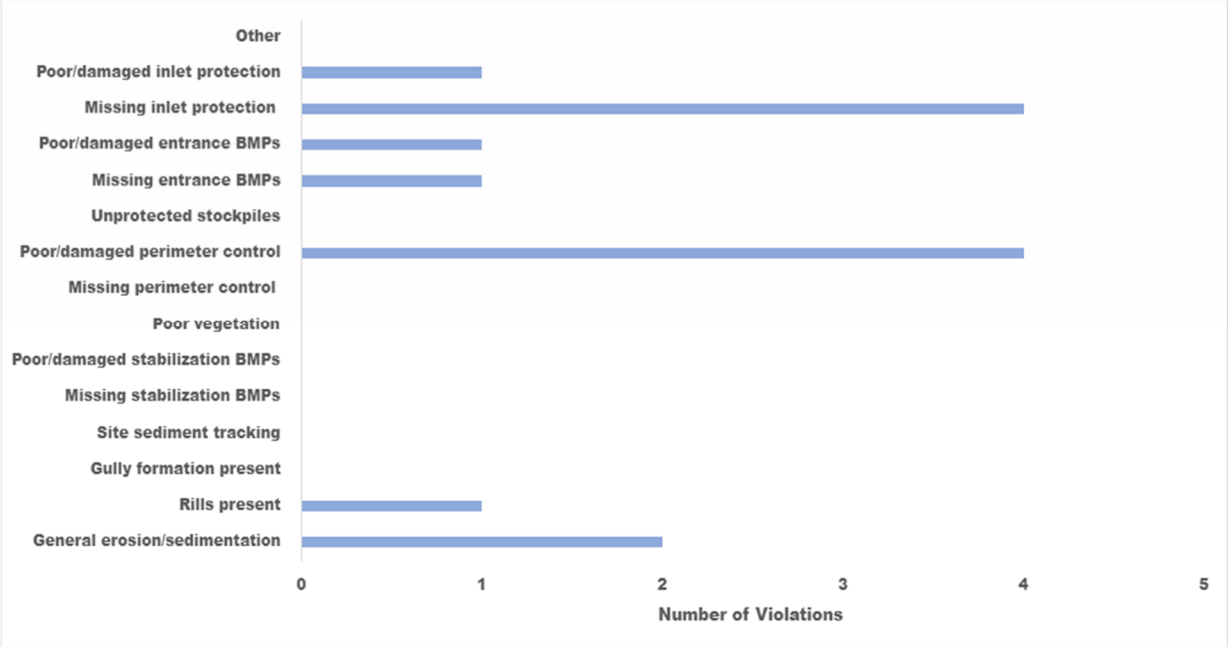


*Figure 2. Summary of violations at active sites (no violations were found at construction-complete sites).*


*Figure 3. Example photos of violations found on-site. A) Damaged perimeter control. B) Dirty inlet protection. C) Damaged sediment logs.*

In addition to the violations found, one site, the Engineered Hillside project (located in the Steep Slopes District), let their permit expire on April 21, 2023. This site currently has temporary stabilization BMPs, including an erosion control blanket and silt fence present on-site and was lacking 70% vegetation cover (Figure 4). Because of the potential for seeding to fail, projects without successful vegetative cover require permit continuation. The Engineered Hillside project is currently in violation of LMRWD rules because the project does not have an active permit, and the site is not yet fully stabilized.

*Figure 4. Engineering Hillside site with temporary BMPs present and lack of 70% vegetative cover.*

Post-inspection Notification Summary

Between July 28 and August 3, the project team contacted all seven sites about their violations and notified sites with no violations that an inspection took place and that no further action was required. Of these seven sites, three sites responded with photos of fixed violations: the I35W Frontage Trail, Chaska Tech Center, and Former Knox sites. These violations consisted of no entrance/exit BMPs (Figures 5 and 7) and eroding banks (Figure 6). The sites corrected these violations with replenished rock vehicle entrances/exits (Figures 5 and 7) and reduction of general erosion/sedimentation, such as repaired rills stabilized with hydromulch (Figure 6). The following four sites have outstanding violations (Table 2).


*Figure 5. Fixed violation from the Former Knox site. A) Absent vehicle rock entrance/exit. B) Vehicle rock entrance/exit installed.*


*Figure 6. Fixed violation from the I35W Frontage Trail site. A) Rills running under fence. B) Repaired rills and laid hydromulch.*


*Figure 7. Fixed violation from the Chaska Tech Center site. A) Absent vehicle rock entrance/exit. B) Vehicle rock entrance/exit installed.*

*Table 2. Summary of outstanding violations.*

| Permit Number | Project Name | Date inspected | Violations |
|---|---|---|---|
| 2022-041 | 35W SP 2782-352 | 07/26/2023 | Unprotected inlets, general sedimentation/erosion |
| 2021-030 | Building Renovation Park Jeep | 07/27/2023 | Damaged perimeter control, unprotected inlets |
| 2021-016 | Whispering Waters | 07/27/2023 | Damaged perimeter control, unprotected inlets |
| 2020-135 | Canterbury Crossings | 08/01/2023 | Damaged perimeter control, unprotected inlets |

## Next Steps

The project team has inspected 26 project sites thus far, which leaves 18 projects that still require an inspection this year. The following steps will be completed to close out the 2023 inspection season:

1. Young Environmental will continue inspections through the summer and fall to complete inspections for the remaining 18 projects.
2. Young Environmental will notify permittees of any on-site violations and request erosion and sediment control inspection and maintenance records if they have not yet been requested and received.
3. If initial violation notices go unanswered, Young Environmental will complete reinspections two to three weeks after the initial inspection.
4. If permittees remain unresponsive to violation notices, Young Environmental will notify the appropriate city to determine whether the city is aware of the violation. After coordination with the city, the LMRWD can consider a cease-and-desist order for permittees that fail to correct violations.
5. Young Environmental will coordinate with the City of Eden Prairie and work with the Engineered Hillside permittee to renew their permit and ensure final stabilization is achieved. If the permittee remains unresponsive, the LMRWD can consider further legal action.
6. For project sites with completed construction, final vegetative stabilization, and no violations found or violations having been corrected, the permit close-out process can continue. Young Environmental will request as-built drawings and complete an as-built review. Of the 26 projects inspected thus far, five have been recommended for permit close-out procedures and are listed in Table 3.

*Table 3. Projects recommended for closeout procedures.*

| Permit Number | Project Name |
|---|---|
| 2022-003 | Ivy Brook Parking East |
| 2022-027 | Ivy Brook Parking Northeast |
| 2022-008 | Ivy Brook Parking West |
| 2021-020 | Core Crossing Apartments |
| 2022-017 | PLOC 2022 Bank Stabilization |
| 2022-026 | 10521 Spyglass Dr |
| 2022-013 | Normandale & 98th St |

7. Young Environmental will develop a list of projects from the 2023 inspection season that will require another inspection in 2024. Of the 26 projects inspected thus far, 19 will require an inspection in 2024 and are listed in Table 4.

*Table 4. Projects requiring additional inspections.*

| Permit Number | Project Name | Permit Status |
|---|---|---|
| 2021-033 | MN MASH | Active |
| 2022-041 | 35W SP 2782-352 | Active |
| 2021-035 | I35W Frontage Trail | Active |
| 2022-007 | Engineered Hillside | Expired |
| 2021-057 | Cliff Road Ramps | Active |
| 2022-039 | Former Knox Site | Active |
| 2022-011 | Biffs, Inc. | Active |
| 2021-030 | Building Renovation Park Jeep | Active |
| 2023-011 | Quarry Lake Playground | Active |
| 2022-028 | Quarry Lake Park Restroom | Active |
| 2021-016 | Whispering Waters | Active |
| 2021-025 | TH13/Dakota Ave Improvement | Active |
| 2021-040 | Canterbury Independent Senior Living | Active |
| 2020-135 | Canterbury Crossings | Active |
| 2021-045 | Triple Crown Residences Phase II | Active |
| 2022-010 | Quarry Lake Trail and Ped Bridge | Active |
| 2021-002A | CSAH 61 Drainage Ditch | Active |
| 2023-008 | Chaska Tech Center | Active |
| 2022-005 | Chaska West Creek Apt | Active |

8. The permits database will be used to create technical memorandums to be shared with the LMRWD board with results and recommendations for each individual project inspection.

Young Environmental will continue to keep an open line of communication with each permittee, informing them of inspection dates and violations in a timely manner and maintaining organized records of each site's status and documentation. The Young Environmental team is working to continuously improve the permitting program and inspection process to make the process more efficient and effective.

## Attachments

Attachment A—Project Inspection Schedule

Attachment B—LMRWD Permitting Program Inspection Process

## Attachment A: Project Inspection Schedule

| Date Inspected | Permit Number | Project Name |
|---|---|---|
| July 25, 2023 | 2021-033 | MN MASH |
| July 26, 2023 | 2022-041 | 35W SP 2782-352 |
| July 26, 2023 | 2021-035 | I35W Frontage Trail |
| July 26, 2023 | 2022-003 | Ivy Brook Parking East |
| July 26, 2023 | 2022-027 | Ivy Brook Northeast |
| July 26, 2023 | 2022-007 | Engineered Hillside |
| July 26, 2023 | 2021-057 | Cliff Road Ramps |
| July 27, 2023 | 2022-039 | Former Knox Site |
| July 27, 2023 | 2022-011 | Biffs, Inc. |
| July 27, 2023 | 2021-030 | Building Renovation Park Jeep |
| July 27, 2023 | 2022-008 | Ivy Brook Parking West |
| July 27, 2023 | 2023-011 | Quarry Lake Playground |
| July 27, 2023 | 2022-028 | Quarry Lake Park Restroom |
| July 27, 2023 | 2021-016 | Whispering Waters |
| August 1, 2023 | 2021-025 | TH13/Dakota Ave Improvement |
| August 1, 2023 | 2021-020 | Core Crossing Apartments |
| August 1, 2023 | 2022-017 | PLOC 2022 Bank Stabilization |
| August 1, 2023 | 2021-040 | Canterbury Independent Senior Living |
| August 1, 2023 | 2020-135 | Canterbury Crossings |
| August 1, 2023 | 2021-045 | Triple Crown Residences Phase II |
| August 1, 2023 | 2022-010 | Quarry Lake Trail and Ped Bridge |
| August 2, 2023 | 2022-026 | 10521 Spyglass Dr |
| August 2, 2023 | 2021-002A | CSAH 61 Drainage Ditch |
| August 2, 2023 | 2023-008 | Chaska Tech Center |
| August 2, 2023 | 2022-005 | Chaska West Creek Apt |
| August 2, 2023 | 2022-013 | Normandale & 98th St |

**Attachment B: LMRWD Permitting Program—Inspection Process**

## Task 1: In-Office Inspections

Young Environmental Consulting Group LLC (Young Environmental) staff begin the Lower Minnesota River Watershed District's (LMRWD's) project inspections with an in-office inspection. This assessment is carried out using the Survey123 program. Two distinct surveys cater to different construction statuses: active or completed construction. The in-office surveys include free-response questions based on erosion and sediment control plans, site plans, and other relevant project documents. These questions give Young Environmental staff essential contextual information for conducting field inspections. The inquiries cover grading limits, discharge locations, and best management practices.

Prior to field inspections, the staff at Young Environmental also proactively notify permittees of upcoming inspections. If project construction is active, staff requests any relevant updates to the construction or stormwater management plans. Alternatively, if the construction is complete, the staff requests record drawings for a comprehensive review. Moreover, if a project has previously been identified as having on-site violations, regardless of construction status, the staff erosion and sediment control inspection and maintenance records to identify and address any recurring patterns.

## Task 2: Field Inspections

Young Environmental staff members who have not previously completed a field inspection are paired with senior staff for their initial inspection. This practice guarantees a comprehensive understanding of the on-site inspection process. To ensure staff safety, Young Environmental staff are accompanied by the contractor or erosion and sediment control inspector during inspections of active sites. Conversely, inspections of completed construction sites are done without the contractor or erosion and sediment control inspector.

Staff complete field inspection surveys in the Survey123 program. Depending on the project's construction status—whether it is active construction or considered complete—staff use two district surveys for the field inspection. These surveys consist of multiple-choice toggle questions that can easily be answered in the field. The questions primarily focus on confirming compliance of items identified during the in-office survey. Additionally, the field survey also includes the option to upload images taken on-site.

## Task 3: Post-Inspection

Following field inspections, staff download results from the Survey123 surveys for review. Projects with and without violations are notified of inspection outcomes via emails indicating one of the following:

- No LMRWD rule violations were found on-site, and no further on-site action is required at this time.

- Violations were found on-site (all violations are listed). Permittee is referred to the NPDES permit compliance requirements to determine the time frame for correcting the violations.

Projects with on-site violations are required to send erosion and sediment control inspection and maintenance records if not previously requested and received. Permittees are allowed to correct violations and provide photo confirmation of correction. If Young Environmental staff does not receive photo confirmation, a follow-up inspection will be conducted within two to three weeks of the initial inspection to confirm compliance. If Violations persist, Young Environmental staff will coordinate with the appropriate city authorities to address ongoing violations and potential enforcement actions.

Staff thoroughly record information developed and acquired during the inspection in the permits database. Subsequently, the database generates automated technical memorandums for each inspected project. These technical memorandums are shared with the LMRWD board and contain information on inspection results and recommendations. Project sites with active construction, without final site stabilization, and/or with violations are recommended for inspection the following year. Project sites with final site stabilization are recommended for permit close-out procedures, including the review of project as-built drawings. As-built drawings allow for inspection of grading and structure elevations that cannot be easily confirmed in the field.

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 5. B. – LMRWD Gully Assessment Final Report**

**Prepared By**
Linda Loomis, Administrator

**Summary**
A presentation was made at the July 2023 Board of Managers meeting on the findings of Gully Inventory and Condition Assessment project. The Final Report is complete and is attached for the Board's review. The interns that conducted the project will be at the meeting and will be available to answer any questions the Board may have. The presentation made at the July 19, 2023 Board of Managers meeting can be accessed using this link.

**Attachments**
Technical Memorandum – 2023 Gully Inventory and Condition Assessment Project: Further Analysis of Impact Tier B – Serios Impact, dated August 9, 2023
2023 Gully Inventory and Condition Assessment Project Final Report dated August 9, 2023

**Recommended Action**
No action recommended – Water Resource Interns Faith Breeden, Stefanie Gronlund and Leila Khalid will be available to answer questions from the Board

Young Environmental Consulting Group, LLC

# Technical Memorandum

**To:** Linda Loomis, Administrator
Lower Minnesota River Watershed District

**From:** Lan Tornes, Natural Resources Scientist
Hannah LeClaire, PE, Project Manager

**Date:** August 9, 2023

**Re:** 2023 Gully Inventory and Condition Assessment Project: Further Analysis of Impact Tier B—Serious Impact

As part of the 2023 Gully Inventory and Condition Assessment Project (2023 Project), Young Environmental Consulting Group (Young Environmental) developed a gully ranking process to prioritize gullies within the Lower Minnesota River Watershed District (LMRWD) for restoration. Part of the gully ranking process involves assigning points to gullies that may impact important LMRWD water and natural resources. LMRWD water and natural resources are grouped into four impact tiers and point values are assigned to each tier as shown in Table 1. A detailed description of the overall gully ranking process and the development of the LMRWD impact tiers can be found in Appendix B of the 2023 Gully Inventory and Condition Assessment Project report.

*Table 1. LMRWD Gully Inventory and Condition Assessment Impact Tiers*

| LMRWD Impact Tiers | Tier Description | Point Value |
|---|---|---|
| Tier A—Critical Impact | Gullies within the watershed of high value resources such as calcareous fens and trout streams | 10 points |
| Tier B—Serious Impact | Gullies within the watershed of MPCA's impaired water bodies or within the watershed of tributaries to high value resources | 7 points |
| Tier C—Marginal Impact | Gullies within the watersheds of strategic resources or tributaries to impaired water bodies | 4 points |
| Tier D—Low Impact | Gullies in the LMRWD that do not fall into any previous category | 0 points |

During the initial evaluation, Young Environmental categorized 103 gullies into Tier B—Serious Impact (Tier B). Minnesota Pollution Control Agency (MPCA) impaired waterbodies are associated with 93 of those Tier B gullies, whereas the remaining 10 gullies are associated with tributaries to high value resources. The project team assumed that all impaired waterbodies have fragile ecosystems to begin with, and although gully erosion may not be contributing directly to the specific impairment of the waterbody, it is still a higher risk to waterbodies that are impaired. Therefore, the initial evaluation included all impaired waterbodies in Tier B regardless of the type of impairment.

After the initial gully ranking was complete, Young Environmental decided to reexamine Tier B from a different perspective by considering the specific types of impairments that may relate directly or indirectly to gully erosion. The purpose of this additional analysis was to determine whether gullies would be ranked differently (moved from Tier B to Tier C) based on their potential to contribute to the degradation of impaired waterbodies.

## LMRWD Impaired Waterbodies

The most recent list of impaired waters provided by the MPCA was last updated in 2022. According to this list, there are 17 impaired waterbodies within the LMRWD boundary and 15 different impairments associated with them. Table 2 lists the impaired waterbodies, their assessment identification number (AUID), waterbody type, and their associated impairment parameters. Table 3 lists impairment parameter abbreviations. Many of the waterbodies in the LMRWD have multiple impairment listings, with the Mississippi River and Minnesota River having the most impairments.

*Table 2. LMRWD Impaired Waterbodies*

| Waterbody Name | AUID | Waterbody Type | Impairment Parameter |
|---|---|---|---|
| Bluff Creek | 07020012-710 | Stream | FishesBio; T |
| Carver Creek | 07020012-806 | Stream | FC; FishesBio; InvertBio; Nutrients; T |
| Chaska Creek | 07020012-804 | Stream | FC |
| Credit River | 07020012-811 | Stream | Cl-; *E. coli*; FishesBio; InvertBio |
| Eagle Creek | 07020012-519 | Stream | *E. coli* |
| Hyland Lake | 27-0048-00 | Lake | Nutrients |

| Waterbody Name | AUID | Waterbody Type | Impairment Parameter |
|---|---|---|---|
| Minnesota River | 07020012-505 | Stream | DO; Hg-F; Hg-W; Nutrients; PCB-F; T |
| Minnesota River | 07020012-505 | Stream | DO; Hg-F; Hg-W; Nutrients; PCB-F; T |
| Minnesota River | 07020012-505 | Stream | DO; Hg-F; Hg-W; Nutrients; PCB-F; T |
| Mississippi River | 07010206-814 | Stream | Al; FC; Hg-F; Hg-W; Nutrients; PCB-F; PFOS-F; PFOS-W; TSS |
| Nine Mile Creek | 07020012-809 | Stream | Cl-; *E. coli*; FishesBio; InvertBio |
| Purgatory Creek | 07020012-828 | Stream | *E. coli*; InvertBio |
| Riley Creek | 07020012-511 | Stream | *E. coli*; FishesBio; InvertBio; T |
| Snelling Lake | 27-0001-00 | Lake | Hg-F |
| Staring Lake | 27-0078-00 | Lake | Hg-F; Nutrients |
| Unnamed creek (Assumption Creek) | 07020012-582 | Stream | FishesBio |
| Unnamed creek (East Creek) | 07020012-581 | Stream | FC; FishesBio; InvertBio; T |
| Unnamed creek (Prior Lake Outlet Channel) | 07020012-728 | Stream | FishesBio; InvertBio |
| Unnamed creek (Spring Creek) | 07020012-528 | Stream | FC |

*Table 3. List of Impairment Parameter Abbreviations*

| Abbreviation | Parameter Name |
|---|---|
| Al | Aluminum |
| Cl | Chloride |
| FC | Fecal coliform |
| Hg-F | Mercury in fish tissue |
| Hg-W | Mercury in water column |
| Nutrients | Nutrients |
| PCB-F | Polychlorinated biphenyls |
| PFOS-F | Perfluoro octane sulfonate in fish tissue |
| PFOS-W | Perfluoro octane sulfonate in water column |
| TSS | Total suspended solids |
| DO | Dissolved oxygen |
| *E. coli* | *Escherichia coli* |
| FishesBio | Fish bioassessments |
| InvertBio | Benthic macroinvertebrate bioassessments |
| T | Turbidity |

## Impairment Parameter Analysis

Young Environmental evaluated the impairment parameters and categorized them as having a direct, indirect, or no relationship to gully erosion. The following sections contain a summary of each category.

Impairments Directly Related to Gully Erosion

Total suspended solids (TSS) and turbidity are both directly linked to gully erosion because they are the direct result of increased sediment deposition in waterbodies. Waterbodies with a TSS or turbidity impairment remained in Tier B.

Impairments Indirectly Related to Gully Erosion

Many of the impairments are indirectly related to gully erosion due to their association with sediment particles. These impairment parameters include nutrients, PCBs, PFOS in the water column, *E. coli*, and fecal coliform. *E. coli* and fecal coliform originate from animals and are not directly associated with gully erosion. However, bacteria often associate with sediment particles in the water and may persist in the water column when sediment particles are present. Dissolved oxygen impairments are also related to

gully erosion because low dissolved oxygen levels are typically associated with turbid waterbodies. Additionally, fish and invertebrate bioassessments can be indirectly associated with gully erosion because the presence of sediment in the water that may originate from eroding gullies will alter fish or invertebrate communities. Last, chloride impairments are also indirectly related to gully erosion because increased runoff that may contribute to gully formation and sediment discharge often contains elevated chloride concentrations as well. Therefore, waterbodies with any of these impairments remained in Tier B.

Impairments Not Related to Gully Erosion

Because fish consumption advisories for mercury, PCBs, or PFOS in fish tissue are the result of factors unrelated to gully erosion, these impairments were removed from Tier B.

## Results

TSS and turbidity were the only two impairment parameters directly related to gully erosion. However, almost all the other impairments could be indirectly linked to sediment and gully erosion. Table 4 summarizes the categorization of waterbodies into direct, indirect, and no relation to gully erosion. Also listed is the number of gullies (out of the 93 total gullies evaluated in 2023) associated with these categories.

*Table 4. Waterbodies Categorized into Direct, Indirect, or No Relation to Gully Erosion*

| Impairment Categorization | Waterbody | Number of Gullies within the Impact Areas of the Categorized Waterbodies |
|---|---|---|
| Waterbodies with Impairments Directly Related to Gully Erosion | Bluff Creek | 41 |
| | Carver Creek | |
| | Minnesota River | |
| | Mississippi River | |
| | Riley Creek | |
| | Unnamed creek (East Creek) | |
| Waterbodies with Impairments Indirectly Related to Gully Erosion | Chaska Creek | 52 |
| | Credit River | |
| | Eagle Creek | |
| | Hyland Lake | |
| | Nine Mile Creek | |
| | Purgatory Creek | |
| | Staring Lake | |
| | Unnamed creek (Assumption Creek) | |

| Impairment Categorization | Waterbody | Number of Gullies within the Impact Areas of the Categorized Waterbodies |
|---|---|---|
| | Unnamed creek (Prior Lake Outlet Channel) | |
| | Unnamed creek (Spring Creek) | |
| Waterbodies with Impairments Not Related to Gully Erosion | Snelling Lake | 0 |

Based on the results in Table 4, 41 gullies have the potential to contribute directly to the TSS or turbidity impairment of waterbodies, and 52 gullies have the potential to contribute indirectly to the degradation of impaired waterbodies. Snelling Lake was the only waterbody categorized with an impairment (mercury in fish tissue) not related to gully erosion and should be moved to Tier C. Because there were no gullies in the watershed for Snelling Lake, this analysis did not affect the 2023 gully ranking. The results of this analysis show that the inclusion of impaired waterbodies in Tier B is valid because of the potential direct and indirect impacts to downstream water and natural resources.

Prepared for

LOWER MINNESOTA RIVER
WATERSHED DISTRICT

**August 9, 2023**

# 2023 Gully Inventory and Condition Assessment Project

# 2023 Gully Inventory and Condition Assessment Project

Prepared for

LOWER MINNESOTA RIVER
WATERSHED DISTRICT

www.lowermnriverwd.org
Chaska, Minnesota

**Final**
**August 9, 2023**

Prepared by

Young Environmental
Consulting Group, LLC

**www.youngecg.com**
Brooklyn Center, Minnesota

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## LIST OF ABBREVIATIONS

| Abbreviation | Name/Term |
|---|---|
| 2008 Project | Minnesota Conservation Corps 2008 Gully Inventory |
| 2020 Project | LMRWD 2020 Gully Inventory and Condition Assessment |
| 2021 Project | LMRWD 2021 Gully Inventory and Condition Assessment |
| 2023 Project | 2023 Gully Inventory and Condition Assessment Project |
| BLM | City of Bloomington |
| BVL | City of Burnsville |
| CHH | City of Chanhassen |
| CVR | City of Carver |
| EDP | City of Eden Prairie |
| EGN | City of Eagan |
| FSN | Fort Snelling |
| GIS | Geographic Information System |
| HVRA | High Value Resource Area |
| JKT | Jackson Township |
| LMRWD | Lower Minnesota River Watershed District |
| MDH | City of Mendota Heights |
| MPCA | Minnesota Pollution Control Agency |
| SHK | City of Shakopee |

| Abbreviation | Name/Term |
|---|---|
| SSOD | Steep Slopes Overlay District |
| SVG | City of Savage |
| TSS | Total suspended solids |
| USDA | United States Department of Agriculture |
| Young Environmental | Young Environmental Consulting Group, LLC |

# LIST OF TABLES

# 1 Executive Summary

This report is the third volume of the Lower Minnesota River Watershed District's (LMRWD) *Gully Inventory and Condition Assessment,* conducted by the district's technical consultant, Young Environmental Consulting Group, LLC (Young Environmental). The first two volumes were published in 2020 and 2021 and identified high- and very high-priority gullies within the watershed district based on their erosion potential and impact to LMRWD resources. The gully assessment this year was implemented to assess the high- and very high-priority gullies identified during past years to determine if the sites continue to pose a risk and identify appropriate candidates for potential restoration projects. The 2023 assessment consisted of four components: field preparation and training, field data collection, gully ranking, and recommendations.

## Field Preparation and Training:

This phase of the project allowed the team to prepare for efficient fieldwork and established a foundation for analysis of the gullies. The team first completed an in-depth literature review to understand the cause and effects of gullies and to review previous gully reports from Young Environmental to understand the previous Survey123 erosion scoring system. Additional questions were added to Survey123 to allow for more structured details to assist in future gully ranking. The team reviewed a GIS map of the 315 gully locations, developed a preliminary fieldwork schedule, and began developing gully restoration priority factors.

## Field Data Collection:

The fieldwork phase was used to assess the current condition of the gullies and note any factors that may be contributing to continued erosion or changes that occurred since the gully was last assessed. Over the course of four weeks, the project team visited each gully site and reevaluated the erosion score of the gullies using the Survey123 program. Photos and notes were collected at each site for future data analysis.

## Gully Ranking:

The gully ranking process consisted of two parts. First, the sites were sorted into four categories: Public Safety Concern, Public No Safety Concern, Private Safety Concern, and Private No Safety Concern. Then the gullies were ranked by need for restoration based on a scoring system within their given categories. To quantitatively rank each gully, multiple factors were considered, including erosion potential score, proximity to LMRWD natural resources, and the number of Minnesota Pollution Control Agency (MPCA) sites marked as "under investigation" or an "active cleanup site" within a one-mile radius of the

site. Each factor was assigned points that correspond to varying rates of degradation and need for remediation to provide a final ranking score for each gully.

## Results:

Young Environmental assessed 315 gullies throughout the LMRWD. 274 were included in the ranking process, 16 gullies were found to be duplicate data points, 11 were no longer considered a gully, and 14 were inaccessible, excluding 41 gullies total from the ranking process. The average erosion score for all the gullies was 30.5, and the highest and lowest scores were 50 and 8, respectively. The city of Eden Prairie was found to have the highest average erosion score and the area of Fort Snelling was found to have the lowest average. The average ranking score was 39.8, while the highest and lowest scores were 61.5 and 17, respectively. Burnsville was found to have the highest average ranking score and the area of Fort Snelling had the lowest average ranking score.

## Recommendations:

Following the ranking of all gullies assessed in the 2023 Project, Young Environmental recommends the following management strategies for gully restoration:

1. Prioritize gullies for restoration on a continuous yearly cycle that alternates between completing a feasibility study for specific gullies one year, followed by completing restoration of the gullies the next year. To begin this cycle, Young Environmental recommends the top three gullies in the Public Safety Concern category (BVL62, SHK1, and SHK10) as well as one notable gully (SHK16) that is encroaching on a public trail and posing a major safety concern.
2. Notify private landowners of gullies present on their properties and complete a high-level assessment of public outfalls to determine if any private gullies are caused by these public outfalls.
3. Utilize new LiDAR data to conduct a desktop analysis to identify gullies that have not yet been inventoried.
4. Conduct an accessibility assessment of the gullies that were considered inaccessible during field survey.

# 2 Introduction

Gully restoration of high-priority sites, particularly those in the steep slopes overlay district (SSOD) and near high-value resources, strongly aligns with several of the LMRWD watershed management goals under the issue of water quality. The LMRWD's priorities of surface water management, groundwater management, and unique natural resources management are all addressed by properly restoring actively eroding gullies within the watershed district. Specifically, this gully assessment and ranking follows strategy 1.3.1 from the watershed management plan, which is to provide strategic resource evaluation and management, and strategy 7.3.1 to continue work of addressing gully erosion. The gullies suggested for restoration are determined not purely from their erosion potential, but also by their impact on important LMRWD's resources and alignment with the LMRWD management plan.

To support LMRWD's goals to address gully erosion, the 2023 Gully Inventory and Condition Assessment Project (2023 Project) was implemented to assess and rank gullies throughout the LMRWD. The 2023 Project is a continuation of three previous gully assessments. The first project was conducted by the Minnesota Conservation Corps in 2008 where gullies were located on the north side of the Minnesota River using ArcGIS (2008 Project). Following the 2008 Project, LMRWD tasked Young Environmental to continue monitoring gullies in the LMRWD in 2020 and 2021. The 2020 Gully Inventory and Condition Assessment Project*,* Volume 1 (2020 Project; LMRWD, 2020) was implemented to complete a gully and pipe outfall condition assessment and inventory throughout LMRWD, on the north side of the Minnesota River. This project was intended to provide information to municipalities on the current conditions of gullies and pipe outfalls identified in 2008 as well as identify new locations that may be contributing sediment to the Minnesota River (LMRWD, 2020). Similarly, the 2021 Gully Inventory and Condition Assessment Project, Volume 2 (2021 Project; LMRWD, 2022) continued the gully assessments by surveying gullies on the south side of the Minnesota River to identify new gullies in areas not previously surveyed in 2008 or 2020 (LMRWD, 2022). As part of both the 2020 and 2021 projects, each gully was given a risk category of Very Low, Low, Moderate, High, or Very High based on the erosion potential of the gully combined with its potential to cause degradation to LMRWD resources. The recommended action for gullies identified as High was further study, and the recommended action for gullies identified as Very High was mitigation. Using the prioritization from the 2020 and 2021 projects, the 2023 Project assessed 315 High and Very High priority gullies throughout the entire watershed. Gullies visited are in the cities of Bloomington, Burnsville, Carver, Chanhassen, Eagan, Eden Prairie, Jackson Township, Mendota Heights, Savage, and Shakopee. The objective of the 2023 Project was to continue monitoring and assessing the conditions of High and Very High priority gullies and to recommend specific gullies for restoration projects using a gully ranking system developed by Young Environmental.

Team members involved in this project include the project manager, Hannah LeClaire; the project team, Faith Breeden, Stefanie Gronlund, and Leila Khalid; geographic information systems (GIS) analyst, Chris Ross; and principal-in-charge and quality control reviewer, Della Schall Young. The following sections of this report present Young Environmental's methodology, findings, and recommendations for future gully restoration projects.

# 3 Field Preparation and Training

To prepare for the 2023 Project, the project team was provided various forms of training to ensure the safety and accuracy of the gully inventory project. The project team was first provided with Gully 101 training to define a gully, identify gully characteristics, and understand the causes and effects of gully formation. The project team then conducted a literature review to examine gully assessments from other organizations, which provided critical information to use when reassessing the High and Very High priority gullies. Literature sources and the purpose for reviewing each document are provided in Table 1. The project team was also provided training on how to correctly score the erosion potential of gullies using the Survey123 application (described in Section 4) through ArcGIS during a trial field inspection. This process ensured consistency with the 2020 and 2021 assessments.

Table 1. Literature Review Sources and Purpose

| Literature (Author) | Purpose |
|---|---|
| The City of Burnsville Slope Stability Analysis; WSB Project No. 011693-000 (WSB: Jen Holmstadt and Nick Bradley) | Provided a local case study for developing a risk analysis method for determining unstable slopes. This process was useful for creating a similar method for gully erosions. |
| National Engineering Handbook: Chapter 10 – Gully Treatment (USDA)<br><br>Gully Erosion Assessment and Control Guide (HDR, Engineering Inc.)<br><br>South East Local Land Services Gully Erosion Assessment and Control Guide (South East LLS)<br><br>Technical Supplement 14P – Gullies and Their Control (USDA)<br><br>Gully Control in SAT Watersheds (Pathak et al.) | Identified the main characteristics of gullies and the most common treatment measures used to stabilize gullies. |
| Seminary Fen/Chaska Ravine Restoration Project (LMRWD) | An informative local case study that documented the reasons for this specific ravine restoration, the project description, funding details, and future maintenance plans. This case study presented the entire process of a ravine stabilization project. |

| Literature (Author) | Purpose |
|---|---|
| Strategic Resources Evaluation of the LMRWD (HDR Engineering, Inc.) | Described the method used to differentiate Strategic Resources into either Category 1 or Category 2. This helped inform the impact tiers for the gully ranking system that was developed. |

The project team planned to visit a total of 315 gully sites over the course of 5 weeks (Figure 1) and compiled a fieldwork plan spreadsheet that included site information, site access points, and planned visit dates to ensure all sites would be evaluated within the project timeline. The project team decided to include six additional questions in Survey123 to help evaluate the overall condition of the surveyed gullies and better support the 2023 ranking process (Table 2).

Table 2. Additional Questions added to Survey123

| Additional Survey123 Questions | Rationale |
|---|---|
| **Is there existing infrastructure near the gully?** | If there are homes or buildings near the gully, there may be greater risk of property damage or potential injury. |
| **Is there existing erosion control?** | Existing erosion control may cause the gully to stabilize, making another project unnecessary on the site. Erosion control also shows previous action has been taken to attempt to remediate the site. |
| **Does the gully appear stable?** | While Survey123 is used to determine the erosion score, an additional question to note the observed stability allowed the team ease in reviewing gullies that were perceived to be unstable. |
| **Is the material in the gully compact?** | The level of compaction of the material in the gully relates to how easily the surface will erode. The more compact the material, the more stable the gully. This also differentiates soils of the same general type. |
| **Where is the location of groundwater seepage?** | Water seepage from groundwater on the banks of the gullies causes more impact than seepage from the bottom of the gullies; therefore, it is important to note the source of the water. |
| **Is the site accessible?** | Gullies must be accessible on foot by fieldwork staff for gullies to be assessed and restored. Construction equipment must be able to reach the gully without causing further damage to the environment. Gullies that are surrounded by dense vegetation or have steep, unstable slopes are evaluated for their accessibility. |

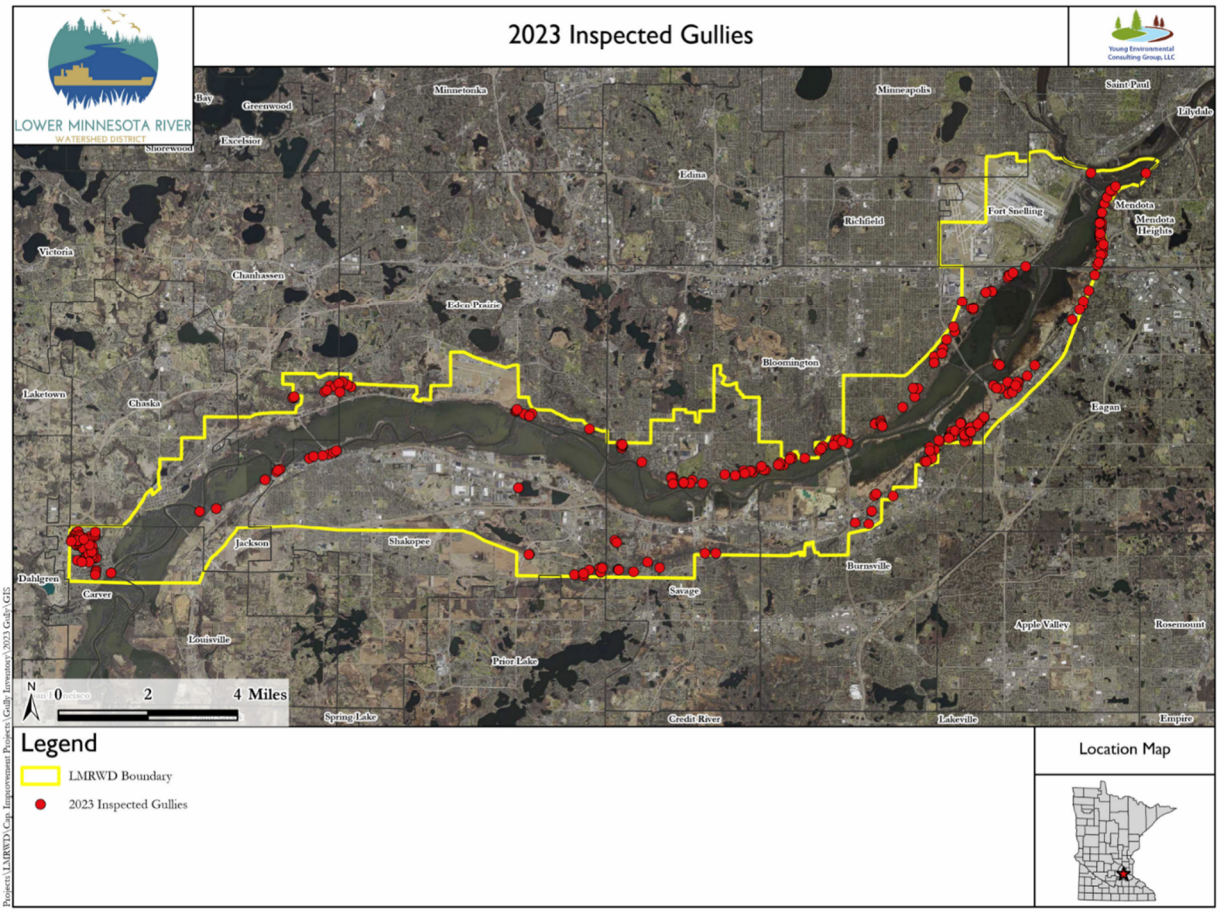


Figure 1. Map of all gully sites assessed during the 2023 Gully Inventory within the LMRWD boundary

# 4 Gully Ranking Methods

## 4.1 Field Data Collections

To reevaluate the erosion potential of gullies that were previously ranked as High or Very High priority from the 2020 and 2021 reports, the project team used the Survey123 program, which allows for quantitative measurement of the gullies and is completed in the field using iPads. Because there was no consistent naming convention between the 2020 and 2021 projects, for the 2023 Project, all gullies were given an updated gully ID for consistency. The new gully IDs include an abbreviation for the city in which they are located and a unique identification number. To score the gullies, the project team answered multiple-choice questions in Survey123 about various aspects that influence erosion probability such as vegetation cover, gully size, shape, and material (Appendix A). Each question has an associated point value that adds up to the erosion potential score. The greater the point value, the more potential the gully has for further erosion (Appendix B, Table 2). Multiple photos of each gully were also collected in Survey123.

## 4.2 Categorization and Point Assignments

To rank a large inventory of gullies effectively and efficiently, the project team established a quantitative method of scoring to assess the need for gully restoration. The gully ranking was separated into two parts. Part 1 categorizes the gullies into four separate categories based on the initial field screening, accessibility, property type, and safety concerns (Figure 2). Each category is given a restoration priority level of High, Moderate, or Low as shown in the legend in Figure 2. Gullies within the public safety concern list are given the highest restoration priority due to the 1) presence of a safety concern and 2) the location on public property. Because cities and other local government units manage public property, there is simplicity in jurisdiction and partnership to manage and restore gullies. Projects on private property often have complexities that could lead to legal or statutory conflicts. In contrast, gullies located on private land with no safety concerns are categorized as lower restoration priority due to the complexity of project planning on private land and the lack of safety concerns near the gully. Part 2 of the gully ranking consists of assigning point values to each gully determined by the erosion potential score from the field survey, the gully's proximity to LMRWD resources, and the number of potentially contaminated MPCA sites within a 1-mile radius of the gully. Refer to Appendix B for a detailed description of the gully ranking categories and the overall process.

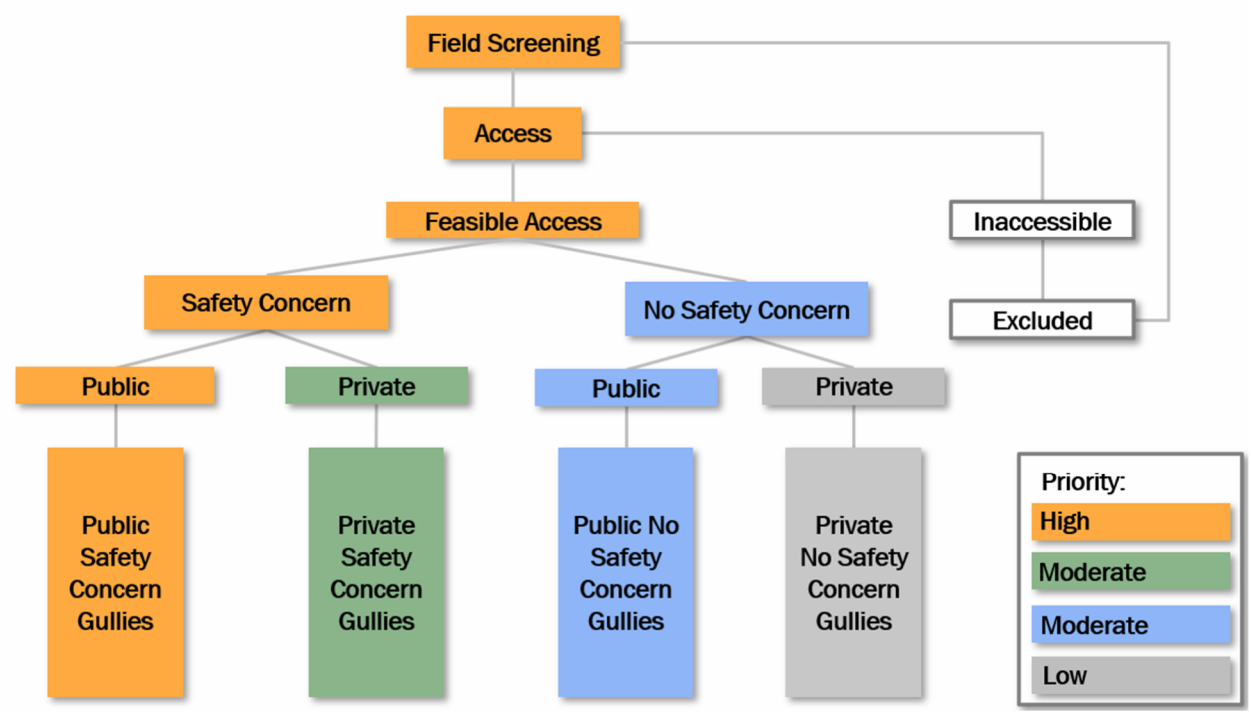


Figure 2. Flow chart to depict the organization of gullies prior to numerical ranking. Gullies are organized into one of the four lists considering accessibility, safety concerns, and property type.

# 5 Results

## 5.1 City Overview

As part of the 2020 and 2021 projects, the LMRWD partnered with cities in the LMRWD to identify gully locations and collaborate on next steps for high-priority sites. The 2023 Project aims to continue this partnership by identifying high-priority restoration projects where funding and resources can be pooled to implement a project. The following sections offer a brief summary of each community evaluated, including the conditions encountered in the field, areas of concern, and restoration potential.

### 5.1.1 Bloomington

The City of Bloomington is located in Hennepin County on the north side of the Minnesota River. Within Bloomington, 73 known gullies and 2 new gullies were surveyed in 2023 and have an average erosion score of 30.7. Many of the gullies in Bloomington are characterized by dense vegetation and are located on private property, which creates a greater safety risk for residents, but can also make restoration harder to fund. In addition, when comparing erosion scores from previous years, nearly all gullies surveyed had decreased in erosion score, indicating some stabilization of the gully without remediation practices.

### 5.1.2 Burnsville

The City of Burnsville is located in Dakota County along the south side of the Minnesota River. Within Burnsville, 47 gullies were surveyed and have an average erosion score of 28.9. Gullies in Burnsville are typically located on private property, which resulted in numerous interactions with homeowners. Through these interactions with homeowners, the project team was notified of the rapid growth of nearby gullies and of the decline in water quality of a pond near Black Dog Lake.

### 5.1.3 Carver

The City of Carver is located in Carver County along the north side of the Minnesota River. Within Carver, 66 gullies were surveyed and have an average erosion score of 33.6. The area of Carver that was included within this round of surveys was undergoing rapid development of suburban homes, which has resulted in extensive construction work throughout the area and may be contributing to the development of gullies due to new stormwater outfalls and increased runoff from residential properties. Carver also had the greatest number of erosion control tactics near the gullies such as silt fences, sandbags, and signage to notify residents of the environmental harm of increased erosion. Access to the gullies in Carver was difficult due to dense vegetation and steep slopes. In addition, many of the gullies reported in 2020 and 2021 had converged into single larger gullies.

### 5.1.4 Chanhassen

The City of Chanhassen is located in Carver County along the north side of the Minnesota River. Within Chanhassen, only 7 gullies were surveyed and have an average erosion score of 32.3. Many of the gullies surveyed in Chanhassen were given high erosion potential scores. The majority of the gullies in Chanhassen were located on or near private residential properties and after speaking with homeowners, the Young Environmental project team was notified of gullies in the area that were not previously surveyed.

### 5.1.5 Eagan

The City of Eagan is located within Dakota County on the south side of the Minnesota River. Within Eagan, 22 gullies were surveyed and have an average erosion score of 22.2. Many of these gullies were located on private land near the Union Memorial Railroad, which was difficult to access due to steep slopes and dense vegetation. As the average erosion score reflects, many of the gullies were small and at a low risk for erosion. These gullies were likely marked as high priority due to their proximity to valuable resources; however, upon further inspection, they were found to be at low risk for erosion.

### 5.1.6 Eden Prairie

The City of Eden Prairie is located within Hennepin County and is on the north side of the Minnesota River. Within Eden Prairie, 14 gullies were surveyed and have an average erosion score of 36.1. Gullies within Eden Prairie were on both public and private property. Gullies on public property were primarily located within the Richard T. Anderson Conservation Area and were given high erosion scores. The Richard T. Anderson Conservation Area's gullies were accessible via trails, and all converged into one system with one gully often flowing into the next. Other clusters of gullies in Eden Prairie were located deeper into the woods, accessible through residential homes, but not encroaching upon them.

### 5.1.7 Jackson Township and Shakopee

The City of Shakopee and Jackson Township are both located within Scott County and are on the south side of the Minnesota River. Within Shakopee and Jackson Township, 25 gullies were surveyed and have an average erosion score of 29.9 and 31.7, respectively. Gullies within Shakopee were typically located on private property; however, there were some located on public land on the banks of the Minnesota River. These gullies clearly deposit sediment directly into the river and pose a greater safety risk due to their proximity to nearby public parks and greenspaces. Gullies within Jackson Township were large and also near the Minnesota River; however, access to these sites is difficult, which can limit the ability for restoration.

### 5.1.8. Mendota Heights

The City of Mendota Heights is located within Dakota County and is on the south side of the Minnesota River. Within Mendota Heights, 26 gullies were surveyed and have an average erosion

score of 30.5. All the gullies are on public land and are either near public parks or are near the Union Memorial Railroad. Gullies in Mendota Heights ranged in severity where some gullies were more similar to a steep slope with no defining gully features, while others had very high erosion scores. The main concern in this area is the proximity to high value resources such as wetlands.

### 5.1.9 Savage

The City of Savage is located within Scott County and is on the south side of the Minnesota River. Within Savage, 8 gullies were surveyed with an average erosion score of 25.1. All gullies were located on private property, which resulted in numerous interactions with homeowners. All of the gullies were given erosion scores below 30 due to extensive vegetation cover and few signs of recent erosion. However, much of the vegetation cover was dominated by buckthorn, so if there are efforts to remove buckthorn in this area, the need for remediation may need further evaluation. In addition, many of the gullies previously surveyed were found to be similar to steep hillslopes with no defining gully features like apparent headcuts or banks and showed no signs of degradation.

## 5.2 Erosion Potential Score Summary

The average erosion potential score, calculated with the Survey123 field assessment, for all gullies surveyed, was 30.5, and the highest and lowest scores were 50 and 8, respectively. The low score of 8 is due to riprap being added and effectively stabilizing the gully. The average erosion potential score per city is shown in Figure 3, where Eden Prairie was shown to have the highest average erosion potential score. This is most likely due to the smaller number of gullies surveyed in Eden Prairie (14) and the location of several within the Richard T. Anderson Conservation Area, where the potential for erosion is very high.

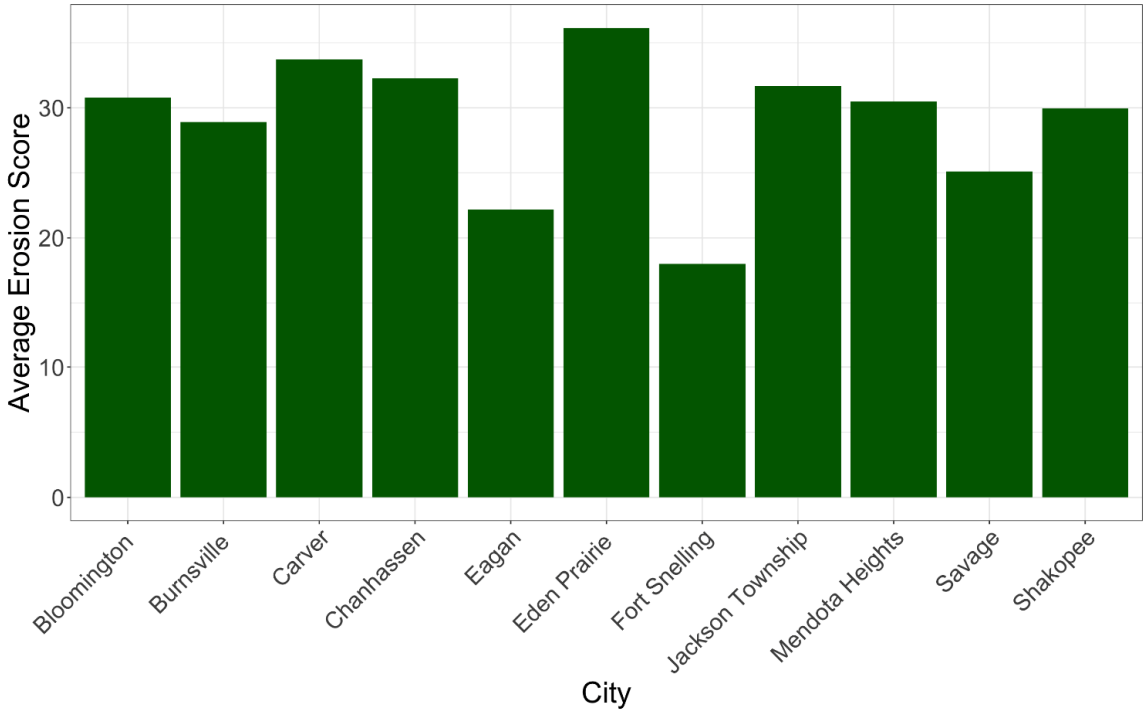


Figure 3. Bar plot of average erosion scores organized by city.

## 5.3 Gully Ranking Summary

The average gully ranking score (which includes the erosion potential score, proximity to LMRWD resources, and quantity of MPCA sites) across all gullies surveyed was 39.8, where the highest and lowest score was 61.5 and 17, respectively. Average ranking score sorted by city is shown in Figure 4, where Burnsville had the highest average ranking score.

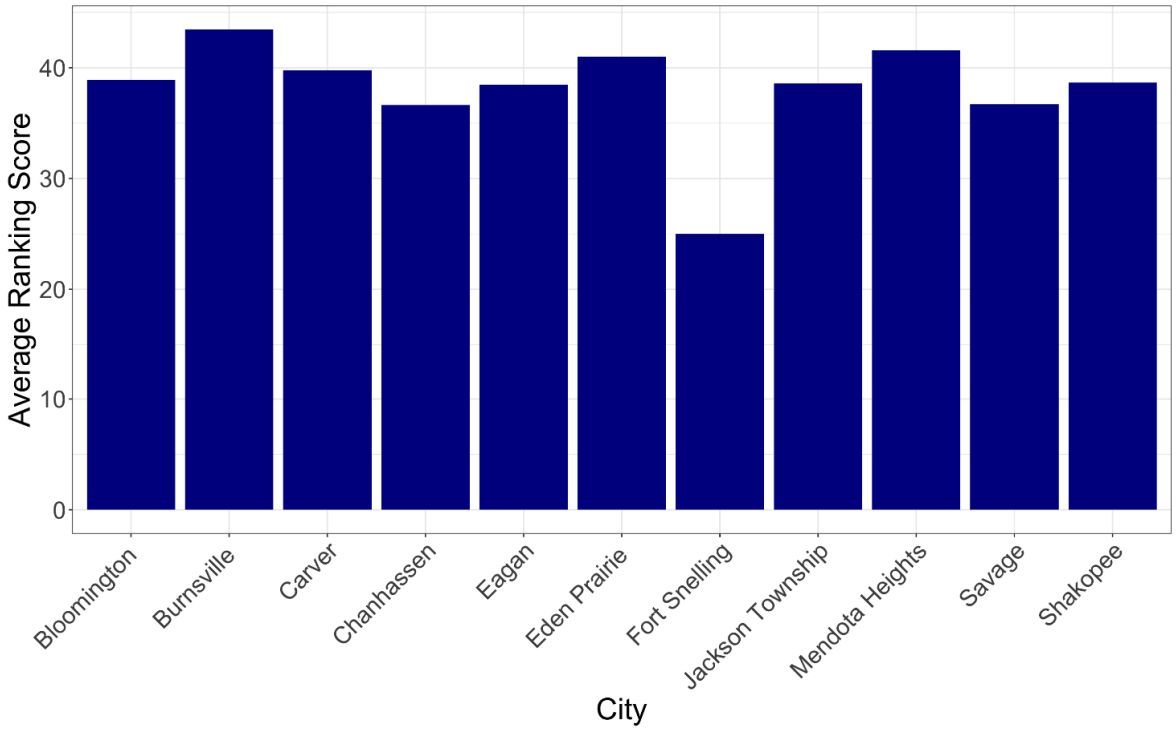


Figure 4. Average Ranking Score by City

The overall ranking scores for each individual gully are plotted in Figure 5 and summarized in the Overall Ranking Score column in Table 3.

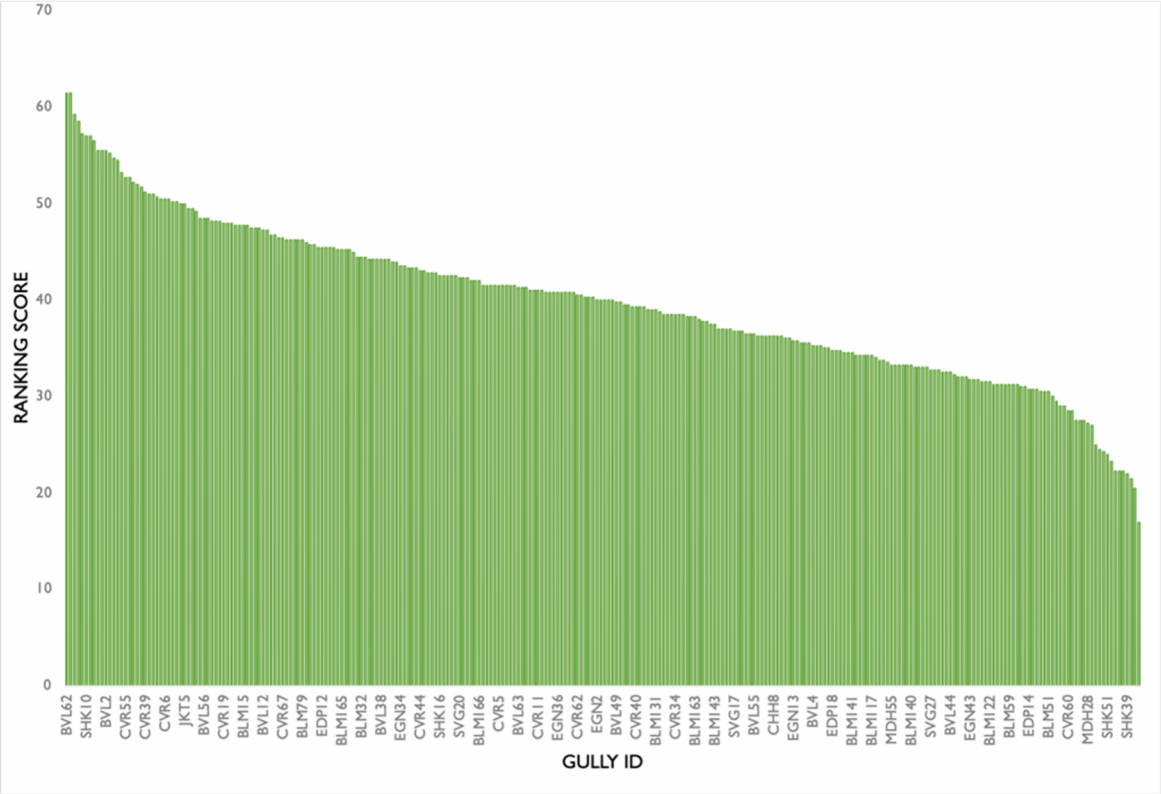


Figure 5. Overall Gully Ranking Scores

Table 3. Gully Ranking Scores

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **BVL62** | 47 | 10 | 4.5 | 61.5 |
| **BVL3** | 44 | 10 | 7.5 | 61.5 |
| **BLM68** | 44 | 10 | 5.25 | 59.25 |
| **CVR81** | 50 | 7 | 1.5 | 58.5 |
| **BLM78** | 50 | 7 | 0.25 | 57.25 |
| **SHK10** | 42 | 7 | 8 | 57 |
| **SHK1** | 42 | 7 | 8 | 57 |
| **BVL13** | 42 | 10 | 4.5 | 56.5 |
| **MDH33** | 42 | 10 | 3.5 | 55.5 |
| **CVR38** | 47 | 7 | 1.5 | 55.5 |
| **BVL2** | 38 | 10 | 7.5 | 55.5 |
| **BVL69** | 38 | 10 | 7.25 | 55.25 |
| **BLM154** | 39 | 10 | 5.75 | 54.75 |
| **BVL16** | 40 | 10 | 4.5 | 54.5 |
| **MDH38** | 40 | 10 | 3.25 | 53.25 |
| **CVR55** | 45 | 7 | 0.75 | 52.75 |
| **BVL15** | 39 | 10 | 3.75 | 52.75 |
| **EDP2** | 45 | 7 | 0.25 | 52.25 |
| **SHK3** | 37 | 7 | 8 | 52 |
| **BLM67** | 36 | 10 | 5.75 | 51.75 |
| **CVR39** | 43 | 7 | 1.25 | 51.25 |
| **CVR76** | 43 | 7 | 1 | 51 |
| **CVR56** | 43 | 7 | 1 | 51 |
| **MDH21** | 38 | 10 | 2.75 | 50.75 |
| **CVR7** | 42 | 7 | 1.5 | 50.5 |
| **CVR6** | 42 | 7 | 1.5 | 50.5 |
| **BLM145** | 44 | 4 | 2.5 | 50.5 |
| **MDH8** | 37 | 10 | 3.25 | 50.25 |
| **BVL10** | 34 | 10 | 6.25 | 50.25 |
| **MDH16** | 37 | 10 | 3 | 50 |
| **JKT5** | 45 | 4 | 1 | 50 |
| **EDP16** | 42 | 7 | 0.5 | 49.5 |
| **CVR92** | 42 | 7 | 0.5 | 49.5 |
| **SHK6** | 38 | 10 | 1.25 | 49.25 |
| **MDH7** | 35 | 10 | 3.5 | 48.5 |
| **BVL56** | 37 | 10 | 1.5 | 48.5 |
| **BVL31** | 32 | 7 | 9.5 | 48.5 |
| **MDH34** | 35 | 10 | 3.25 | 48.25 |

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **EDP17** | 39 | 7 | 2.25 | 48.25 |
| **CVR18** | 40 | 7 | 1.25 | 48.25 |
| **CVR19** | 40 | 7 | 1 | 48 |
| **CVR15** | 47 | 0 | 1 | 48 |
| **BVL11** | 31 | 10 | 7 | 48 |
| **EGN17** | 29 | 10 | 8.75 | 47.75 |
| **BVL50** | 32 | 10 | 5.75 | 47.75 |
| **BLM15** | 40 | 4 | 3.75 | 47.75 |
| **BLM113** | 40 | 4 | 3.75 | 47.75 |
| **EGN5** | 29 | 10 | 8.5 | 47.5 |
| **CVR3** | 39 | 7 | 1.5 | 47.5 |
| **CHH6** | 39 | 7 | 1.5 | 47.5 |
| **BVL12** | 35 | 10 | 2.25 | 47.25 |
| **BLM18** | 39 | 4 | 4.25 | 47.25 |
| **BVL9** | 34 | 10 | 2.75 | 46.75 |
| **BLM148** | 40 | 4 | 2.75 | 46.75 |
| **CVR8** | 38 | 7 | 1.5 | 46.5 |
| **CVR67** | 38 | 7 | 1.5 | 46.5 |
| **SHK2** | 35 | 10 | 1.25 | 46.25 |
| **EGN3** | 28 | 10 | 8.25 | 46.25 |
| **BVL14** | 32 | 10 | 4.25 | 46.25 |
| **BLM84** | 39 | 4 | 3.25 | 46.25 |
| **BLM79** | 39 | 7 | 0.25 | 46.25 |
| **BLM169** | 39 | 4 | 3 | 46 |
| **EGN24** | 31 | 10 | 4.75 | 45.75 |
| **BVL37** | 29 | 10 | 6.75 | 45.75 |
| **SHK15** | 38 | 4 | 3.5 | 45.5 |
| **EDP12** | 37 | 7 | 1.5 | 45.5 |
| **CHH9** | 37 | 7 | 1.5 | 45.5 |
| **BVL34** | 29 | 7 | 9.5 | 45.5 |
| **BLM13** | 37 | 4 | 4.5 | 45.5 |
| **CVR98** | 37 | 7 | 1.25 | 45.25 |
| **BLM165** | 37 | 7 | 1.25 | 45.25 |
| **BLM102** | 37 | 7 | 1.25 | 45.25 |
| **BLM101** | 37 | 7 | 1.25 | 45.25 |
| **BLM142** | 41 | 0 | 4 | 45 |
| **BVL5** | 31 | 10 | 3.5 | 44.5 |
| **BLM32** | 38 | 4 | 2.5 | 44.5 |
| **BLM116** | 38 | 4 | 2.5 | 44.5 |
| **SHK36** | 33 | 10 | 1.25 | 44.25 |

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **MDH19** | 31 | 10 | 3.25 | 44.25 |
| **CVR71** | 43 | 0 | 1.25 | 44.25 |
| **BVL38** | 29 | 10 | 5.25 | 44.25 |
| **BLM82** | 37 | 7 | 0.25 | 44.25 |
| **BLM133** | 34 | 7 | 3.25 | 44.25 |
| **CVR74** | 43 | 0 | 1 | 44 |
| **CVR25** | 36 | 7 | 1 | 44 |
| **EGN34** | 26 | 10 | 7.5 | 43.5 |
| **BVL1** | 26 | 10 | 7.5 | 43.5 |
| **MDH31** | 30 | 10 | 3.25 | 43.25 |
| **CVR10** | 42 | 0 | 1.25 | 43.25 |
| **BLM156** | 36 | 7 | 0.25 | 43.25 |
| **CVR44** | 35 | 7 | 1 | 43 |
| **CVR37** | 35 | 7 | 1 | 43 |
| **EDP13** | 34 | 7 | 1.75 | 42.75 |
| **CVR24** | 35 | 7 | 0.75 | 42.75 |
| **BLM70** | 35 | 4 | 3.75 | 42.75 |
| **SHK16** | 32 | 7 | 3.5 | 42.5 |
| **JKT9** | 33 | 7 | 2.5 | 42.5 |
| **EDP5** | 42 | 0 | 0.5 | 42.5 |
| **CVR9** | 34 | 7 | 1.5 | 42.5 |
| **BLM107** | 35 | 4 | 3.5 | 42.5 |
| **SVG20** | 27 | 10 | 5.25 | 42.25 |
| **SHK43** | 31 | 10 | 1.25 | 42.25 |
| **CVR49** | 34 | 7 | 1.25 | 42.25 |
| **SHK11** | 27 | 7 | 8 | 42 |
| **EDP7** | 41 | 0 | 1 | 42 |
| **BLM166** | 33 | 7 | 2 | 42 |
| **SHK67** | 28 | 7 | 6.5 | 41.5 |
| **MDH39** | 29 | 7 | 5.5 | 41.5 |
| **EGN31** | 23 | 10 | 8.5 | 41.5 |
| **CVR68** | 33 | 7 | 1.5 | 41.5 |
| **CVR5** | 33 | 7 | 1.5 | 41.5 |
| **CVR43** | 40 | 0 | 1.5 | 41.5 |
| **BLM162** | 34 | 4 | 3.5 | 41.5 |
| **BLM123** | 35 | 4 | 2.5 | 41.5 |
| **BLM100** | 33 | 7 | 1.5 | 41.5 |
| **BVL63** | 26 | 10 | 5.25 | 41.25 |
| **BLM43** | 35 | 4 | 2.25 | 41.25 |
| **BLM33** | 35 | 4 | 2.25 | 41.25 |

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **EGN29** | 23 | 10 | 8 | 41 |
| **CVR45** | 33 | 7 | 1 | 41 |
| **CVR11** | 33 | 7 | 1 | 41 |
| **BVL65** | 23 | 7 | 11 | 41 |
| **SVG4** | 27 | 10 | 3.75 | 40.75 |
| **SHK61** | 30 | 7 | 3.75 | 40.75 |
| **MDH37** | 37 | 0 | 3.75 | 40.75 |
| **EGN36** | 23 | 10 | 7.75 | 40.75 |
| **EDP9** | 40 | 0 | 0.75 | 40.75 |
| **CVR23** | 33 | 7 | 0.75 | 40.75 |
| **BVL54** | 20 | 10 | 10.75 | 40.75 |
| **BLM172** | 32 | 7 | 1.75 | 40.75 |
| **CVR62** | 32 | 7 | 1.5 | 40.5 |
| **BVL47** | 28 | 10 | 2.5 | 40.5 |
| **SHK8** | 29 | 10 | 1.25 | 40.25 |
| **EGN39** | 22 | 10 | 8.25 | 40.25 |
| **BVL60** | 26 | 10 | 4.25 | 40.25 |
| **EGN2** | 21 | 10 | 9 | 40 |
| **CVR79** | 32 | 7 | 1 | 40 |
| **CVR75** | 39 | 0 | 1 | 40 |
| **BVL42** | 27 | 10 | 3 | 40 |
| **BLM93** | 33 | 4 | 3 | 40 |
| **BVL49** | 28 | 10 | 1.75 | 39.75 |
| **BLM77** | 24 | 10 | 5.75 | 39.75 |
| **SVG18** | 26 | 10 | 3.5 | 39.5 |
| **CVR47** | 31 | 7 | 1.5 | 39.5 |
| **EDP4** | 39 | 0 | 0.25 | 39.25 |
| **CVR40** | 31 | 7 | 1.25 | 39.25 |
| **CVR27** | 38 | 0 | 1.25 | 39.25 |
| **BLM111** | 32 | 4 | 3.25 | 39.25 |
| **MDH15** | 26 | 10 | 3 | 39 |
| **EDP10** | 38 | 0 | 1 | 39 |
| **BLM131** | 29 | 7 | 3 | 39 |
| **BLM95** | 31 | 4 | 3.75 | 38.75 |
| **MDA57** | 26 | 7 | 5.5 | 38.5 |
| **EGN7** | 21 | 10 | 7.5 | 38.5 |
| **CVR66** | 30 | 7 | 1.5 | 38.5 |
| **CVR34** | 37 | 0 | 1.5 | 38.5 |
| **BVL58** | 25 | 10 | 3.5 | 38.5 |
| **BLM167** | 31 | 4 | 3.5 | 38.5 |

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **EGN4** | 23 | 7 | 8.25 | 38.25 |
| **BVL30** | 25 | 10 | 3.25 | 38.25 |
| **BLM163** | 27 | 7 | 4.25 | 38.25 |
| **EGN26** | 20 | 10 | 8 | 38 |
| **EGN25** | 19 | 10 | 8.75 | 37.75 |
| **BLM57** | 30 | 7 | 0.75 | 37.75 |
| **BVL39** | 25 | 10 | 2.5 | 37.5 |
| **BLM143** | 29 | 4 | 4.5 | 37.5 |
| **EDP15** | 30 | 7 | 0 | 37 |
| **CVR57** | 29 | 7 | 1 | 37 |
| **BLM88** | 29 | 4 | 4 | 37 |
| **BLM120** | 32 | 4 | 1 | 37 |
| **SVG17** | 23 | 10 | 3.75 | 36.75 |
| **EGN42** | 24 | 10 | 2.75 | 36.75 |
| **BVL45** | 22 | 10 | 4.75 | 36.75 |
| **SVG26** | 29 | 7 | 0.5 | 36.5 |
| **CVR58** | 29 | 7 | 0.5 | 36.5 |
| **BVL55** | 24 | 10 | 2.5 | 36.5 |
| **EGN8** | 18 | 10 | 8.25 | 36.25 |
| **EGN6** | 21 | 10 | 5.25 | 36.25 |
| **CVR94** | 35 | 0 | 1.25 | 36.25 |
| **CVR65** | 35 | 0 | 1.25 | 36.25 |
| **CHH8** | 35 | 0 | 1.25 | 36.25 |
| **BVL68** | 21 | 10 | 5.25 | 36.25 |
| **BLM98** | 28 | 7 | 1.25 | 36.25 |
| **SHK58** | 23 | 10 | 3 | 36 |
| **CVR36** | 28 | 7 | 1 | 36 |
| **EGN13** | 22 | 10 | 3.75 | 35.75 |
| **BVL67** | 23 | 10 | 2.75 | 35.75 |
| **CVR90** | 27 | 7 | 1.5 | 35.5 |
| **BVL40** | 23 | 10 | 2.5 | 35.5 |
| **BLM158** | 28 | 7 | 0.5 | 35.5 |
| **BVL4** | 23 | 10 | 2.25 | 35.25 |
| **BLM168** | 28 | 4 | 3.25 | 35.25 |
| **BLM112** | 28 | 4 | 3.25 | 35.25 |
| **CVR46** | 27 | 7 | 1 | 35 |
| **BLM135** | 25 | 7 | 3 | 35 |
| **EDP18** | 27 | 7 | 0.75 | 34.75 |
| **BLM170** | 26 | 7 | 1.75 | 34.75 |
| **BLM152** | 27 | 4 | 3.75 | 34.75 |

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **CVR22** | 27 | 7 | 0.5 | 34.5 |
| **CVR13** | 33 | 0 | 1.5 | 34.5 |
| **BLM141** | 26 | 7 | 1.5 | 34.5 |
| **CVR70** | 33 | 0 | 1.25 | 34.25 |
| **CHH4** | 33 | 0 | 1.25 | 34.25 |
| **CHH2** | 33 | 0 | 1.25 | 34.25 |
| **BVL48** | 21 | 10 | 3.25 | 34.25 |
| **BLM117** | 27 | 4 | 3.25 | 34.25 |
| **BLM54** | 28 | 4 | 2 | 34 |
| **SVG29** | 26 | 7 | 0.75 | 33.75 |
| **BLM105** | 26 | 4 | 3.75 | 33.75 |
| **CVR100** | 32 | 0 | 1.5 | 33.5 |
| **MDH55** | 20 | 10 | 3.25 | 33.25 |
| **MDH35** | 29 | 0 | 4.25 | 33.25 |
| **MDH20** | 20 | 10 | 3.25 | 33.25 |
| **BLM83** | 26 | 4 | 3.25 | 33.25 |
| **BLM80** | 26 | 7 | 0.25 | 33.25 |
| **BLM140** | 28 | 4 | 1.25 | 33.25 |
| **SHK49** | 32 | 0 | 1 | 33 |
| **CVR54** | 25 | 7 | 1 | 33 |
| **CVR53** | 25 | 7 | 1 | 33 |
| **BLM69** | 17 | 10 | 6 | 33 |
| **SVG27** | 25 | 7 | 0.75 | 32.75 |
| **BVL51** | 20 | 10 | 2.75 | 32.75 |
| **BLM90** | 25 | 7 | 0.75 | 32.75 |
| **CVR87** | 31 | 0 | 1.5 | 32.5 |
| **CVR50** | 31 | 0 | 1.5 | 32.5 |
| **BVL44** | 19 | 10 | 3.5 | 32.5 |
| **BVL20** | 19 | 10 | 3.25 | 32.25 |
| **CVR96** | 31 | 0 | 1 | 32 |
| **CVR91** | 24 | 7 | 1 | 32 |
| **BLM121** | 26 | 4 | 2 | 32 |
| **EGN43** | 19 | 10 | 2.75 | 31.75 |
| **BLM28** | 27 | 4 | 0.75 | 31.75 |
| **BLM153** | 24 | 4 | 3.75 | 31.75 |
| **SVG28** | 18 | 10 | 3.5 | 31.5 |
| **BVL57** | 18 | 7 | 6.5 | 31.5 |
| **BLM122** | 25 | 4 | 2.5 | 31.5 |
| **MDA1** | 21 | 7 | 3.25 | 31.25 |
| **EGN12** | 26 | 0 | 5.25 | 31.25 |

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **CVR48** | 23 | 7 | 1.25 | 31.25 |
| **CHH7** | 30 | 0 | 1.25 | 31.25 |
| **BLM59** | 23 | 7 | 1.25 | 31.25 |
| **BLM138** | 25 | 4 | 2.25 | 31.25 |
| **BLM134** | 21 | 7 | 3.25 | 31.25 |
| **SHK62** | 18 | 7 | 6 | 31 |
| **SHK50** | 30 | 0 | 1 | 31 |
| **EDP14** | 23 | 7 | 0.75 | 30.75 |
| **CVR88** | 29 | 0 | 1.75 | 30.75 |
| **BLM94** | 23 | 4 | 3.75 | 30.75 |
| **CVR41** | 29 | 0 | 1.5 | 30.5 |
| **CVR16** | 29 | 0 | 1.5 | 30.5 |
| **BLM51** | 22 | 7 | 1.5 | 30.5 |
| **EDP11** | 29 | 0 | 1 | 30 |
| **BLM132** | 19 | 7 | 3.5 | 29.5 |
| **SHK48** | 28 | 0 | 1 | 29 |
| **EGN32** | 12 | 10 | 7 | 29 |
| **CVR60** | 21 | 7 | 0.5 | 28.5 |
| **BLM157** | 21 | 7 | 0.5 | 28.5 |
| **MDH54** | 23 | 0 | 4.5 | 27.5 |
| **CVR61** | 19 | 7 | 1.5 | 27.5 |
| **CHH5** | 19 | 7 | 1.5 | 27.5 |
| **MDH28** | 23 | 0 | 4.25 | 27.25 |
| **SHK55** | 26 | 0 | 1 | 27 |
| **FSN4** | 18 | 0 | 7 | 25 |
| **CVR101** | 23 | 0 | 1.5 | 24.5 |
| **BLM118** | 17 | 4 | 3.25 | 24.25 |
| **SHK51** | 23 | 0 | 1 | 24 |
| **JKT10** | 17 | 4 | 2.25 | 23.25 |
| **EGN10** | 8 | 10 | 4.25 | 22.25 |
| **CVR80** | 14 | 7 | 1.25 | 22.25 |
| **BLM58** | 14 | 7 | 1.25 | 22.25 |
| **SHK39** | 21 | 0 | 1 | 22 |
| **CVR28** | 14 | 7 | 0.5 | 21.5 |
| **BLM161** | 15 | 4 | 1.5 | 20.5 |
| **SHK44** | 16 | 0 | 1 | 17 |

Figure 6 shows how many sites were categorized into each list as explained in the Gully Ranking Process section of this report.

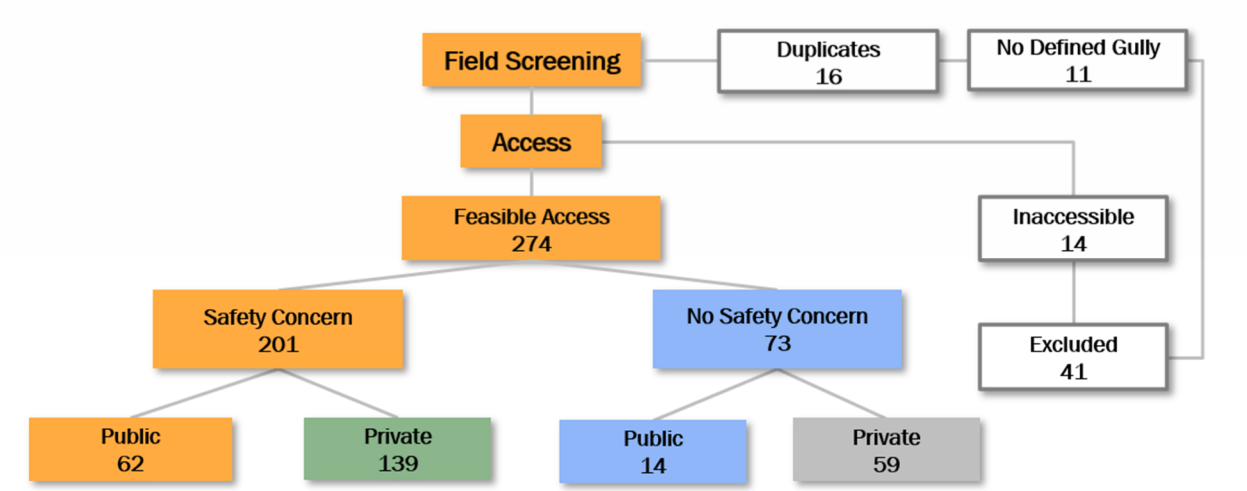


Figure 6. Total Number of Gullies in Each Step of the Categorization Process

## 5.4 Highest Overall Ranked Gullies

This section outlines the top ranked gullies prior to being organized into categories based on property type or safety concern. The three gullies with the overall highest gully ranking score are summarized in Table 4. These gullies earned the highest gully ranking scores due to their high erosion potential score and close proximity to LMRWD high value resources and MPCA sites.

Table 4. Overall Highest Ranking Gullies

| Gully Name | Overall Ranking Score | Erosion Score | Impact Tier/ points | MPCA Sites Points | City |
|---|---|---|---|---|---|
| BVL3 | 61.5 | 44 | A/10 | 7.5 | Burnsville |
| BVL62 | 61.5 | 47 | A/10 | 4.5 | Burnsville |
| BLM68 | 59.25 | 44 | A/10 | 5.25 | Bloomington |

The three gullies with the highest erosion potential score are summarized in Table 5. These gullies were identified to have the greatest risk of erosion; however, due to other factors such as proximity to LMRWD resources and number of MPCA sites, these gullies may not have been ranked within the top three of each category.

Table 5. Gullies with Highest Erosion Potential Score

| Gully Name | Overall Ranking Score | Erosion Score | Impact Tier/ points | MPCA Sites Points | City |
|---|---|---|---|---|---|
| CVR81 | 58.5 | 50 | B/7 | 1.5 | Carver |
| BLM78 | 57.25 | 50 | B/7 | 0.25 | Bloomington |
| BVL62 | 61.5 | 47 | A/10 | 4.5 | Burnsville |

## 5.5 Highest Ranked Gullies by Category

All gullies that were deemed accessible (details on determining accessibility are included in Appendix B) were categorized into one of four groups including, 1) private property with no safety concerns, 2) private property with safety concerns, 3) public property with no safety concerns, and 4) public property with safety concerns. The gullies were then ranked within their given category (Appendix C). The top three gullies in each category are described in Sections 5.5.1 through 5.5.4. Locations of each gully within the watershed district are shown in Figure 7.

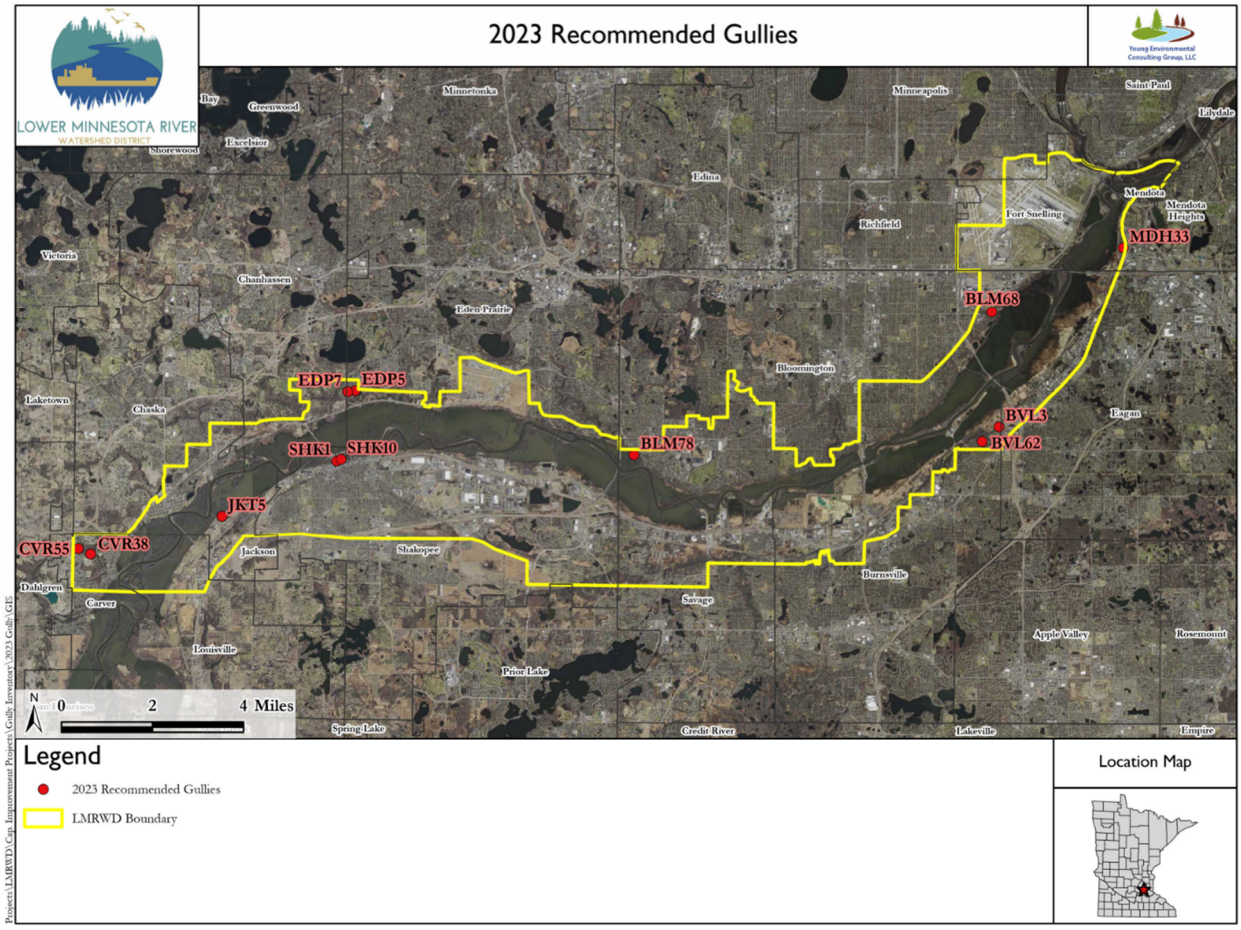


Figure 7. Map of recommended gully sites within the LMRWD boundaries

### 5.5.1 Gullies on Public Land with a Safety Concern

**BVL62**:

- **Location:** BVL62, located in Burnsville and was easily accessible behind homes on Chatham Ct N (Figure 7).
- **Size:** The gully is over 100 feet long, 15 feet high, and 1-5 feet wide at the bottom.
- **Safety:** This gully is within 50 feet of a home and a yard, making it a potential safety concern.
- **Vegetation:** The gully has no vegetation on the bottom and some newer vegetation on the banks.
- **Soils:** BVL62 consists of very sandy, non-compact material, which contributes to the overhanging banks and slumping observed.
- **Field Observations:** There is a large pipe outfall located near the headcut of the gully, which is surrounded by existing riprap (Figure 8). This pipe conveys water from BVL14 into BVL62. BVL14 was a much smaller gully on the other side of the pipe and did not receive a high-ranking score. There was also severe accumulation of sediment below the flowing water within BVL62.
- **Ranking Score Breakdown:** This gully has a total erosion score of **47**, which is greater than the 2021 assessment's score of **32**. This is due to the gully being longer, deeper, and less vegetated than in the last visit. BVL62 is in impact Tier A, meaning it is near high value resource areas in the LMRWD, adding **10** points to the final ranking score. BVL62 specifically impacts Black Dog Fen. It also has 18 sites of active investigation or cleanup within a 1-mile radius, adding **4.5** points to the final ranking score. Gully BVL62 received a total of **61.5** points (Table 6), which is the highest-ranking score given out of all the gullies surveyed.


Figure 8. Photos of gully BVL62. A) Headcut with large pipe outfall and surrounding rip rap. B) Facing North at bank from the side of the headcut. C) Gully bottom condition. D) Image of water pooling at bottom of rip rap

Table 6. BVL62 Ranking Score Summary

| BVL62 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 47 | 10 | 4.5 | 61.5 |

**SHK1:**

- **Location:** SHK1 is on land owned by the City of Shakopee and is located off a trail accessible from Huber Park and flows directly into the Minnesota River (Figure 7).
- **Size:** The gully is less than 50 feet long, less than 3 feet deep and is V-shaped.
- **Safety:** The gully is considered a safety concern due to its proximity to a public trail.
- **Vegetation:** The gully has no vegetation on the bottom or the banks.
- **Soils:** The gully was observed to be very unstable because it is on the banks of the Minnesota River and consists of easily erodible sand (Figure 9).
- **Field Observations:** The gully included areas that were undercut causing hanging banks, and there was evidence of seepage leading to high erosion potential.
- **Ranking Score Breakdown:** The calculated erosion score was **42,** which is greater than the previous year's score of **35**. SHK1 is in impact Tier B because it directly discharges sediment to the Minnesota River, which is defined as an impaired water body, adding **7** points to the final ranking score. This gully has 32 active investigation or cleanup sites within a mile radius, adding **8** points and giving it a final score of **57** (Table 7).

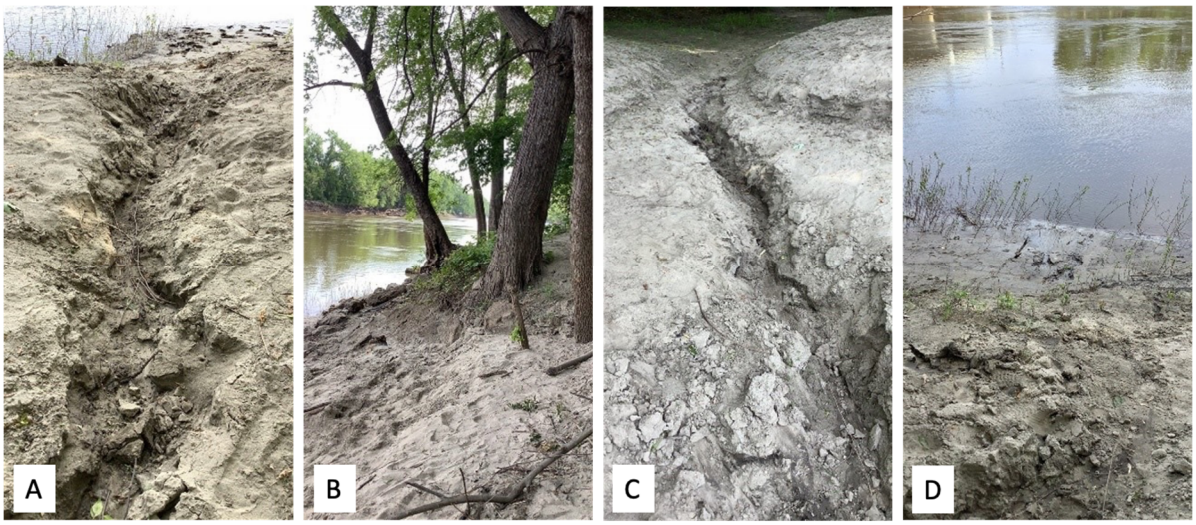


Figure 9. Photos of gully SHK1. A) Facing north looking down at gully. B) Facing south looking up at gully. C) Leaning tree along bank adjacent to the gully. D) Water at gully edge in the Minnesota River.

Table 7. SHK1 Ranking Score Summary

| SHK1 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 42 | 7 | 8 | 57 |

**SHK10**:

- **Location:** SHK10 is also located off a trail accessible from Huber Park (Figure 7) and flows directly into the Minnesota River.
- **Size:** The gully is less than 50 feet long, less than 3 feet deep and less than 1 foot wide, with undercut areas and noticeable slumping.
- **Safety:** The gully is considered a safety concern due to its proximity to a public trail.
- **Vegetation:** The gully has no vegetation on the bottom or the banks.
- **Soils:** The gully consists of sand with observed seepage.
- **Field Observations:** While the gully is small, the area has undergone severe erosion as seen in Figure 10 where the top of a manhole and the concreate is fully exposed and apparent sedimentation can be seen at the outlet of the gully.
- **Ranking Score Breakdown:** The erosion potential score is **42,** which is higher than the previous erosion score of **34**. SHK10 falls into impact Tier B because of its proximity to the Minnesota River, which is an impaired waterbody, contributing **7** points to the final score. This gully was found to have 32 active investigation or cleanup sites found within a mile radius adding another **8** points, giving it a final score of **57** (Table 8).

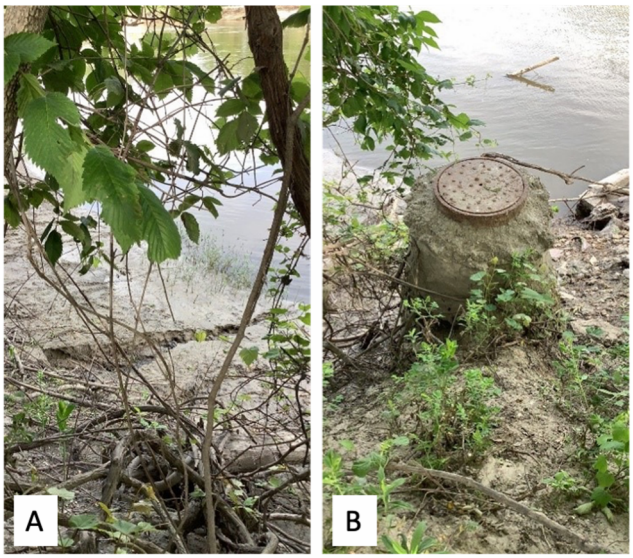


Figure 10. Photos of gully SHK10. A) Facing northwest looking down at gully. B) Image of structure that is surrounded by evident erosion.

Table 8. SHK10 Ranking Score Summary

| SHK10 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 42 | 7 | 8 | 57 |

### 5.5.2 Gullies on Private Land with a Safety Concern

**BVL3**:

- **Location**: BVL3 is located in Burnsville and easily accessed behind houses on McCool Court (Figure 7). This gully was connected to BVL1, which had a relatively low erosion potential score of 26.
- **Size**: The gully is over 100 feet long, 15 feet high, and V-shaped at the downstream end of the gully.
- **Safety**: This gully is within 50 feet of a home and a yard, making it a potential safety concern for those living in the area.
- **Vegetation**: There was limited vegetation on the bottom and banks of the gully (Figure 11).
- **Soils**: The gully consisted of a fine-grained cohesive material.
- **Field Observations**: There were areas with overhanging banks and subsequent slumping and flattened banks. There was observed evidence of groundwater upwelling or seepage from the gully bottom, but the water was not flowing, indicating that the gully was actively eroding and unstable.
- **Ranking Score Breakdown:** The gully ultimately has an erosion score of **44**, which is higher than the previous erosion potential score of **39**, due to the gully being longer and less vegetated. BVL3 is in impact Tier A contributing **10** points, as this site is near the location of the high value resource, Black Dog Fen. There are also 30 active investigation or cleanup sites within a 1-mile radius of this gully, which contributed **7.5** points. Gully BVL3 received a total of **61.5** points (Table 9), which is the highest score given from these assessments.

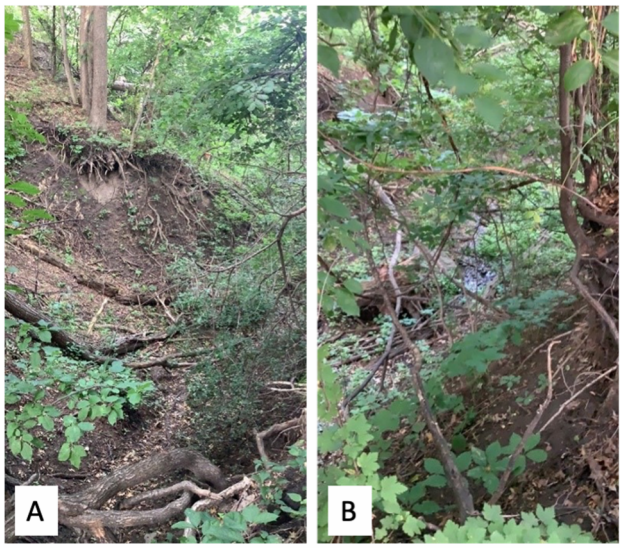


Figure 11. Photos of gully BVL3. A) Facing west by the headcut, viewing overhanging bank B) Seepage at gully bottom

Table 9. BVL3 Ranking Score Summary

| BVL3 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 44 | 10 | 7.5 | 61.5 |

**BLM68**:

- **Location**: BLM68 is located off Old Shakopee East Road, extremely close to Long Meadow Lake (Figure 7). The access to this gully was simple as it was behind homes, but difficult to photograph within the gully due to the steepness of the slopes.
- **Size**: This gully is greater than 100 feet in length, greater than 15 feet in depth, and less than a foot in width.
- **Safety**: The gully is within 10 feet of a shed, making it a safety concern.
- **Vegetation**: There was limited vegetation on the bottom and banks of the gully (Figure 12).
- **Soils**: The gully material was sandy, making it more at risk for erosion.
- **Field Observations**: There were undercut areas causing slumping. Many fallen trees were observed in the channel and the gully was very unstable due to its extremely steep slopes (Figure 12).
- **Ranking Score Breakdown:** The final erosion potential score was calculated to be **44**. This gully fell into impact Tier A, due to its proximity to the high value resource Black Dog Fen, contributing **10** points to the final ranking score. Lastly, there were 21 active investigation or cleanup sites within a mile of the gully contributing another **5.25** points. The final score for this gully is **59.25** (Table 10).

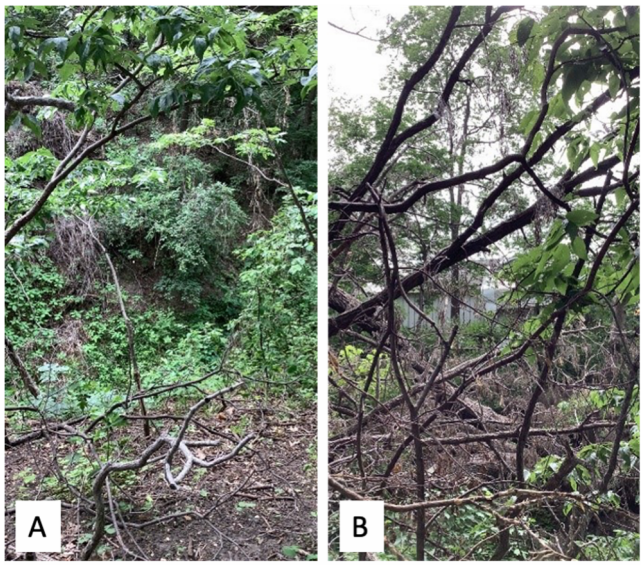


Figure 12. Photos of gully BLM68. A) Facing southeast on bank, looking down at the gully. B) Image of large shed near the gully

Table 10. BLM68 Ranking Score Summary

| BLM68 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 44 | 10 | 5.25 | 59.25 |

**CVR81:**

- **Location**: CVR81 is easily accessible off a community trail labeled the Purple Trail between Broadway North and Ironwood Drive and is located on private property (Figure 7).
- **Size**: The gully was over 100 feet long, over 15 feet deep, and V- shaped with hanging banks near the headcut.
- **Safety**: The proximity to a public trail categorizes this gully as a safety concern.
- **Vegetation**: The bottom and banks of the gully had no vegetation.
- **Soils**: The gully banks were made up of a sandy material, increasing the potential for erosion (Figure 13).
- **Field Observations**: Two drainage pipes were identified near the headcut of the gully which are likely the cause of the gully's continued development.
- **Ranking Score Breakdown:** CVR81 received a final erosion score of **50**, which is tied for the highest erosion potential score of all the gullies surveyed. Previously, CVR81 received an erosion potential score of **43**; however, the gully has become more V-shaped, developed overhanging banks, and had more sediment aggradation, increasing its erosion potential score during the 2023 Project assessment. CVR81 is within impact Tier B, as it affects the impaired waterbody of Spring Creek, accounting for **7** points toward its final score. CVR81 has 6 active investigation and cleanup sites within a mile radius, giving it an additional **1.5** points toward the final score. The final ranked score for this gully is **58.5** (Table 11).


Figure 13. Photos of Gully CVR81. A) Northeast looking down from headcut with view of outlet. B) East looking at new headcut development

Table 11. CVR81 Ranking Score Summary

| CVR81 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 50 | 7 | 1.5 | 58.5 |

### 5.5.3 Gullies on Public Land with No Safety Concerns

**CVR55**:

- **Location:** CVR55 is located within the City of Carver and is accessible behind homes on Red Oak Ridge (Figure 7).
- **Size:** This gully is more than 100 feet long, over 15 feet in depth, and V-shaped.
- **Safety:** There is no existing infrastructure or erosion control near the gully, categorizing it as having no safety concerns.
- **Vegetation:** The gully banks and bottoms had some vegetation, but it was sparse. Most notably, the banks were vegetated in the previous survey, and sparse in the 2023 survey, indicating that the gully continues to grow more unstable.
- **Soils:** The gully material was comprised of sand along the banks, making it a greater erosion risk.
- **Field Observations:** There were numerous points where undercuts, overhanging roots, and leaning or fallen trees were observed (Figure 14). There are additional gullies of a lower risk connected to this gully; however, CVR55 seems to be the main contributor to the downstream erosion of nearby gullies.
- **Ranking Score Breakdown:** CVR55 received a previous erosion score of **32** and had a large increase in erosion since the last assessment. Due to its easily erodible material and large size, CVR55 received an initial erosion score of **45**. Seven points were added because the gully is in impact Tier B contributing **7** points, affecting the impaired waterbody Spring Creek, which is of some concern to LMRWD. There were also 3 active investigation or cleanup sites near the gully, adding **0.75 points** to the score. The total score for this gully was **52.75** (Table 12)

Figure 14. Photo of CVR55. Facing west looking downstream of the gully.

Table 12. CVR55 Ranking Score Summary

| CVR55 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 45 | 7 | 0.75 | 52.75 |

**SHK3**:

- **Location:** SHK3 is located in Shakopee and on City-owned land located off a trail near Huber Park (Figure 7). It flows directly into the Minnesota River.
- **Size:** The gully is less than 50 feet long, less than 3 feet deep, and the gully bottom is V-shaped.
- **Safety:** This gully was defined as having no safety concerns.
- **Vegetation:** There were no signs of vegetation within or near the gully, which results in decreased bank stabilization
- **Soils:** The gully material is made up of easily erodible sand and could be visibly seen eroding directly into the Minnesota River upon inspection (Figure 15).
- **Field Observation:** At the time of the field inspection, water was actively flowing through the gully although there had been no recent rainfall, suggesting groundwater upwelling occurring in the gully. Silt fences and sandbags were present upstream of the gully; however, these erosion measures appeared ineffective at the time of the assessment.
- **Ranking Score Breakdown:** Due to these conditions, this gully received an erosion potential score of **37**. This gully was found to be within impact Tier B and **7** points were awarded to the gully ranking score. Lastly, 14 MPCA active investigation or cleanup sites were found within a 1-mile radius resulting in **8** points added. In total, SHK3 received a ranking score of **52** (Table 13) and was the second highest ranked gully on public property without a safety concern.

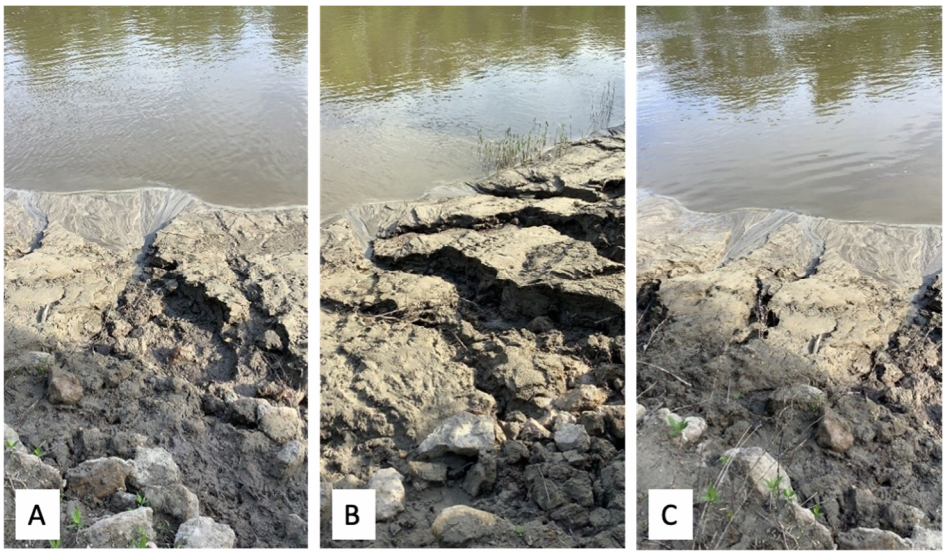


Figure 15. Photos of gully SHK3. A) Facing north looking downstream from the headcut. B) Facing northeast looking at the side of the gullies. C) Another view of the gully from the headcut.

Table 13. SHK3 Ranking Score Summary

| SHK3 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 37 | 7 | 8 | 52 |

**CVR56**:

- **Location**: CVR56 is located in Carver between the streets of Broadway North, Red Oak Ridge, and Hackberry Court (Figure 7).
- **Size**: The gully is greater than 100 feet long, greater than 15 feet deep, and V-shaped.
- **Safety**: There is no existing infrastructure within 50 feet of this gully and it was not considered a safety concern.
- **Vegetation**: The bottom of the gully has no vegetation while the banks of the gully have some vegetation and leaning trees.
- **Soils**: The gully consisted of fine-grained cohesive material (Figure 16).
- **Field Observations**: CVR56 is connected to many other gullies throughout the area and forms a large system of gullies that run from behind the houses on Red Oak Ridge and Hackberry Court. These gullies would have to be considered for a joint restoration project to reduce the chances of gullies reforming after restoration. Throughout this gully there is clear evidence of seepage leading to running water along the bottom. The gully includes overhang and exhibits signs of severe degradation and active erosion.
- **Ranking Score Breakdown:** The erosion score of the gully was **43**. The previous erosion score for CVR56 was **41,** suggesting that the gully has not changed drastically but has continued to actively erode. The gully is in impact Tier B affecting the impaired waterbody Spring Creek and contributing **7** points towards the ranking score. Lastly, 4 active investigation and cleanup sites were found within a 1-mile radius, contributing 1 point towards the final score of **51** (Table 14).

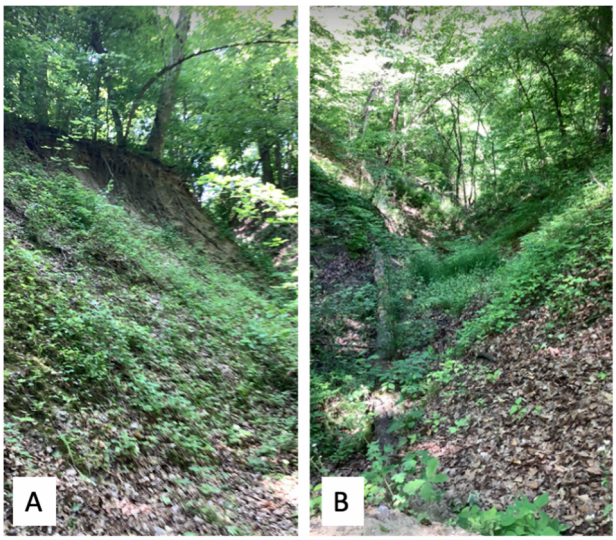


Figure 16. Photos of gully CVR56. A) Facing west looking towards left bank from inside. B) Facing north looking up gully.

Table 14. CVR56 Ranking Score Summary

| CVR56 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 43 | 7 | 1 | 51 |

### 5.5.4 Gullies on Private Land with No Safety Concerns

**BLM78:**

- **Location:** BLM78 was somewhat difficult to access through the woods off West 110th Street in Bloomington (Figure 7).
- **Size:** The gully is more than 100 feet long, 15 feet high, and V-shaped.
- **Safety:** There is no existing infrastructure near the gully, therefore it is not considered to be an immediate safety concern.
- **Vegetation:** The gully has no vegetation on the bottom or banks.
- **Soils:** There is bare soil on the banks and the gully bottom, consisting of mostly sandy material.
- **Field Observations:** There is evidence of overhanging banks and slumping, due to the non-compact soil (Figure 17). There was a drainage feature observed as well as running water at the bottom of the gully, but due to extremely steep slopes, photos of these conditions are not available.
- **Ranking Score Breakdown:** This gully received a potential erosion score of **50,** which is higher than its previous erosion score of **45**. This change in erosion score is due to the change in gully depth and lack of vegetation during the 2023 Project assessment. This gully is located in impact Tier B contributing **7** points, due to its proximity to an impaired waterbody or tributary to a high value resource. BLM78 contained only 1 active investigation or cleanup site within a 1-mile radius, contributing **0.25** points to the ranking score. BLM78 resulted in a final score of **57.25** (Table 15).

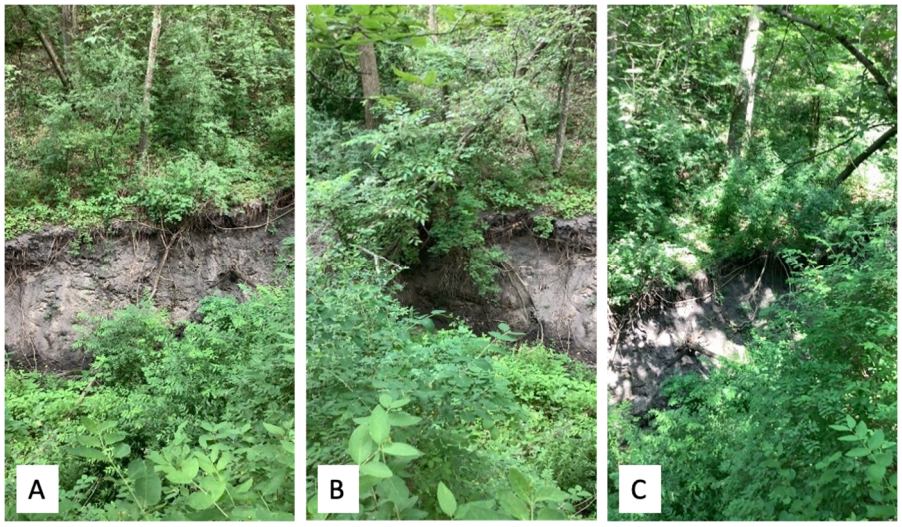


Figure 17. Photos of gully BLM78. A) Facing south looking across the gully at bare bank. B) Facing southeast at bare bank. C) Facing southwest at bare bank with leaning trees.

Table 15. BLM78 Ranking Score Summary

| BLM78 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 50 | 7 | 0.25 | 57.25 |

**CVR38:**

- **Location:** CVR38 is located off Ironwood Drive in Carver (Figure 7), through somewhat dense vegetation to access the gully.
- **Size:** CVR38 is more than 100 feet long, 15 feet high, and V-shaped at the bottom.
- **Safety:** There is no existing infrastructure near the gully, therefore it is not considered to be an immediate safety concern.
- **Vegetation:** The banks have some vegetation, but the gully bottom is completely bare soil (Figure 18).
- **Soils:** It consists of sandy, non-compact material, which has led to overhanging banks and slumping.
- **Field Observations:** This gully contains no seepage or outfalls, but is very large.
- **Ranking Score Breakdown:** The current erosion score of this gully is **47**. CVR38 had a previous erosion score of **40** and previously had more vegetation on its banks. This increased erosion score indicates that CVR38 is unstable and should be considered for a restoration project. This gully fell within impact Tier B contributing **7** points, which is of some concern to the LMRWD as it is near an impaired waterbody, Spring Creek. There are 6 active investigation or cleanup sites within a 1-mile radius, bringing the total score for CVR38 to **55.5** (Table 16).


Figure 18. Photos of gully CVR38. A) Facing south looking up at headcut. B) Gully bottom material and aggradation.

Table 16. CVR38 Ranking Score Summary

| CVR38 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 47 | 7 | 1.5 | 55.5 |

**CVR76**:

- **Location:** CVR76 was accessed by walking through several neighboring gullies off Green Ash Drive in the City of Carver (Figure 7).
- **Size:** This gully is over 100 feet long, 15 feet high, and V-shaped farther from the headcut.
- **Safety:** There is no existing infrastructure near the gully and not a safety concern.
- **Vegetation:** There is no vegetation on the banks or the bottom of the gully.
- **Soils:** The gully consists of sandy non-compact material.
- **Field Observations:** The slopes were extremely steep and there were significant overhanging banks, causing many leaning or falling trees within the channel (Figure 19). There was also severe sediment aggradation and degradation observed.
- **Ranking Score Breakdown:** The overall erosion potential score was **43**. In previous assessments, this gully received a score of **39**, but as the gully became deeper, narrower, and less vegetated, the erosion potential score increased. Additionally, the gully material is no longer sand and has eroded away to a fine-grained cohesive material. It was also noted from 2020 that the nearby homeowner had expressed concerns about the gully worsening. CVR76 is in impact Tier B contributing **7** points, due to its proximity to Spring Creek. There are 4 active investigation or cleanup sites within a 1-mile radius of CVR76, which contributed **1** point. This resulted in gully CVR76 receiving a final ranking score of **51** (Table 17).


Figure 19. Photos of gully CVR76. A) Facing east looking up at the gully. B) Facing east looking at headcut.

Table 17. CVR38 Ranking Score Summary

| CVR76 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 43 | 7 | 1 | 51 |

## 5.6 Additional Gullies of Concern

Gullies were ranked to determine which are of greatest concern and are likely in need of immediate restoration; however, some gullies that were not ranked in the top of their categories are still of major concern. This could be due to heightened safety concerns or noticeable active erosion.

**BVL15**:

- **Location:** BVL15 is easily accessible from behind a home off Chatham Court South in Burnsville, but it is located on private land.
- **Size:** BVL15 is over 100 feet tall, 15 feet high, and V-shaped at the bottom.
- **Safety:** The home is within 50 feet of the gully, indicating a possible safety concern.
- **Vegetation:** No vegetation was found on the banks or bottom (Figure 20).
- **Soils:** The gully consisted of non-cohesive material that was not compact (Figure 20).
- **Field Observations:** There was a drainage feature observed, causing water to flow within the channel. Additionally, there was evidence of severe aggradation in the bottom of the gully.
- **Ranking Score Breakdown:** BVL15 received an erosion score of **39**. Previously, this gully had an erosion score of **37**, but has become more V-shaped and less vegetated. This gully is in impact Tier A, contributing **10** points for Black Dog Fen and has 15 active investigation or cleanup sites within a 1-mile radius for a total score of **52.75** (Table 18). Since the outfall is likely the cause of this erosion and it is near a residential home, BVL15 is a gully of concern.


Figure 20. Photos of gully BVL15. A) Facing south viewing the drainage feature in the headcut. B) Facing north looking down at the gully from bank. C) Bare bank of gully with water flowing in channel.

Table 18. BVL15 Ranking Score Summary

| BVL15 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 39 | 10 | 3.75 | 52.75 |

**SHK16:**

- **Location:** SHK16 is easily accessible from a paved trail behind a trailer park.
- **Size:** SHK16 is less than 50 feet long, between 3-15 feet tall, and has a V-shaped bottom.
- **Safety:** The headcut of the gully is destroying the paved trail as it continues to erode, creating a serious safety concern (Figure 21).
- **Vegetation:** The gully contains some vegetation on the bottom and none on the banks.
- **Soils:** The material is made up of fine-grained cohesive material with parts of the trail present within the gully.
- **Field Observations:** There are also overhanging and flattened banks observed.
- **Ranking Score Breakdown:** SHK16 was given an erosion potential score of **32**. Previously, this gully had a similar erosion score of **31**. It is within impact Tier B, contributing **7** points, due to its proximity to the Minnesota River and has 14 active investigation or cleanup sites within a 1-mile radius, contributing **3.5** points to the final ranking score. Although the overall score for SHK16 is only **42.5** (Table 19) and it is located on private land, the gully is causing significant damage to infrastructure and poses a safety threat. Thus, SHK16 should be considered for a restoration project.

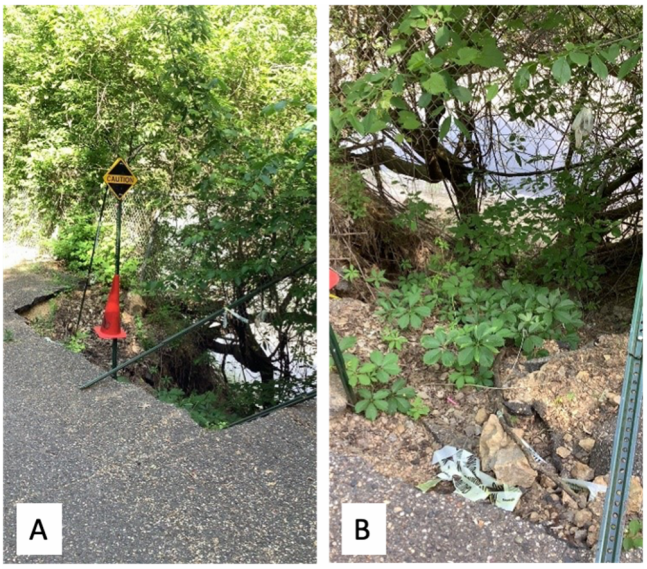


Figure 21. Photos of SHK16. A) Gully marked with sign as it encroaches on paved trail. B) Looking down at the gully from the headcut.

Table 19. SHK16 Ranking Score Summary

| SHK16 | Erosion Score | Impact Tier | MPCA Sites | Total Score |
|---|---|---|---|---|
| Points Assigned | 32 | 7 | 3.5 | 42.5 |

**Richard T Anderson Conservation Area (EDP 5, 7, 9, 10, 11 and CHH7):**

- **Location:** These sites are found in a cluster off Flying Cloud Drive and can be accessed via community trails.
- **Size:** Almost all gullies in this system were longer than 100 feet and deeper than 15 feet.
- **Safety:** The gullies were split between safety and non-safety concerns due to their varying proximity to trails and homes**.**
- **Vegetation:** All gullies in this area contained little to no vegetation on the bottoms and banks.
- **Soils:** The gullies consisted mostly of fine grain cohesive soil, but were prone to erosion as well as in active erosion.
- **Field Observations:** Groundwater seepage was a common occurrence in these gullies often leading to flowing water. These gullies did not rank at the very top of their lists but are still notable due to their potential impact as a group and their location within a conservation area. Many of the gullies connect or flow into one another, so to effectively restore these gullies, all must be restored rather than selecting one from the cluster. If only one gully is restored, other gullies would continue to erode and potentially cause the restored gully to reform.
- **Ranking Score Breakdown:** The gullies in this area range from ranking scores of **30** to **42.5** (Table 3). Most of the points for these gullies came from the erosion score as they are found within impact Tier D and average only 1 point from investigation and cleanup sites.

## 5.7 New Gullies

During the 2023 gully inventory, the Young Environmental project team added four additional gullies to the inventory. The new gullies were in Bloomington or Chanhassen. New gullies were generally discovered by the team while traveling to other high priority sites; however, one gully was discovered after speaking with homeowners who notified the project team of increased erosion near a golf course. Two gullies, one in Bloomington and one in Chanhassen, are not currently high priority but should be added to the gully inventory and continued to be monitored. The other two gullies discovered were determined to have active erosion, are of high priority, and are described in the following section.

**BLM173:**

- **Location:** This gully was found while accessing another gully in the area and is located behind an assisted living center off 100th Street East in Bloomington.
- **Size:** The gully was measured to between 50 and 100 feet long, 15 feet deep, and is a V-shape.
- **Safety:** The gully is considered a safety concern due to its proximity to the assisted living center building.
- **Vegetation:** This gully has no vegetation present on the bottom or the banks (Figure 22).
- **Soils:** The gully consists of a sandy material.
- **Field Observations:** The gully is caused by several drainage pipes that run from the building directly into the gully. The gully is actively eroding, has steep slopes and overhanging banks (Figure 22).
- **Erosion Score Breakdown:** The erosion potential score for this gully is **48**. While the gully is not currently extremely long, it will continue to rapidly grow if no intervention takes place. Many other drainage pipes were observed around the area that could lead to similar issues.

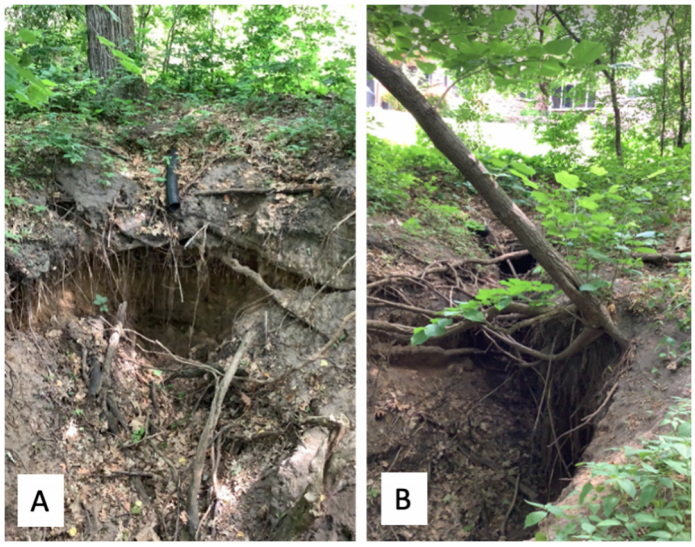


Figure 22. Photos of BLM173. A) Facing north looking at one headcut of the gully. B) Facing northeast looking at another headcut

**CHH11:**

- **Location:** This gully was located after speaking with a homeowner about erosion in the area. They informed the project team of a developing gully near Bluff Creek Golf Course off Creekwood Drive and stated it had been growing rapidly.
- **Size:** The gully is greater than 100 feet, deeper than 15 feet, and is V-shaped.
- **Safety:** This area is connected to a series of trails that run throughout the woods that many people frequent, making this gully a safety concern for the community.
- **Vegetation:** The gully banks and bottoms have no vegetation
- **Soils:** The gully consisted of a sandy, very erodible material.
- **Field Observations:** There are many overhanging roots and fallen trees leading to higher erosion potential (Figure 23). It was thought upon visual inspection that the gully was likely formed due to stormwater runoff from the nearby golf course parking lot.
- **Erosion Score Breakdown:** The total erosion score for this gully is **49**.

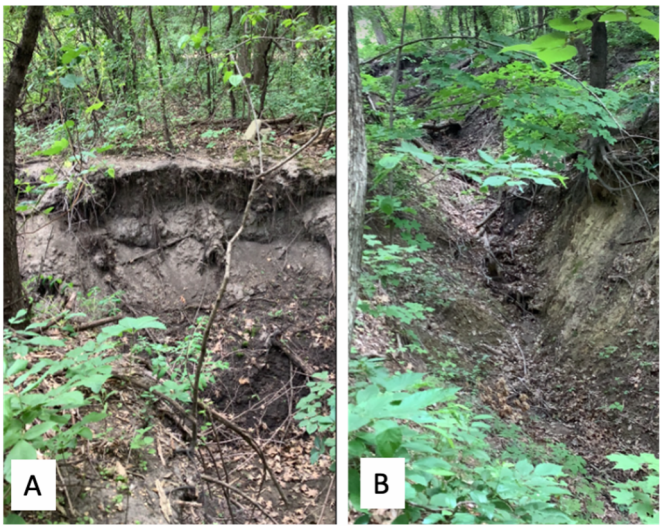


Figure 23. Photos of CHH11. A) Headcut viewed from gully bottom. B) V-shaped banks viewed from gully bottom.

# 6 Recommendations

The 2023 Project reevaluated 315 gullies through a field assessment and gully ranking process. Of these 315, 16 were determined to be duplicates, 11 were determined to not be a gully, 14 were inaccessible by foot, and 274 were located and analyzed. Two additional gullies were also found for a total of 276 presented throughout the report. Through the ranking process, the project team was able to identify gullies within the watershed district that should be prioritized for restoration. Based on the 2023 ranking process, we recommend the following management strategies for gully restoration:

1. Due to the large number of gullies included the ranking, we recommend that the LMRWD prioritize gullies for restoration on a continuous yearly cycle that alternates between completing a feasibility study for specific gullies one year, followed by completing restoration of the gullies the next year. Depending on the location and complexity of the gullies, three to six gullies should be recommended for feasibility studies each year. Table 20 shows the specific gullies recommended for feasibility studies and restoration in the first five years.

Table 20. Recommended Timeline for Restoration of Recommended Gullies

| Year | Gullies Recommended for Feasibility Studies | Gullies Recommended for Restoration Projects |
|---|---|---|
| **2024** | BVL62<br>SHK1<br>SHK10<br>SHK16 | N/A |
| **2025** | MDH33<br>BVL16<br>MDH38 | BVL62<br>SHK1<br>SHK10<br>SHK16 |
| **2026** | BVL15<br>BLM67<br>BLM145 | MDH33<br>BVL16<br>MDH38 |
| **2027** | MDH21<br>MDH8<br>MDH16 | BVL15<br>BLM67<br>BLM145 |
| **2028** | CVR92<br>EDP16<br>BVL31 | MDH21<br>MDH8<br>MDH16 |

2. Although gullies located on private property were categorized as lower priority, the LMRWD should notify landowners of the gullies present on their properties and provide educational materials on managing and monitoring gully erosion. Additionally, the LMRWD should complete a high-level assessment of public pipe outfalls to determine if any of the gullies located on private property are directly caused by a public pipe outfall, in which case public funding and partnership may be more readily available for restoration.
3. The United States Geological Survey (USGS) department is in the process of updating light detection and ranging (LiDAR) data for Minnesota, which is the basis for digital elevation model (DEM). The new data is expected to be available to the public at the end of 2023 or early 2024. The LMRWD should utilize this new DEM data to conduct a desktop analysis to identify gullies in the watershed district that have not yet been inventoried. The desktop analysis may help locate gullies that are otherwise difficult to find on foot.
4. The 2023 Project identified 14 projects as inaccessible. Although these gullies are difficult to access, they may still be contributing to the degradation of LMRWD resources, and it is essential to continue to monitor these gullies. The LMRWD should conduct an accessibility assessment of the gullies that were considered inaccessible by foot and coordinate with the municipalities and county public works departments to determine the best method of study. Alternative ways to monitor gully erosion include drone survey, access by boat, or a desktop analysis to compare old DEM data to the new DEM data. In some cases, drone study may not be feasible due to rules regarding airports in the area.

In past years, the LMRWD has collaborated with municipal partners and potential stakeholders to review the gully inventory and assessment, specifically strategizing ways to prioritize sites, stabilize gullies, and fund stabilization efforts of gullies and pipe outfalls. However, using the prioritization ranking system, the LMRWD can now more strategically identify and recommend restoration project locations to their partners. Additionally, if municipalities or other stakeholders approach the LMRWD for potential partnership on gully restoration projects, the LMRWD can use the developed ranking system to help determine whether a restoration project is a good investment of LMRWD funds.

# 7 References

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# Appendix A
# LMRWD Gully Inspection Survey123

Basic

# LMRWD Gully Inspection

## Gully ID*

## Inspection Date*

7/14/2023

## Inspectors*

-Please select-

## Describe access to the gully:

## Is there existing infrastructure near the gully?

- Yes
- No

## Is there existing erosion control?

- Yes

Basic

No

## How stable is the gully?

- Stable
- Semi-Stable
- Unstable

## Gully Length*

- < 50 ft
- 50-100 ft
- > 100 ft

## Gully Depth*

- < 3 ft
- 3-15 ft
- > 15 ft

## Gully Bottom Width*

- < 1 ft or V-shaped
- 1-5 ft
- > 5 ft

## Gully Bottom Condition*

- Gully bottom is armored, bedrock, or heavily vegetated
- Some vegetation present

Basic

## Photo

Drop image here or select image

## Image Caption

## Gully Material*

- General gully material is bedrock, gravel, cobbles, or boulders
- Fine-grained cohesive material
- Sand

## Is the material compact?

- Yes
- No

## Material Comment

Basic

Drop image here or select image

## Image Caption

## Gully Shape*

- Trapezoid
- U-shaped
- V-shaped

## Photo

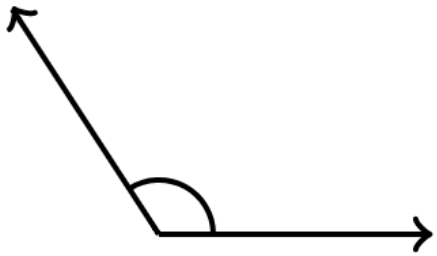
Drop image here or select image

## Image Caption

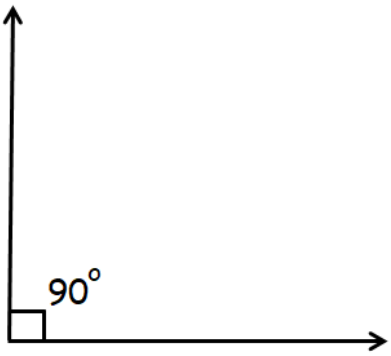
## Gully Angle*

- Obtuse (>90 degrees or flat)

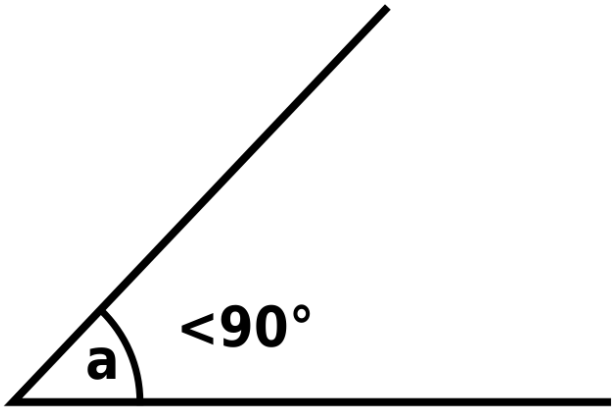
Basic



Mid-range (45-90 degrees)




Acute (<45 degrees or undercut)




## Photo

Basic

## Image Caption

## Gully Bank Condition*

- Heavy Vegetation
- Some Vegetation
- Bare Soil

## Gully Bank Condition Comment

## Photo

Drop image here or select image

## Image Caption

## Gully Seeps*

- No seeps

Basic

- [ ] Observed evidence of groundwater upwelling, springs, or water seepage in gully

## Photo

Drop image here or select image

## Image Caption

## Gully Stormwater Runoff*

- [ ] No Stormwater Outfalls identified
- [ ] Drainage feature or stormwater outfall observed

## Photo

Drop image here or select image

## Image Caption

## Gully Degradation*

- [ ] Low

Basic

Severe

## Photo

Drop image here or select image

## Image Caption

## Gully Aggradation*

- Low
- Severe

## Photo

Drop image here or select image

## Image Caption

## Gully Trees*

- No leaning trees

Basic

## Photo

Drop image here or select image

## Image Caption

## Gully Slumping*

- No slumps or flattened banks
- Slumping or flattened banks observed

## Photo

Drop image here or select image

## Image Caption

## Comments

## Additional Comments

Basic

## Photo

Drop image here or select image

## Erosion Probability Score

123

Submit

Powered by ArcGIS Survey123

# Appendix B
# Gully Ranking Process

# Gully Ranking Overview

As part of the 2023 Gully Inventory and Condition Assessment Project, Young Environmental Consulting Group, LLC (Young Environmental) developed a quantitative method of scoring gullies to assess the urgency for gully restoration. This document is intended to describe the steps used to rank and prioritize gullies based on the erosion potential of the gully as well as variables that influence the feasibility of restoration. This ranking method may be used for all gullies, including new or already surveyed gullies, that are being evaluated for potential restoration.

## Ranking Process

There are two parts to the gully ranking process.

Part 1 classifies the gullies into four separate categories based on the initial field screening, accessibility, property type, and safety concerns, as shown in Figure 1. It is possible that a landform may be incorrectly identified as a gully, so it is important to confirm that the landform being evaluated has identifiable gully features prior to being included in the ranking process. All gullies that have defining gully features and are deemed accessible are sorted into one of the four categories. Each category is given a restoration priority level of High, Moderate, or Low as shown in the legend in Figure 1. Gullies within the public safety concern list are given the highest restoration priority due to 1) the presence of a safety concern and 2) the location on public property. Because cities and other local government units manage public property, there is less complexity in jurisdiction and partnership to manage and restore gullies. Projects on private property often have complexities that could lead to legal or statutory conflicts. In contrast, gullies located on private land with no safety concerns are categorized as lower restoration priority due to the complexity of project planning on private land and the lack of safety concerns near the gully.

Part 2 consists of assigning points to each gully to rank gullies within their given categories. Detailed descriptions of the process for Part 1 and Part 2 are found in the following sections.

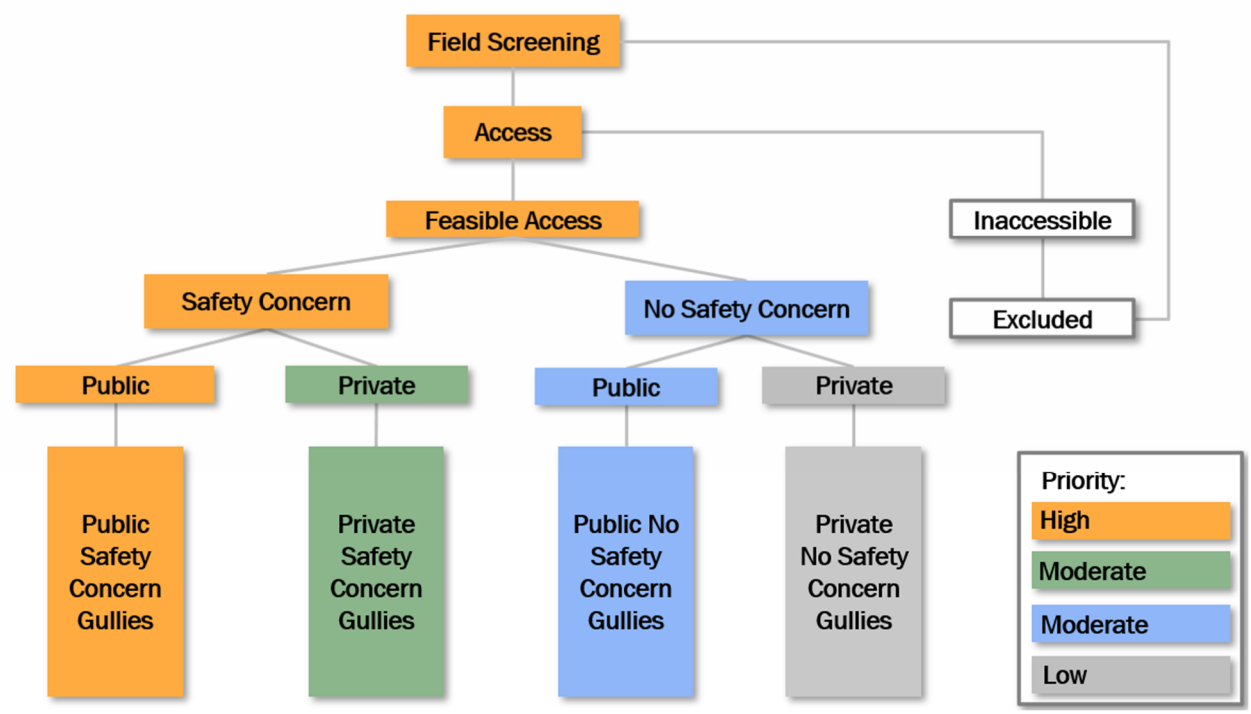



Figure 1. Lower Minnesota River Watershd District Overview Gully Categorization Flow Chart

## Part 1: Organization of gullies into their appropriate category

***Field Screening:*** During fieldwork, it must be determined if gully sites do not have gully-defining features. Gullies may have been repaired or have self-stabilized or been misrepresented during desktop analysis, and do not have the defining features of a gully. To determine if a gully should be included in the ranking, fieldwork staff should consider:

1. Does the gully have gully-defining features such as overhanging banks, a headcut, slumping, or signs of erosion?
2. Has the gully already been repaired or has it self-stabilized since last assessed?

Sorting: If a gully does not have gully-defining features, it is excluded from the ranking and potential project list.

***Accessibility:*** Prior to ranking, each gully must be evaluated for accessibility. For a gully to be restored, it must be accessible by fieldwork staff to assess a gully's condition. Sites that are deemed inaccessible by fieldwork staff are excluded from the ranking process. To determine the accessibility of a gully, the reviewer must consider:

1. Is the gully accessible on foot?
2. Are slopes extremely steep or unstable that may limit the ability for fieldwork staff to safely reach the gully?

Sorting: If a gully is not accessible by foot due to safety concerns, the gully is categorized as inaccessible and excluded from the ranking and potential project list.

***Infrastructure/Safety:*** Each gully must be categorized by its proximity to infrastructure to assess whether there is a safety concern. Many high-erosion potential gullies are found to be actively eroding near man-made infrastructure and areas with significant foot traffic. This encroachment is considered a safety hazard due to the potential for both infrastructure and people to fall into the eroding gullies. Thus, gullies found to be within 50 feet of residential homes, garages, sheds, private non-residential buildings, roads, trails, and railroad tracks are determined to be more urgent candidates for future restoration projects. Gullies beyond 50 feet from infrastructure were/are not considered an immediate safety concern.

Sorting: Gullies within 50 feet of infrastructure are categorized as having a safety concern.

***Property Type:*** The final categorization of gullies is by property type. Gullies located on private property are typically more difficult for watershed districts to restore due to legal and statutory complexities. However, it is important to notify property owners of potential gully risks on their property and monitor their progression, which is why they are still included in the ranking. Gullies on public property are considered a higher priority because public entities hold jurisdiction over these gullies, and it is typically easier to form partnerships and establish funding for gully restoration. Gullies are separated into two categories: private or public property.

Sorting: Gullies are categorized by their property type (private or public) and are separated into their own list.

At the end of Part 1, all gullies should be categorized into one of four lists: Public Safety Concern, Private Safety Concern, Public No Safety Concern, and Private No Safety Concern

## Part 2: Assigning points to gullies within their given categories

In Part 2 of the gully ranking process, gullies are assigned point values that rank the gullies within their respective categories. Gullies are assigned points using the erosion potential score, LMRWD impact tier, and the number of Minnesota Pollution Control Agency (MPCA) sites within a one-mile radius (Table 1) to determine the final gully ranking score for each gully. Gullies with higher overall ranking scores in each of their respective categories are prioritized for restoration within their respective categories with Public Safety Concern gullies receiving the highest priority over the other categories.

Table 1. Criteria for Gully Ranking and Assigning Points

| Gully Element | Description of Points |
|---|---|
| Erosion Potential Score | Erosion score calculated using the Survey123 gully inventory survey |
| LMRWD Impact Tiers | Tier A: 10 pts |
| | Tier B: 7 pts |
| | Tier C: 4 pts |
| | Tier D: 0 pts |
| MPCA Sites | Active Investigation or Cleanup Sites within 1 mile of gully site (¼ point per site) |
| Overall Ranking Score | Max Score = 61 + number of MPCA Sites |

***Erosion Score:*** Using the Survey123 program, an erosion potential score is calculated by assessing the condition of various features of the gully. Features that are assessed include depth, length, material type, and presence of water. The severity of these features is assigned a point value, as shown in Table 2. These points are then summed into the final erosion score that quantifies the erosion potential of the gully.

Scoring: Erosion potential score is taken directly from the Survey123 results and added into the final gully ranking score.

Table 2. Erosion Potential Features and Point Values

| | Low Erosion Potential | | Moderate Erosion Potential | | High Erosion Potential | |
|---|---|---|---|---|---|---|
| | Description | Pts | Description | Pts | Description | Pts |
| Length | Gully length less than 50 feet | 1 | Gully length between 50 and 100 feet | 3 | Gully length greater than 100 feet | 5 |
| Depth | Gully depth less than 3 feet | 1 | Gully depth between 3 and 15 feet | 3 | Gully depth greater than 15 feet | 5 |
| Bottom Width | Bottom width greater than 5 feet wide | 1 | Bottom width 1 to 5 feet wide | 3 | Less than 1 feet wide or V-shaped | 5 |
| Bottom Condition | Gully bottom is armored, bedrock, or heavily vegetated | 1 | Some vegetation present | 3 | No vegetation, or bare soil | 5 |
| Gully Material | General gully material is bedrock or gravel, cobbles, or boulders | 1 | Fine-grained cohesive material | 5 | Sand | 10 |
| Gully Shape | Trapezoid | 1 | U-shaped | 3 | V-shaped | 5 |
| Bank Angle | Obtuse (> 90 degrees or flat) | 1 | Mid-range (45 to 90 degrees) | 3 | Acute (< 45 degrees or undercut) | 5 |
| Bank Condition | Heavy vegetation | 1 | Some vegetation present | 3 | Bare soil | 5 |
| Seeps | No seeps identified | 0 | - | - | Observed evidence of groundwater upwelling, springs, or water seepage in gully | 1 |
| Stormwater Runoff | No stormwater outfalls identified | 0 | - | - | Drainage feature or stormwater outfall observed | 1 |
| Degradation | Low | 0 | Moderate | - | Severe | 1 |
| Aggradation | Low | 0 | Moderate | - | Severe | 1 |
| Trees | No leaning trees noted | 0 | - | - | Leaning trees or fallen trees observed in channel | 1 |

| | Low Erosion Potential | | Moderate Erosion Potential | | High Erosion Potential | |
|---|---|---|---|---|---|---|
| | Description | Pts | Description | Pts | Description | Pts |
| Slumping | No slumps or flattened banks noted | 0 | - | - | Slumping or flattened banks observed | 1 |

***LMRWD Impact Tiers:*** Gullies have the potential to contribute large amounts of sediment to downstream water and natural resources, therefore, their contribution to nearby resources must be evaluated. Sediment deposition in these resources is generally quantified by measuring total suspended solids (TSS) or turbidity. High volumes of TSS may lead to recreational and habitat impairments. To determine which sites are of higher priority for restoration, LMRWD impact tiers were created to categorize the gully sites based on proximity and impact to LMRWD natural resources. The impact tiers from the previous gully prioritization exercise completed in 2021 were modified to further categorize and rank impacts to LMRWD water resources. The primary difference is that the steep slopes overlay district (SSOD) was removed from the tiers because nearly all the gullies that were surveyed in 2023 were already located in the SSOD (Table 3).

Table 3. Compairson of Previous and Current Impact Tiers

| Previous Impact Tiers (Current Impact Tier) | Previous Impact Tier Description | Current Impact Tiers Description |
|---|---|---|
| Tier I – Critical Impact (A) | High value resource area or steep slope overlay district (SSOD) | High value resource area |
| Tier II – Serious Impact (B) | Impaired waterbody or direct tributary watershed to Tier I | Impaired waterbody or tributary to a high value resource |
| Tier III – Marginal Impact (C) | Strategic resource or direct tributary watershed to Tier II | Strategic resource or tributary to impaired water bodies |
| Tier IV – Low Impact (D) | All other resources | All other resources |

The new impact tiers are categorized as A through D where Tier A is of the highest priority due to its proximity to valuable LMRWD resources. Point values for each tier are assigned by giving the highest tier (Tier A) approximately one fifth of the maximum erosion potential score (51 points), to ensure that the erosion potential score remains the primary driver of the gully ranking score. The new impact tiers, their description and associated point values are shown in Table 4.

Table 4. LMRWD Impact Tiers and Associated Point Values

| Impact Tiers | Tier Description | Point Value |
|---|---|---|
| Tier A – Critical Impact | Gullies are within the watershed of high value resources such as calcareous fens and trout streams | 10 points |
| Tier B – Serious Impact | Gullies are within the watershed of Minnesota Pollution Control Agency impaired water bodies[1] or within the watershed of tributaries to high value resources | 7 points |
| Tier C – Marginal Impact | Gullies within the watershed of strategic resources or tributary to impaired water bodies | 4 points |
| Tier D – Low Impact | Gullies in the LMRWD that do not fall into any previous category | 0 points |

These impact tiers are related to the LMRWD Watershed Management Plan's goals, policies, and management strategies to ensure that the recommended gully restoration projects fall in line with the LMRWD's mission to manage and protect the Minnesota River and other water resources within the district. The gully locations (displayed as pink triangles) in their respective tiers are shown in Figure 2.

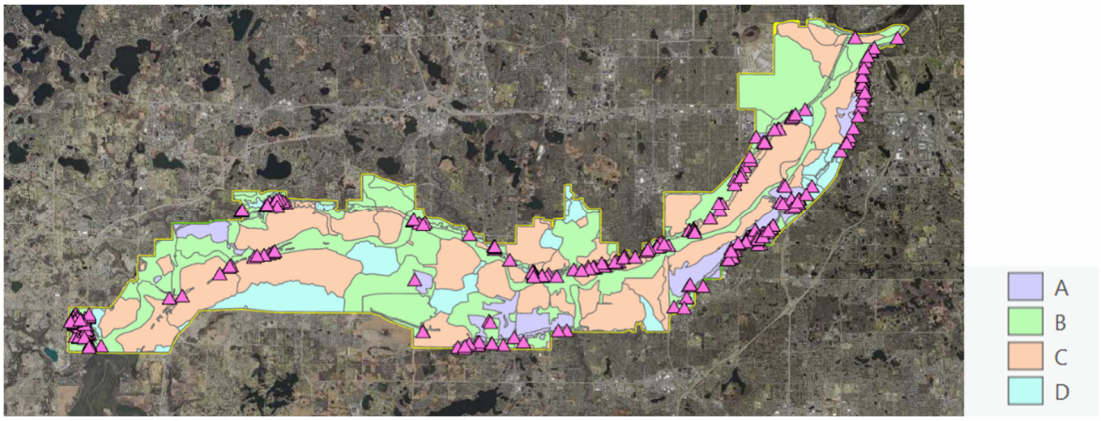



Figure 2. Gully Sites and LMRWD Impact Tiers

Scoring: Gullies are separated into their given tier based on their proximity to LMRWD Resources. Each Tier (A-D) is given a point value that contributes to the total ranking score for each gully.

***MPCA Water Quality Sites:*** The MPCA has a database titled "What's in my Neighborhood", which allows the public to see locations of businesses that have applied for and received various types of environmental permits and registrations from the MPCA. Additionally, the MPCA has

[1] All impaired waterbodies are included in this analysis regardless of the specific impairment parameter. This assumes that impaired waterbodies have a fragile ecosystem that is at higher risk for degradation even if the waterbody is not impaired for parameters that are directly related to sediment discharge and gully erosion such as TSS and Turbidity.

identified potentially contaminated sites. These sites are classified as Active Investigation or Cleanup sites within the database and are sites where hazardous substances may be or have been present and the MPCA is working to identify risks and appropriate remediation strategies. Active investigation or cleanup sites were included in the gully ranking by assigning a quarter, 0.25, or 1/4 point to each MPCA site that is located within a one-mile radius from the gully site. A greater number of MPCA sites within the radius moves the gully higher in the ranking due to potential for hazardous waste to be exposed by the gully or conveyed through the gully. Figure 3 shows the gully sites (displayed as pink triangles) in relation to the MPCA sites (displayed as purple dots).

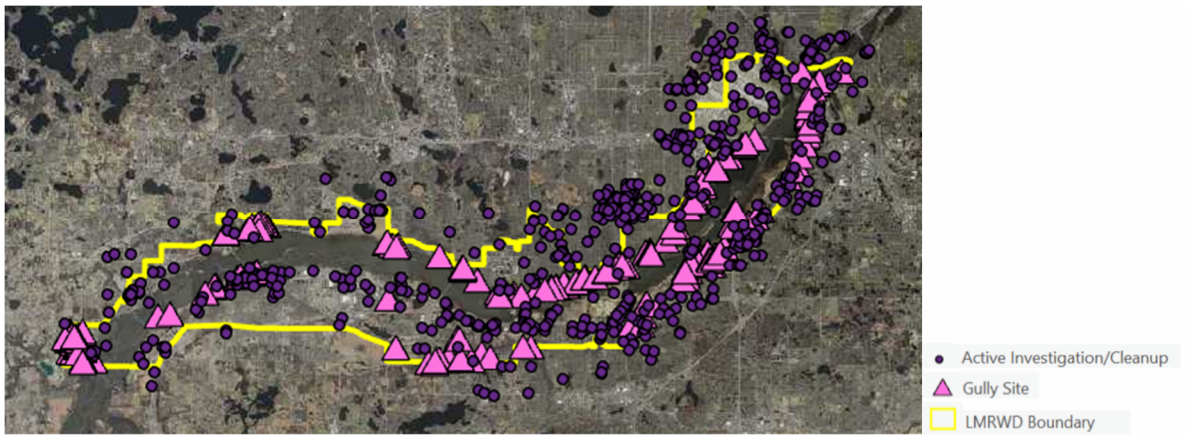



Figure 3. Gully Sites and MPCA Water Quality Sites

Scoring: Each gully (pink triangle) is given a one-mile radius. Each MPCA active investigation or cleanup site (purple dot) within the radius of a gully is assigned 0.25 of a point. These points are then added into the total ranking score.

At the end of Part 2, all gullies should be ranked based on their overall ranking score within their respective categories.

# Appendix C
# 2023 Gully Ranking by Category

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **BVL62** | 47 | 10 | 4.5 | 61.5 |
| **SHK1** | 42 | 7 | 8 | 57 |
| **SHK10** | 42 | 7 | 8 | 57 |
| **MDH33** | 42 | 10 | 3.5 | 55.5 |
| **BVL16** | 40 | 10 | 4.5 | 54.5 |
| **MDH38** | 40 | 10 | 3.25 | 53.25 |
| **BVL15** | 39 | 10 | 3.75 | 52.75 |
| **BLM67** | 36 | 10 | 5.75 | 51.75 |
| **MDH21** | 38 | 10 | 2.75 | 50.75 |
| **BLM145** | 44 | 4 | 2.5 | 50.5 |
| **MDH8** | 37 | 10 | 3.25 | 50.25 |
| **MDH16** | 37 | 10 | 3 | 50 |
| **CVR92** | 42 | 7 | 0.5 | 49.5 |
| **EDP16** | 42 | 7 | 0.5 | 49.5 |
| **BVL31** | 32 | 7 | 9.5 | 48.5 |
| **MDH7** | 35 | 10 | 3.5 | 48.5 |
| **BVL56** | 37 | 10 | 1.5 | 48.5 |
| **MDH34** | 35 | 10 | 3.25 | 48.25 |
| **BVL11** | 31 | 10 | 7 | 48 |
| **EGN17** | 29 | 10 | 8.75 | 47.75 |
| **BVL50** | 32 | 10 | 5.75 | 47.75 |
| **BVL12** | 35 | 10 | 2.25 | 47.25 |
| **BLM148** | 40 | 4 | 2.75 | 46.75 |
| **EGN3** | 28 | 10 | 8.25 | 46.25 |
| **BVL14** | 32 | 10 | 4.25 | 46.25 |
| **BLM169** | 39 | 4 | 3 | 46 |
| **BVL37** | 29 | 10 | 6.75 | 45.75 |
| **EGN24** | 31 | 10 | 4.75 | 45.75 |
| **SHK15** | 38 | 4 | 3.5 | 45.5 |
| **BLM142** | 41 | 0 | 4 | 45 |
| **BLM32** | 38 | 4 | 2.5 | 44.5 |
| **BVL38** | 29 | 10 | 5.25 | 44.25 |
| **MDH19** | 31 | 10 | 3.25 | 44.25 |
| **CVR25** | 36 | 7 | 1 | 44 |
| **EGN34** | 26 | 10 | 7.5 | 43.5 |
| **MDH31** | 30 | 10 | 3.25 | 43.25 |
| **CVR24** | 35 | 7 | 0.75 | 42.75 |
| **SHK16** | 32 | 7 | 3.5 | 42.5 |
| **SHK11** | 27 | 7 | 8 | 42 |
| **MDH39** | 29 | 7 | 5.5 | 41.5 |
| **BLM43** | 35 | 4 | 2.25 | 41.25 |

Public Safety Concern Gullies

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **EGN36** | 23 | 10 | 7.75 | 40.75 |
| **SHK61** | 30 | 7 | 3.75 | 40.75 |
| **MDH37** | 37 | 0 | 3.75 | 40.75 |
| **EDP9** | 40 | 0 | 0.75 | 40.75 |
| **BVL47** | 28 | 10 | 2.5 | 40.5 |
| **BVL60** | 26 | 10 | 4.25 | 40.25 |
| **EGN2** | 21 | 10 | 9 | 40 |
| **MDH15** | 26 | 10 | 3 | 39 |
| **BLM95** | 31 | 4 | 3.75 | 38.75 |
| **EGN7** | 21 | 10 | 7.5 | 38.5 |
| **MDA57** | 26 | 7 | 5.5 | 38.5 |
| **BVL30** | 25 | 10 | 3.25 | 38.25 |
| **BLM163** | 27 | 7 | 4.25 | 38.25 |
| **BVL39** | 25 | 10 | 2.5 | 37.5 |
| **BLM88** | 29 | 4 | 4 | 37 |
| **EDP15** | 30 | 7 | 0 | 37 |
| **SVG17** | 23 | 10 | 3.75 | 36.75 |
| **EGN42** | 24 | 10 | 2.75 | 36.75 |
| **BVL55** | 24 | 10 | 2.5 | 36.5 |
| **CVR58** | 29 | 7 | 0.5 | 36.5 |
| **EGN8** | 18 | 10 | 8.25 | 36.25 |
| **SHK58** | 23 | 10 | 3 | 36 |
| **EGN13** | 22 | 10 | 3.75 | 35.75 |
| **BVL67** | 23 | 10 | 2.75 | 35.75 |
| **CVR90** | 27 | 7 | 1.5 | 35.5 |
| **BLM158** | 28 | 7 | 0.5 | 35.5 |
| **EDP18** | 27 | 7 | 0.75 | 34.75 |
| **BVL48** | 21 | 10 | 3.25 | 34.25 |
| **CHH2** | 33 | 0 | 1.25 | 34.25 |
| **BLM54** | 28 | 4 | 2 | 34 |
| **MDH55** | 20 | 10 | 3.25 | 33.25 |
| **MDH20** | 20 | 10 | 3.25 | 33.25 |
| **MDH35** | 29 | 0 | 4.25 | 33.25 |
| **BLM69** | 17 | 10 | 6 | 33 |
| **CVR54** | 25 | 7 | 1 | 33 |
| **BVL51** | 20 | 10 | 2.75 | 32.75 |
| **EGN43** | 19 | 10 | 2.75 | 31.75 |
| **BLM28** | 27 | 4 | 0.75 | 31.75 |
| **MDA1** | 21 | 7 | 3.25 | 31.25 |
| **EGN12** | 26 | 0 | 5.25 | 31.25 |
| **SHK62** | 18 | 7 | 6 | 31 |

## Public Safety Concern Gullies

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **EDP14** | 23 | 7 | 0.75 | 30.75 |
| **BLM51** | 22 | 7 | 1.5 | 30.5 |
| **BLM157** | 21 | 7 | 0.5 | 28.5 |
| **CVR60** | 21 | 7 | 0.5 | 28.5 |
| **MDH28** | 23 | 0 | 4.25 | 27.25 |
| **SHK55** | 26 | 0 | 1 | 27 |
| **FSN4** | 18 | 0 | 7 | 25 |
| **SHK51** | 23 | 0 | 1 | 24 |
| **JKT10** | 17 | 4 | 2.25 | 23.25 |
| **EGN10** | 8 | 10 | 4.25 | 22.25 |
| **CVR28** | 14 | 7 | 0.5 | 21.5 |

Private Safety Concern Gullies

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **BVL3** | 44 | 10 | 7.5 | 61.5 |
| **BLM68** | 44 | 10 | 5.25 | 59.25 |
| **CVR81** | 50 | 7 | 1.5 | 58.5 |
| **BVL13** | 42 | 10 | 4.5 | 56.5 |
| **BVL2** | 38 | 10 | 7.5 | 55.5 |
| **BVL69** | 38 | 10 | 7.25 | 55.25 |
| **BLM154** | 39 | 10 | 5.75 | 54.75 |
| **EDP2** | 45 | 7 | 0.25 | 52.25 |
| **CVR39** | 43 | 7 | 1.25 | 51.25 |
| **CVR7** | 42 | 7 | 1.5 | 50.5 |
| **BVL10** | 34 | 10 | 6.25 | 50.25 |
| **CVR18** | 40 | 7 | 1.25 | 48.25 |
| **CVR19** | 40 | 7 | 1 | 48 |
| **BLM113** | 40 | 4 | 3.75 | 47.75 |
| **CHH6** | 39 | 7 | 1.5 | 47.5 |
| **BLM18** | 39 | 4 | 4.25 | 47.25 |
| **CVR67** | 38 | 7 | 1.5 | 46.5 |
| **SHK2** | 35 | 10 | 1.25 | 46.25 |
| **BLM84** | 39 | 4 | 3.25 | 46.25 |
| **BVL34** | 29 | 7 | 9.5 | 45.5 |
| **BLM13** | 37 | 4 | 4.5 | 45.5 |
| **BLM165** | 37 | 7 | 1.25 | 45.25 |
| **BLM82** | 37 | 7 | 0.25 | 44.25 |
| **BVL1** | 26 | 10 | 7.5 | 43.5 |
| **BLM156** | 36 | 7 | 0.25 | 43.25 |
| **CVR37** | 35 | 7 | 1 | 43 |
| **BLM70** | 35 | 4 | 3.75 | 42.75 |
| **BLM107** | 35 | 4 | 3.5 | 42.5 |
| **SVG20** | 27 | 10 | 5.25 | 42.25 |
| **CVR49** | 34 | 7 | 1.25 | 42.25 |
| **BLM166** | 33 | 7 | 2 | 42 |
| **BLM100** | 33 | 7 | 1.5 | 41.5 |
| **CVR5** | 33 | 7 | 1.5 | 41.5 |
| **CVR68** | 33 | 7 | 1.5 | 41.5 |
| **BVL63** | 26 | 10 | 5.25 | 41.25 |
| **BLM33** | 35 | 4 | 2.25 | 41.25 |
| **BVL65** | 23 | 7 | 11 | 41 |
| **BVL54** | 20 | 10 | 10.75 | 40.75 |
| **BLM172** | 32 | 7 | 1.75 | 40.75 |
| **CVR23** | 33 | 7 | 0.75 | 40.75 |
| **CVR62** | 32 | 7 | 1.5 | 40.5 |

Private Safety Concern Gullies

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **BVL42** | 27 | 10 | 3 | 40 |
| **CVR79** | 32 | 7 | 1 | 40 |
| **BLM93** | 33 | 4 | 3 | 40 |
| **CVR75** | 39 | 0 | 1 | 40 |
| **SVG18** | 26 | 10 | 3.5 | 39.5 |
| **CVR47** | 31 | 7 | 1.5 | 39.5 |
| **CVR40** | 31 | 7 | 1.25 | 39.25 |
| **BLM111** | 32 | 4 | 3.25 | 39.25 |
| **BLM131** | 29 | 7 | 3 | 39 |
| **EDP10** | 38 | 0 | 1 | 39 |
| **CVR66** | 30 | 7 | 1.5 | 38.5 |
| **BLM167** | 31 | 4 | 3.5 | 38.5 |
| **CVR34** | 37 | 0 | 1.5 | 38.5 |
| **EGN25** | 19 | 10 | 8.75 | 37.75 |
| **BLM57** | 30 | 7 | 0.75 | 37.75 |
| **BLM143** | 29 | 4 | 4.5 | 37.5 |
| **BVL45** | 22 | 10 | 4.75 | 36.75 |
| **BVL68** | 21 | 10 | 5.25 | 36.25 |
| **EGN6** | 21 | 10 | 5.25 | 36.25 |
| **BLM98** | 28 | 7 | 1.25 | 36.25 |
| **CVR94** | 35 | 0 | 1.25 | 36.25 |
| **CVR36** | 28 | 7 | 1 | 36 |
| **BVL40** | 23 | 10 | 2.5 | 35.5 |
| **BLM112** | 28 | 4 | 3.25 | 35.25 |
| **BLM135** | 25 | 7 | 3 | 35 |
| **CVR46** | 27 | 7 | 1 | 35 |
| **BLM170** | 26 | 7 | 1.75 | 34.75 |
| **BLM152** | 27 | 4 | 3.75 | 34.75 |
| **BLM141** | 26 | 7 | 1.5 | 34.5 |
| **CVR22** | 27 | 7 | 0.5 | 34.5 |
| **BLM105** | 26 | 4 | 3.75 | 33.75 |
| **CVR100** | 32 | 0 | 1.5 | 33.5 |
| **BLM83** | 26 | 4 | 3.25 | 33.25 |
| **BLM80** | 26 | 7 | 0.25 | 33.25 |
| **BLM140** | 28 | 4 | 1.25 | 33.25 |
| **CVR53** | 25 | 7 | 1 | 33 |
| **SHK49** | 32 | 0 | 1 | 33 |
| **BLM90** | 25 | 7 | 0.75 | 32.75 |
| **BVL44** | 19 | 10 | 3.5 | 32.5 |
| **CVR87** | 31 | 0 | 1.5 | 32.5 |
| **BVL20** | 19 | 10 | 3.25 | 32.25 |

Private Safety Concern Gullies

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **CVR91** | 24 | 7 | 1 | 32 |
| **CVR96** | 31 | 0 | 1 | 32 |
| **BLM153** | 24 | 4 | 3.75 | 31.75 |
| **BVL57** | 18 | 7 | 6.5 | 31.5 |
| **SVG28** | 18 | 10 | 3.5 | 31.5 |
| **BLM122** | 25 | 4 | 2.5 | 31.5 |
| **BLM134** | 21 | 7 | 3.25 | 31.25 |
| **BLM59** | 23 | 7 | 1.25 | 31.25 |
| **CVR48** | 23 | 7 | 1.25 | 31.25 |
| **BLM138** | 25 | 4 | 2.25 | 31.25 |
| **SHK50** | 30 | 0 | 1 | 31 |
| **CVR88** | 29 | 0 | 1.75 | 30.75 |
| **CVR41** | 29 | 0 | 1.5 | 30.5 |
| **CVR16** | 29 | 0 | 1.5 | 30.5 |
| **BLM132** | 19 | 7 | 3.5 | 29.5 |
| **EGN32** | 12 | 10 | 7 | 29 |
| **CVR61** | 19 | 7 | 1.5 | 27.5 |
| **MDH54** | 23 | 0 | 4.5 | 27.5 |
| **CVR101** | 23 | 0 | 1.5 | 24.5 |
| **BLM118** | 17 | 4 | 3.25 | 24.25 |
| **BLM58** | 14 | 7 | 1.25 | 22.25 |
| **CVR80** | 14 | 7 | 1.25 | 22.25 |
| **SHK39** | 21 | 0 | 1 | 22 |
| **BLM161** | 15 | 4 | 1.5 | 20.5 |
| **SHK44** | 16 | 0 | 1 | 17 |

Public No Safety Concern Gullies

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **CVR55** | 45 | 7 | 0.75 | 52.75 |
| **SHK3** | 37 | 7 | 8 | 52 |
| **CVR56** | 43 | 7 | 1 | 51 |
| **EDP17** | 39 | 7 | 2.25 | 48.25 |
| **BVL9** | 34 | 10 | 2.75 | 46.75 |
| **EDP12** | 37 | 7 | 1.5 | 45.5 |
| **BVL5** | 31 | 10 | 3.5 | 44.5 |
| **BLM116** | 38 | 4 | 2.5 | 44.5 |
| **EDP13** | 34 | 7 | 1.75 | 42.75 |
| **SHK67** | 28 | 7 | 6.5 | 41.5 |
| **EGN29** | 23 | 10 | 8 | 41 |
| **CVR11** | 33 | 7 | 1 | 41 |
| **SVG4** | 27 | 10 | 3.75 | 40.75 |
| **EGN39** | 22 | 10 | 8.25 | 40.25 |
| **BVL49** | 28 | 10 | 1.75 | 39.75 |
| **BVL58** | 25 | 10 | 3.5 | 38.5 |
| **EGN26** | 20 | 10 | 8 | 38 |
| **CVR57** | 29 | 7 | 1 | 37 |
| **CHH8** | 35 | 0 | 1.25 | 36.25 |
| **BVL4** | 23 | 10 | 2.25 | 35.25 |
| **BLM121** | 26 | 4 | 2 | 32 |
| **CHH7** | 30 | 0 | 1.25 | 31.25 |
| **BLM94** | 23 | 4 | 3.75 | 30.75 |
| **EDP11** | 29 | 0 | 1 | 30 |
| **JKT9** | 33 | 7 | 2.5 | 42.5 |
| **EDP5** | 42 | 0 | 0.5 | 42.5 |
| **EDP7** | 41 | 0 | 1 | 42 |
| **EGN31** | 23 | 10 | 8.5 | 41.5 |
| **EDP4** | 39 | 0 | 0.25 | 39.25 |

Private No Safety Concern Gullies

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **BLM78** | 50 | 7 | 0.25 | 57.25 |
| **CVR38** | 47 | 7 | 1.5 | 55.5 |
| **CVR76** | 43 | 7 | 1 | 51 |
| **CVR6** | 42 | 7 | 1.5 | 50.5 |
| **SHK6** | 38 | 10 | 1.25 | 49.25 |
| **CVR15** | 47 | 0 | 1 | 48 |
| **BLM15** | 40 | 4 | 3.75 | 47.75 |
| **EGN5** | 29 | 10 | 8.5 | 47.5 |
| **CVR3** | 39 | 7 | 1.5 | 47.5 |
| **CVR8** | 38 | 7 | 1.5 | 46.5 |
| **BLM79** | 39 | 7 | 0.25 | 46.25 |
| **CHH9** | 37 | 7 | 1.5 | 45.5 |
| **BLM102** | 37 | 7 | 1.25 | 45.25 |
| **BLM101** | 37 | 7 | 1.25 | 45.25 |
| **CVR98** | 37 | 7 | 1.25 | 45.25 |
| **SHK36** | 33 | 10 | 1.25 | 44.25 |
| **BLM133** | 34 | 7 | 3.25 | 44.25 |
| **CVR71** | 43 | 0 | 1.25 | 44.25 |
| **CVR74** | 43 | 0 | 1 | 44 |
| **CVR10** | 42 | 0 | 1.25 | 43.25 |
| **CVR44** | 35 | 7 | 1 | 43 |
| **CVR9** | 34 | 7 | 1.5 | 42.5 |
| **SHK43** | 31 | 10 | 1.25 | 42.25 |
| **BLM162** | 34 | 4 | 3.5 | 41.5 |
| **BLM123** | 35 | 4 | 2.5 | 41.5 |
| **CVR43** | 40 | 0 | 1.5 | 41.5 |
| **CVR45** | 33 | 7 | 1 | 41 |
| **SHK8** | 29 | 10 | 1.25 | 40.25 |
| **BLM77** | 24 | 10 | 5.75 | 39.75 |
| **CVR27** | 38 | 0 | 1.25 | 39.25 |
| **EGN4** | 23 | 7 | 8.25 | 38.25 |
| **BLM120** | 32 | 4 | 1 | 37 |
| **CVR65** | 35 | 0 | 1.25 | 36.25 |
| **BLM168** | 28 | 4 | 3.25 | 35.25 |
| **CVR13** | 33 | 0 | 1.5 | 34.5 |
| **BLM117** | 27 | 4 | 3.25 | 34.25 |
| **CVR70** | 33 | 0 | 1.25 | 34.25 |
| **CHH4** | 33 | 0 | 1.25 | 34.25 |
| **SVG29** | 26 | 7 | 0.75 | 33.75 |
| **SVG27** | 25 | 7 | 0.75 | 32.75 |
| **CVR50** | 31 | 0 | 1.5 | 32.5 |

## Private No Safety Concern Gullies

| Gully ID | Erosion Score Points | Impact Tier Points | MPCA Points | Overall Ranking Score |
|---|---|---|---|---|
| **SHK48** | 28 | 0 | 1 | 29 |
| **CHH5** | 19 | 7 | 1.5 | 27.5 |
| **JKT5** | 45 | 4 | 1 | 50 |
| **SVG26** | 29 | 7 | 0.5 | 36.5 |

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 5. C – Friends of the MN Valley report on County Fair Project and 2024 request**

**Prepared By**
Linda Loomis, Administrator

**Summary**
Mr. Ted Suss and others (Izaak Walton Green Crew) will be present at the meeting to inform the Board of the progress on the County Fair project. The last County Fair will be the Le Sueur County Fair, August 17th through August 20th in Le Center. The final report will be presented at the September 20, 2023, Board of Manager meeting.

Friends of the MN Valley has requested the Board of Managers consider repeating the County Fair project in 2024 and is requesting $10,000 for a 2024 County Fair project.

Friends is also requesting the LMRWD support its River Watch program and contribute $20,000 for 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 is attached for the Board's information.

In addition, Friends of the MN Valley have requested payment of funds for the 2023 County Fair project. An invoice is attached. At the March 2023 Board of Managers meeting the Board approved $15,000 for the 2023 County Fair Project. Friends is requesting partial payment in the amount of $10,000. The Board should authorize payment of the invoice

**Attachments**
Request to fund 2024 County Fair Project
Request to fund Friends of the MN Valley River Watch
State of Minnesota River Watch Report dated 1-15-2022
Friends of the Minnesota Valley Invoice 2023-01 dated July 1, 2023

**Recommended Action**
Motion to authorize payment of Friends of the Minnesota Valley invoice 2023-01 in the amount of $10,000
The Board should provide direction to staff regarding inclusion of funding requests in 2024 budget

**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 iver 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

BOARD OF WATER AND SOIL RESOURCES

# State of Minnesota River Watch Report

01/15/2022

## State of Minnesota River Watch Report

Minnesota Board of Water and Soil Resources
520 Lafayette Road North
St. Paul, MN, 55155
https://bwsr.state.mn.us

As requested by Minnesota Statute 3.197: This report cost approximately $7,020 to prepare, including staff time, printing and mailing expenses.

*Upon request, this material will be made available in an alternative format such as large print, Braille or audio recording. Printed on recycled paper.*

# State of Minnesota River Watch Report

**Report Purpose**

This report provides a framework to develop, implement, and fund a statewide River Watch program. Per ML 2021, 1st Special Session, Chapter 1, Article 2, Section 6(r), the legislature has directed the following:

*(r) The board, in consultation with an advisory group consisting of one representative from the Department of Natural Resources, one representative from the Association of Minnesota Counties, one representative from Friends of the Minnesota Valley, and one representative from the Red River Watershed Management Board, must study the development, implementation, and funding of a statewide river watch program. By January 15, 2022, the board must submit a report with recommendations and proposed legislation to the chairs and ranking minority members of the house of representatives and senate environment finance and legacy committees.*

This report was prepared for MN BWSR by the International Water Institute, a non-profit organization focused on watershed education and research. Report review and guidance were provided by an advisory group (Table 1).

Table 1. Advisory Group Members[1].

| **River Watch Study Advisory Group** | | |
|---|---|---|
| Rob Sip | Red River Watershed Management Board | Executive Director |
| Ted Suss | Friends of the Minnesota River Valley | Executive Director |
| Nick Kludt | MN DNR | Fisheries Specialist |
| Angie Becker Kudelka | MN BWSR | Assistant Director |
| Brian Martinson | Assoc. of MN Counties | Env. Nat. Res. Policy |

[1] MPCA was also invited to review the report.

**Background**

A River Watch program is generally defined in Minnesota as water quality monitoring which is conducted by volunteers, usually school-aged youth. In practice, River Watch includes a comprehensive suite of classroom and outdoor experiences that build awareness of watershed connections, increase knowledge of water quality principles, and instill a sense of place in the local environment.

*River Watch History:* River Watch (RW) launched as a pilot in 1994 (Sand Hill watershed, Red River of the North Basin) to engage students and citizens in watershed education through water quality monitoring. The pilot spurred two key River Watch program efforts in the late 1990s: 1) Red River Basin River Watch program; 2) and Rivers Council of Minnesota River Watch program with a focus on the Upper Mississippi, Minnesota, and Rainy River Basins. Since 1994, The International Water Institute and Red River Watershed Management Board have supported Red River Basin RW schools. The Rivers Council of Minnesota disbanded in 2009 and has not provided services since. Currently, Hennepin County and the Friends of the Minnesota Valley offer limited RW programming to school-age youth.

*Red River Basin River Watch Program:* Today, the International Water Institute coordinates the only comprehensive River Watch (RW) program in Minnesota. The International Water Institute's Red River Basin RW has grown to become a comprehensive watershed education continuum incorporating cross-curriculum and grade-span education programming through a suite of available activities tailored to give students a deeper understanding of water resources. Red River Basin RW is delivered through teams comprised of students and teachers led by International Water Institute Education staff. River Basin RW uses state-of-the-art scientific equipment participants are trained to use and maintain. Field-based monitoring experiences provide students with a unique perspective of their watershed and allow them to investigate real-world conditions in their community.

In addition to water quality monitoring, Red River Basin RW employs macroinvertebrate sampling, River of Dreams, and River Explorers programming to connect students to their watershed through science, geography, technology, and communications. Macroinvertebrate monitoring activities help understand and measure ecosystem health and its relationship to water quality. River Explorers connects macroinvertebrate and water quality monitoring to entire stream ecosystems through planned kayak trips that provide a unique perspective of the river and allow students to see the real-world connections to eroding banks, pools, and riffles. River of Dreams targets younger ($4^{th}$ - $5^{th}$ grade) students who learn watershed terminology and understand their watershed through designing and launching a 14" cedar canoe that can be tracked online as it travels throughout the watershed. During the summer months, RW opportunities are also available for teachers and students to attend training that directly connects to the classroom. And finally, the annual RW Forum provides students opportunities to also take part in small group sessions, present findings and share experiences from the previous year's research projects, and explore emerging resource issues presented by keynote speakers.

The Red River Basin RW Annual Report 2020 is provided as an example of an advanced RW program. The report details yearly activities and program costs.

*River Watch Continuum – 3 Tiers of RW:* Successful RW programs can take multiple years to mature as teachers, administrators, staff leaders, and community members, figure out how best to implement the program. The RW Continuum was developed to create a mutual understanding between RW staff and RW school teams as to how many activities they would be able to participate in.

- Tier 1 – Each RW team in this tier will participate in one activity per year. The activities can alternate from year to year. This tier is great for RW teachers to get introduced to all RW activities and the benefits of each educational activity.
- Tier 2 - RW teams in this tier will complete at least two or more activities per year and are encouraged to complete the RW Forum Assignment. This tier creates a closer connection between RW students and their watershed.
- Tier 3 – Each RW team in this tier will complete every RW activity (e.g., monitoring, River Explorers and River of Dreams) each year and will complete the RW Forum Assignment due each Spring. This tier provides RW students across the grade span with an understanding of water resources and how communities connect and depend on those resources.

*Current River Watch Programs in MN:* A county by county search completed in November 2021 for active RW programs revealed that 19 of the 87 Minnesota Counties currently have RW activities occurring (Attachment A). Programs vary in size, scope, and activity levels and could be described as falling somewhere in the *River Watch Continuum*.

**Our Shared Challenge**

Government (Federal and State) establish laws and regulations intended to protect our water resources. Within these frameworks, local governments and landowners decide how land is used and developed, how waste is managed, how much water drains into the lakes and rivers, and whether to modify beaches or to fertilize yards. These local and personal decisions directly impact water resource quality.

With over 6,000 water quality impairments, the scope and scale of the state's water quality problems require society to prioritize problems and adopt practical, cost-effective solutions. Unfortunately, many people lack the tools/knowledge necessary to make informed and efficient water resource decisions because the science behind water resource issues required to make informed decisions is seldom taught through a traditional classroom curriculum.

**Value of a Statewide RW Program**

A statewide RW program will enhance students' and community members' science capacity related to water quality issues by providing a base understanding of environmental factors related to these issues.

Students today are increasingly disconnected from the natural environment. RW engages students in hands-on educational programs to better understand how humans interact and affect valuable watershed resources through integrated classroom and outdoor experiences that:

- build awareness of river ecosystems and watershed connections.
- increase student capacity to make informed decisions about their environment.

- instill a sense of place highlighting the historic, economic, and ecological uniqueness of their local watershed.

RW programs increase knowledge, understanding, and appreciation of water resources through education of non-point source pollution, water quality issues, connectivity of our planet's water supply, and how watersheds function. These programs target future decision-makers, elementary through high school-aged students, and teachers (specifically 4th – 12th grade). The majority of teachers have little or no training in water resource issues cause and effects. Teachers are more likely to teach subjects they are familiar with and understand themselves. RW will increase teacher awareness and understanding leading to more classroom activities on water issues.

**Program Development Recommendations**

A successful statewide RW program requires drawing on currently active and successful watershed education program models. Examples include Hennepin County River Watch, Friends of the Minnesota River Valley, and Red River Basin River Watch. Hennepin County and Friends of the Minnesota River Valley deliver programs that fall within different RW tier levels and include water quality monitoring (MN River Valley) and biological monitoring (Hennepin County). Only the Red River Basin RW (Red River) program delivers comprehensive watershed education activities covering all three RW continuum tiers.

Successful RW programs have one thing in common, they were initially developed and supported by local interests that recognized the need to inform and educate students and the community about their water resources. Funding levels required for these programs are based on the activities offered, geographic extent, and number of participants.

Since funding is the limiting factor in statewide RW expansion, a stable and predictable legislative appropriation combined with the local support of LGUs, Joint Powers, and non-profits is required. Eligible RW grant activities should target elementary through high school-aged students, teachers, and youth groups. Examples of effective RW program opportunities suited to a local school, community, and watershed needs are listed below.

- *Water Quality Monitoring:* Collect and record conditions at local rivers and streams using state-of-the-art scientific methods and equipment.
- *Biological Monitoring*: Macroinvertebrate monitoring provides additional insights on watershed and ecosystem health.
- *River Explorers:* Guided kayak excursions on local rivers to observe and document watershed conditions.
- *Annual Teacher and Student Training:* proper sampling techniques, data analysis and provide access to resources and experts in current watershed issues.
- *River Watch Forum:* Annual event challenging students to learn and share about emerging local watershed issues.
- *Real-Time Monitoring:* Students build, deploy and maintain real-time water quality monitoring stations. Data analyzed and used to characterize stream water quality.

- *River of Dreams:* A cross-curriculum watershed education program tailored to elementary students. Participants learn watershed terminology and how their sub-watershed fits into their River Basin.

Successful program development across MN requires local stakeholder commitment and some structure to deliver RW programming. Grantee requirements should include local cash match and RW training in the delivery of eligible activities to ensure program consistency. Development will require an investment in coordination activities to build knowledge of program benefits and local support.

**Program Implementation Recommendations**

Implementation begins in mid-2022 (FY23) following a successful legislative appropriation, with the first RW grants awarded in 2024. Phase One of the grant program should then proceed for 5 years to allow for local programs to develop across the state with program review in 2030. The program implementation timeline is below.

*RW Implementation Timeline Yrs. 1-8*

Yr. 1 – Program development (FY23)

- Agency assigned/awarded the grant program lead.
- Grant mechanism and grant details completed.
- Funding allocated.

Yr. 2 - River Watch grant program in place (FY24)

- Release first River Watch RFP.
- Award initial grants for FY24-25 start.

Yrs. 3-8 – RW Grants available (FY25-30)

- Grants awarded and the program continues.
- Reporting and tracking progress.

Yr. 8 – Program Review (FY30)

- Review progress in program development across the state.
- Make funding and grant program adjustments if needed.

**Program Funding Recommendations**

Creating a dedicated statewide RW program will require several funded components and organizational considerations:

1. Create a stable funding source to develop and implement the program and assign an agency to be responsible for a legislative appropriation.

2. Assign an organization or agency as the statewide administrative lead with responsibilities to distribute resources, develop the program, assess local interest, support or hire coordinators, train, oversee and implement the program. *(1.5 FTE = $200K/year).*

3. RW programs should be coordinated within each major MN Basin. *(1 FTE RW Coordinator/basin + 1-2 FTE assistants/basin @ 8 basins @ $250K/year = $2M/year).*

4. Use the Red River Basin RW program as the model for expansion across the State and adopt the following as eligible Minnesota statewide RW activities.
    a. Water Quality Monitoring (River/Stream).
    b. Biological Monitoring (River/Stream).
    c. River Recreation/Observation/Documentation (e.g. River Explorers).
    d. Watershed Geography Activities (e.g. River of Dreams).
    e. Annual Forum.
    f. Annual Teacher/Staff/Student Training.
    g. Lab Equipment, Field Equipment, Travel (bus rental, mileage), Training, Supplies, interns, support staff will be variable depending on coverage *(8 basins @ $150K = $1.2M/year).*

5. Establish eligible grantees as LGUs, Joint Powers, and non-profits.

6. Require grantees to be trained and certified in the delivery of eligible RW activities and make this an eligible grant expense *(3 training events = $45K/year).*

7. Engage Red River Basin RW to assist in MN statewide program development.

8. Engage Red River Basin RW to train and certify local RW sponsors.

9. Evaluate MN Statewide River Watch program in FY30; Make necessary funding and program adjustments.

10. Require biennial program reporting.

11. Continue engaging the Advisory Committee (Table 1) to guide grant program development and expand membership to include the Minnesota Pollution Control Agency (and others as needed).

**Estimated total statewide program investment per year: $3,445,000.**

# *ATTACHMENT A* - **Minnesota River Watch Activities**

**November 2021**

The following information is a result of an effort undertaken by the International Water Institute to find River Watch activities that are currently occurring in the counties across the state of Minnesota. The search was conducted using web resources only. This information should not be considered to be an all-inclusive summary of activities.

**Aitkin County**

- No River Watch Activities Found

**Anoka County**

- No River Watch Activities Found

**Becker County**

- IWI River Watch https://iwinst.org/watershed-education/

**Beltrami County**

- IWI River Watch https://iwinst.org/watershed-education/

**Benton County**

- No River Watch Activities Found

**Big Stone County**

- No River Watch Activities Found

**Blue Earth County**

- No River Watch Activities Found

**Brown County**

- No River Watch Activities Found

**Carlton County**

- No River Watch Activities Found

**Carver County**

- No River Watch Activities Found

**Cass County**

- No River Watch Activities Found

**Chippewa County**

- No River Watch Activities Found

**Chisago County**

- No River Watch Activities Found

**Clay County**

- IWI River Watch https://iwinst.org/watershed-education/

**Clearwater County**

- IWI River Watch https://iwinst.org/watershed-education/

**Cook County**

- No River Watch Activities Found

**Cottonwood county**

- No River Watch Activities Found

**Crow wing county**

- No River Watch Activities Found

**Dakota County**

- No River Watch Activities Found

**Dodge County**

- No River Watch Activities Found

**Douglas County**

- No River Watch Activities Found

**Fairbault County**

- No River Watch Activities Found

**Fillmore County**

- No River Watch Activities Found

**Freeborn County**

- No River Watch Activities Found

**Goodhue County**

- No River Watch Activities Found

**Grant County**

- IWI River Watch https://iwinst.org/watershed-education/

**Hennepin County**

- Hennepin County River Watch https://www.hennepin.us/riverwatch

**Houston County**

- No River Watch Activities Found

**Hubbard County**

- No River Watch Activities Found

**Isanti County**

- No River Watch Activities Found

**Itasca County**

- No River Watch Activities Found

**Jackson County**

- No River Watch Activities Found

**Kanabec County**

- No River Watch Activities Found

**Kandiyohi County**

- No River Watch Activities Found

**Kittson County**

- IWI River Watch https://iwinst.org/watershed-education/

**Koochiching County**

- No River Watch Activities Found

**Lac qui Parle County**

- Friends of the MN Valley River Watch https://www.friendsmnvalley.org/river-watch-program

**Lake County**

- No River Watch Activities Found

**Lake of the Woods County**

- No River Watch Activities Found

**Le Sueur County**
- Friends of the MN Valley River Watch https://www.friendsmnvalley.org/river-watch-program

**Lincoln County**
- No River Watch Activities Found

**Lyon County**
- No River Watch Activities Found

**McLeod County**
- No River Watch Activities Found

**Mahnomen County**
- IWI River Watch https://iwinst.org/watershed-education/

**Marshall County**
- IWI River Watch https://iwinst.org/watershed-education/

**Martin County**
- No River Watch Activities Found

**Meeker County**
- No River Watch Activities Found

**Mille Lacs County**
- No River Watch Activities Found

**Morrison County**
- No River Watch Activities Found

**Mower County**
- No River Watch Activities Found

**Murray County**
- No River Watch Activities Found

**Nicollet County**
- Friends of the MN Valley River Watch https://www.friendsmnvalley.org/river-watch-program

**Nobles County**
- No River Watch Activities Found

**Norman County**

- IWI River Watch https://iwinst.org/watershed-education/

**Olmsted County**

- No River Watch Activities Found

**Otter Tail County**

- IWI River Watch https://iwinst.org/watershed-education/

**Pennington County**

- IWI River Watch https://iwinst.org/watershed-education/

**Pine County**

- No River Watch Activities Found

**Pipestone County**

- No River Watch Activities Found

**Polk County**

- IWI River Watch https://iwinst.org/watershed-education/

**Pope County**

- No River Watch Activities Found

**Ramsey County**

- No River Watch Activities Found

**Red Lake County**

- IWI River Watch https://iwinst.org/watershed-education/

**Redwood County**

- No River Watch Activities Found

**Renville County**

- No River Watch Activities Found

**Rice County**

- No River Watch Activities Found

**Rock County**

- No River Watch Activities Found

**Roseau County**

- IWI River Watch traditionally but currently no schools active

**St. Louis County**

- No River Watch Activities Found

**Scott County**

- No River Watch Activities Found

**Sherburne County**

- No River Watch Activities Found

**Sibley County**

- No River Watch Activities Found

**Stearns County**

- No River Watch Activities Found

**Steele County**

- No River Watch Activities Found

**Stevens County**

- No River Watch Activities Found

**Swift County**

- No River Watch Activities Found

**Todd County**

- No River Watch Activities Found

**Traverse County**

- IWI River Watch https://iwinst.org/watershed-education/

**Wabasha County**

- No River Watch Activities Found

**Wadena County**

- No River Watch Activities Found

**Waseca County**

- No River Watch Activities Found

**Washington County**

- No River Watch Activities Found

**Watonwan County**

- No River Watch Activities Found

**Wilkin County**

- IWI River Watch https://iwinst.org/watershed-education/

**Winona County**

- No River Watch Activities Found

**Wright County**

- No River Watch Activities Found

**Yellow Medicine County**

- No River Watch Activities Found

**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 |
|---|---|
| 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.<br><br>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. | 10,000.00 |

| | |
|---|---|
| **Total** | $10,000.00 |
| **Payments/Credits** | $0.00 |
| **Balance Due** | $10,000.00 |

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 5. C. – 2024 Budget Discussion**

**Prepared By**
Linda Loomis, Administrator

**Summary**
Discussion of the 2024 budget was tabled at the July 19, 2023, Board of Managers meeting. Updated documents are attached. The 2023 year-to-date amounts have been updated. In addition, the LMRWD has met with the City of Chaska regarding the LMRWD contribution to Seminary Fen ravine stabilization project.

The City is planning to implement the recommendations contained in the feasibility report for Ravine C-2. The LMRWD Comprehensive Watershed Management Plan (Plan) has set aside funding for several projects related to Seminary Fen. The City is planning to move ahead with construction of this project ahead of the schedule in the Plan. The LMRWD will not need to apply for a plan amendment to make these changes to the Implementation Plan. Dollar amounts are not changing, only the years the dollars will be used.

The Board should call for a public hearing to approve the 2024 budget and for preliminary certification of the levy for taxes payable 2024 to be held at the September 20, 2023, Board of Managers meeting.

**Attachments**
2023 Estimated Taxable Market Values for Waters Districts from Melissa King, Water Programs Coordinator, BWSR dated July 13, 2023
Certification of apportioned Levies Payable 2024 – LMRWD
Proposed Levy 2024 Worksheet_08162023
2024 Proposed Preliminary Budget_08162023
2024 Proposed Administrative Budget_08162023
2024 Budget line-item explanation_08162023

**Recommended Action**
Provide direction to staff with changes to proposed budget
Motion to call for public hearing pursuant to Section 103D.911 of Minnesota Statutes on Wednesday on September 20, 2023, at 7:00 p.m., in the County Board Room of the Carver County Government Center, 602 East Fourth Street, Chaska, Minnesota 55318 to receive comments on the District's proposed 2024 budget and preliminary tax levy certification for taxes payable in the year 2024

**i. Financing of Area #3**

The LMRWD must match the funds the State of Minnesota has provided for the construction of the Minnesota riverbank stabilization at Area #3. Mr. Shannon Sweeney, David Drown Associates will be present at the meeting to discuss options to raise funds to match the State grant for Area #3. Mr. Sweeney has prepared some information for the Board's information regarding the impact of different funding options available to the LMRWD.

**Attachments**

Letter dated August 11, 2023, re: Eden Prairie Bluff Stabilization Project

**Recommended Action**

Consider options and provide direction to staff

BOARD OF WATER AND SOIL RESOURCES

# Memo

**Date:** July 13, 2023

**To:** Watershed District Administrators and Managers

**From:** Melissa King, Water Programs Coordinator

**Cc:** Jan Voit, Minnesota Watersheds
Rob Sip, Red River Watershed Management Board
BWSR: John Jaschke, Andrea Fish, Justin Hanson, Dave Weirens, Amie Wunderlich, Regional Operations Staff

## RE: 2023 Estimated Taxable Market Values for Watershed Districts

Please find attached a table containing the recently released total estimate market values for 2023 from the Minnesota Department of Revenue.

Session law changes enacted during the 2023 regular session effected the calculation of and increased the annual maximum general fund tax levy for a watershed district (Minn. Stat. § 103D.905, Subd. 3). The session law changes are effective beginning with the 2024 assessment year and thereafter. To calculate the annual maximum general fund tax levy for a particular watershed district:

- Multiply the estimated market value listed in the enclosed table for the watershed district by 0.096 percent (0.00096)
- Compare that calculated value to the maximum general fund levy limit of $500,000
- Use whichever value is less

Please contact me if you have any questions.

Melissa King
Melissa.king@state.mn.us
651.350.8845

Attachment: Taxes Payable 2023 Estimated & Taxable Market Values for Watershed Districts in Minnesota

## *TAXES PAYABLE 2023*

## *ESTIMATED & TAXABLE MARKET VALUES (EMV) FOR WATERSHEDS DISTRICTS IN MINNESOTA*

| Watershed Code | Watershed Name | Total EMV |
|---|---|---|
| 001 | Bear Valley Watershed District | $ 258,627,300 |
| 002 | Cedar River Watershed District | $ 3,908,802,900 |
| 003 | Belle Creek Watershed District | $ 471,829,000 |
| 005 | Buffalo Creek Watershed District | $ 2,904,328,200 |
| 007 | Buffalo-Red River Watershed District | $ 10,495,228,500 |
| 008 | North Fork Crow River Watershed District | $ 1,878,253,900 |
| 009 | Clearwater River Watershed District | $ 2,271,825,000 |
| 010 | Carnelian-Marine-St. Croix Watershed District | $ 2,445,764,300 |
| 013 | Coon Creek Watershed District | $ 23,234,183,700 |
| 014 | South Washington Watershed District | $ 18,738,687,700 |
| 015 | Cormorant Lakes Watershed District | $ 815,308,600 |
| 016 | Crooked Creek Watershed District | $ 464,753,900 |
| 018 | High Island Watershed District | $ 1,488,152,700 |
| 020 | Joe River Watershed District | $ 269,569,600 |
| 021 | Kanaranzi-Little Rock Watershed District | $ 1,983,562,100 |
| 022 | Lac qui Parle-Yellow Bank Watershed District | $ 3,455,319,000 |
| 024 | Heron Lake Watershed District | $ 2,846,205,600 |
| 026 | Middle-Snake-Tamarac Rivers Watershed District | $ 3,273,341,600 |
| 028 | Okabena-Ocheda Watershed District | $ 1,214,980,200 |
| 030 | Pelican River Watershed District | $ 2,945,172,600 |
| 031 | Bois De Sioux Watershed District | $ 4,866,130,600 |
| 032 | Prior Lake-Spring Lake Watershed District | $ 6,176,616,700 |
| 034 | Ramsey-Washington Metropolitan Watershed District | $ 22,694,883,500 |
| 036 | Red Lake Watershed District | $ 10,207,837,200 |
| 038 | Rice Creek Watershed District | $ 32,221,576,200 |
| 040 | Roseau River Watershed District | $ 983,135,200 |
| 042 | Sand Hill Watershed District | $ 1,311,050,000 |
| 043 | Sauk River Watershed District | $ 11,382,792,800 |
| 044 | Stockton-Rollingstone-Minnesota City Watershed District | $ 652,935,100 |
| 048 | Turtle Creek Watershed District | $ 1,631,814,400 |
| 050 | The Two Rivers Watershed District | $ 1,955,465,400 |
| 052 | Upper Minnesota River Watershed District | $ 1,663,890,300 |
| 054 | Valley Branch Watershed District | $ 7,137,574,300 |
| 056 | Warroad Watershed District | $ 524,402,400 |
| 058 | Nine Mile Creek Watershed District | $ 26,283,107,200 |
| 060 | Lower Minnesota River Watershed District | $ 14,235,035,200 |
| 062 | Minnehaha Creek Watershed District | $ 71,544,099,300 |
| 064 | Riley-Purgatory-Bluff Creek Watershed District | $ 19,657,603,300 |
| 066 | Wild Rice Watershed District | $ 4,529,204,500 |
| 068 | Yellow Medicine River Watershed District | $ 3,068,303,900 |
| 069 | Browns Creek Watershed District | $ 2,681,502,500 |
| 070 | Capitol Region Watershed District | $ 29,215,629,200 |
| 071 | Comfort Lake-Forest Lake Watershed District | $ 2,975,872,700 |
| 073 | Shell Rock River Watershed District | $ 2,694,855,600 |
| 074 | Middle Fork-Crow River Watershed District | $ 2,392,722,300 |

*SOURCE: Minnesota Department of Revenue 2023 PRISM SUBMISSION #3 - FINAL ASSESSMENT AND TAXATION*

# *District 060 - Lower Minnesota River Watershed District*

## *CERTIFICATION OF APPORTIONED LEVIES*

## *PAYABLE 2024*

***(1) Payable 2024 Property Tax Levy:*** ***$_____***

| County | (2) Payable 2023 Taxable Net Tax Capacity | (3) Net Tax Capacity Percent Distribution | (4) Apportioned Payable 2024 Levy (1X3) |
|---|---|---|---|
| Carver | 9,950,849 | 6.5269% | |
| Dakota | 14,630,670 | 9.5964% | |
| Hennepin | 61,431,976 | 40.2938% | |
| Scott | 66,446,544 | 43.5829% | |
| Watershed Total | 152,460,039 | 100.0000% | -- N/A -- |

_____

***Signature of Budget Officer*** ***Title*** ***Date***

**Proposed Levy 2024**

| | |
|---|---|
| General Fund | 250,000.00 |
| Planning and Implementation Fund | 525,000.00 |
| One time levy to balance channel fund | - |
| **Apportioned Payable 2024 Levy** | **775,000.00** |

| **County** | **Net Tax Capacity % Distribution** | **Apportioned Payable 2024 Levy** |
|---|---|---|
| Carver | 6.5269% | 50,583.48 |
| Dakota | 9.5964% | 74,372.10 |
| Hennepin | 40.2938% | 312,276.95 |
| Scott | 43.5829% | 337,767.48 |
| **Watershed Total** | **100.0000%** | **775,000.00** |

2024 proposed LMRWD Budget for Administration Operations
2022 Adopted Budget/2022 Actuals/2023 Adopted/ 2023 YTD/2023 Projected/2024 Proposed

| | Account | Adopted 2022 | 2022 Actuals | 2023 Adopted | 2023 Actual YTD (Through 7/31/23) | Projected 2023 | Proposed 2024 |
|---|---|---|---|---|---|---|---|
| | **Revenues:** | | | | | | |
| | General Property Tax | | | | | | |
| 1 | Carver County | $ 41,762.17 | $ 41,597.27 | $ 42,871.43 | $ 525.25 | $ 46,207.83 | $ 50,583.48 |
| 2 | Dakota County | $ 72,153.45 | $ 72,519.30 | $ 72,959.65 | $ 43,298.29 | $ 76,427.40 | $ 74,372.10 |
| 3 | Hennepin County | $ 306,964.28 | $ 303,846.27 | $ 318,293.13 | $ 160,301.31 | $ 314,054.03 | $ 312,276.95 |
| 4 | Scott County | $ 304,120.10 | $ 301,586.70 | $ 290,875.80 | $ 179,046.40 | $ 338,310.75 | $ 337,767.48 |
| | **Total Levy:** | **$ 725,000.00** | **$ 719,549.54** | **$ 725,000.01** | **$ 383,171.25** | **$ 775,000.01** | **$ 775,000.00** |
| 5 | Interest Income | $ - | $ 20,117.41 | $ - | $ 29,105.01 | $ - | $ - |
| 6 | MCES WOMP Grant | $ 5,000.00 | $ 1,000.00 | $ 5,000.00 | $ 4,500.00 | $ 45,000.00 | $ 4,500.00 |
| 7 | State of MN Grant for Dredge Material Management | $ 240,000.00 | $ 240,000.00 | $ 240,000.00 | $ 240,000.00 | $ 240,000.00 | $ 240,000.00 |
| 8 | Metro-Area Watershed Based funding grants | $ - | $ - | $ - | $ 91,021.00 | $ 91,021.00 | $ - |
| 9 | License Revenue from placement of dredge | $ 25,000.00 | $ 29,036.00 | $ 25,000.00 | $ - | $ 25,000.00 | $ 25,000.00 |
| 10 | Revenues from sale of dredge material | $ 5,000.00 | $ - | $ 5,000.00 | $ - | $ 5,000.00 | $ 5,000.00 |
| 11 | Permit Fees | $ - | $ 14,000.00 | $ - | $ 5,300.00 | $ 3,050.00 | $ - |
| 12 | Miscellaneous Income | $ - | $ 2,829.08 | $ - | $ 708.08 | $ 708.08 | $ - |
| | | | | | | | |
| | **Total Revenues:** | **$1,000,000.00** | **$ 1,026,532.03** | **$1,000,000.01** | **$753,805.34** | **$ 1,184,779.09** | **$ 1,049,500.00** |
| | **Expenses:** | | | | | | |
| 13 | **Administration** (from Administrative Budget Page) | $ 250,000.00 | $ 370,977.11 | $ 250,000.00 | $ 169,359.21 | $ 250,000.00 | $ 390,338.00 |
| | **Cooperative Projects** | | | | | | |
| 14 | Eden Prairie Bank Stabilization -Area #3 | $ 100,000.00 | $ 91,603.35 | $ - | $ 99,887.91 | $ 84,816.65 | $ 100,000.00 |
| 16 | Gully Erosion Contingency | $ - | $ 4,395.65 | $ - | $ - | $ - | $ - |
| 17 | Riley Creek Cooperative Project with RPBCWD | $ - | $ 150,000.00 | $ - | $ - | $ - | $ - |
| 18 | Seminary Fen Ravine Restoration site B | $ - | $ - | $ - | $ - | $ - | $ - |
| 19 | Seminary Fen Ravine C-2 | $ - | $ 20,000.00 | $ 20,000.00 | $ - | $ 20,000.00 | $ 90,000.00 |
| 20 | Eagle Creek Bank Restoration Town & Country RV Park Study | $ - | $ - | $ - | $ - | $ - | $ 30,000.00 |
| 21 | Shakopee River bank Stabilization Project | $ - | $ - | $ - | $ - | $ - | $ 50,000.00 |
| | **509 Plan Budget** | | | | | | |
| | Resource Plan Implementation | | | | | | |
| 22 | Watershed Resource Restoration Fund | $ 120,000.00 | $ 142,500.00 | $ 100,000.00 | $ - | $ 100,000.00 | $ 100,000.00 |
| 23 | Fen Private Land Acquisition Study | $ - | $ - | $ - | $ - | $ - | $ 50,000.00 |
| 24 | Gully Inventory | $ - | $ 5,830.50 | $ 90,500.00 | $ 47,475.92 | $ 90,500.00 | $ 150,000.00 |
| 25 | Minnesota River Corridor Management Project | $ - | $ 38,902.28 | $ - | $ - | $ - | $ - |
| 26 | Gun Clun Fen Intrusion Investigation | | $ 34,542.73 | $ - | $ - | $ - | |
| 27 | Assumption Creek Hydrology Restoration Project | $ - | $ 2,125.50 | $ - | $ - | $ - | $ - |
| 28 | Groundwater Screening Tool Model | $ - | $ - | $ - | $ - | $ - | $ - |
| 29 | Minnesota River Floodplain Model Feasibility Study | $ - | $ 13,301.32 | $ 75,000.00 | $ 8,534.50 | $ 75,000.00 | $ - |
| 30 | Schroeder's Acres Park/Savage Fen Stormwater Management | $ - | $ 53,768.61 | $ - | $ - | $ - | $ - |
| 31 | Downtown Shakopee Stormwater BMPs | $ 50,000.00 | $ 25,000.00 | $ 50,000.00 | $ - | $ 50,000.00 | $ 50,000.00 |
| 32 | PLOC Realignment/Wetland Restoration | $ 30,000.00 | $ - | $ - | $ - | $ - | $ - |
| 33 | Spring Creek Project | $ - | $ 12,336.30 | $ 90,000.00 | $ 2,473.42 | $ 90,000.00 | $ 100,000.00 |
| 34 | West Chaska Creek Project | $ - | $ 27,441.00 | $ - | $ - | $ - | $ - |
| 35 | Sustainable Lakes Management Plan (Trout Lakes) | $ 50,000.00 | $ - | $ - | $ - | $ - | $ 50,000.00 |
| 36 | Geomorhpic Assessments (Trout Streams) | $ - | $ 9,913.85 | $ - | $ - | $ - | $ 100,000.00 |
| 37 | Fen Stewardship Program | $ 25,000.00 | $ 47,671.03 | $ 75,000.00 | $ 45,061.75 | $ 75,000.00 | $ 75,000.00 |
| 38 | District Boundary Modification Project | $ - | $ - | $ - | $ - | $ - | $ - |
| 39 | East Chaska Creek Bank Stabilization Project | $ - | $ 4,526.32 | $ - | $ - | $ - | $ - |
| 40 | Minnesota River Sediment Reduction Strategy | $ - | $ - | $ - | $ - | $ - | $ - |
| 41 | Local Water Management Plan reviews | $ 5,000.00 | $ 9,538.31 | $ 5,000.00 | $ 31.25 | $ 5,000.00 | $ 5,000.00 |
| 42 | Project Reviews | $ 75,000.00 | $ 239,647.69 | $ 50,000.00 | $ 74,749.81 | $ 50,000.00 | $ 50,000.00 |
| 43 | Monitoring | $ 75,000.00 | $ 43,965.84 | $ 75,000.00 | $ 37,540.94 | $ 75,000.00 | $ 75,000.00 |
| 44 | Watershed Management Plan | | | | | | |
| 45 | Next Generation Watershed Management Plan | $ - | $ - | $ - | $ - | $ - | $ - |
| 46 | Plan Clarification and proposed rules/Rule implementation | $ - | $ - | $ - | $ 16,761.25 | $ 12,729.25 | $ - |
| 47 | Plan Amendment | $ - | $ - | $ - | $ - | $ - | $ - |
| 48 | Vegetation Management Standard/Plan | $ - | $ - | | $ - | $ - | $ - |
| 49 | Public Education/Citizen Advisory Committee/Outreach Program | $ 75,000.00 | $ 69,142.44 | $ 85,000.00 | $ 50,551.74 | $ 85,000.00 | $ 85,000.00 |
| 50 | Cost Share Program | $ 20,000.00 | $ 20,606.43 | $ 20,000.00 | $ 8,344.00 | $ 20,000.00 | $ 20,000.00 |
| | | | | | | | |
| | **Nine Foot Channel** | | | | | | |
| 51 | Dredge site operations | $ 240,000.00 | $ 16,132.25 | $ 240,000.00 | $ 228,316.97 | $ 240,000.00 | $ 240,000.00 |
| 52 | Dredge Site Restoration | $ - | $ - | $ - | $ - | $ - | $ - |
| | | | | | | | |
| 53 | **Total Non-adminsitrative Expenses:** | $ 865,000.00 | $ 1,082,891.40 | $ 975,500.00 | $ 619,729.46 | $ 1,073,045.90 | $ 1,420,000.00 |
| | | | | | | | |
| 54 | **Total Administrative Expenses (from line 13)** | $ 250,000.00 | $ 370,977.11 | $ 250,000.00 | $ 169,359.21 | $ 250,000.00 | $ 390,338.00 |
| | | | | | | | |
| 55 | Total Expenses | $ 1,115,000.00 | $ 1,453,868.51 | $ 1,225,500.00 | $ 789,088.67 | $ 1,323,045.90 | $ 1,810,338.00 |
| | | | | | | | |
| 56 | Revenue less Expenses | $ (115,000.00) | $ (427,336.48) | $ (225,499.99) | $ (35,283.33) | $ (138,266.81) | $ (760,838.00) |
| | | | | | | | |
| 57 | Beginning Fund Balance - January 1 | | $ 1,953,659.65 | | $ 1,376,420.36 | | **$ 1,341,137.03** |
| 58 | Total Revenue | | $1,026,532.03 | | $753,805.34 | | $ 1,049,500.00 |
| 59 | Total Expenses | | $ (1,453,868.51) | | $ (789,088.67) | | $ (1,810,338.00) |
| 60 | Ending Fund Balance - December 31 (bold figures are projected) | **$ 1,953,659.65** | **$ 1,526,323.17** | $ 1,376,420.36 | **$ 1,341,137.03** | | **$ 580,299.03** |

2024 proposed LMRWD Budget for Administration Operations
2022 Adopted Budget/2022 Actuals/2023 Adopted/ 2023 YTD/2023 Projected/2024 Proposed

| Account | | Adopted 2022 | 2022 Actual | Adopted 2023 | YTD 2023 | Projected 2023 | Proposed 2024 |
|---|---|---|---|---|---|---|---|
| | Expenses: | | (unaudited) | | (Through 7/31/23) | | |
| 61 | Wages-General | $ - | $ - | $ - | $ - | $ - | $ - |
| 62 | Severance Allowance | $ - | $ - | $ - | $ - | $ - | $ - |
| 63 | Benefits | $ - | $ - | $ - | $ - | $ - | $ - |
| 64 | PERA Expense | $ - | $ - | $ - | $ - | $ - | $ - |
| 65 | Payroll Tax (FICA/Medicare) | $ - | $ - | $ - | $ - | $ - | $ - |
| 66 | Unemployment compensation | $ - | $ - | $ - | $ - | $ - | $ - |
| 67 | Manager Per Diem | $ 11,250.00 | $ 6,625.00 | $ 11,250.00 | $ 4,500.00 | $ 11,250.00 | $ 15,000.00 |
| 68 | Manager Expense (mileage/food/registrations) | $ 3,000.00 | $ 1,293.43 | $ 3,000.00 | $ 549.20 | $ 3,000.00 | $ 4,500.00 |
| 69 | Telecommunications-Cell-Internet/Phone | $ 1,000.00 | $ - | $ 1,000.00 | $ - | $ 1,000.00 | $ 1,000.00 |
| 70 | Office Supplies | $ 300.00 | $ 93.19 | $ 300.00 | $ 97.28 | $ 300.00 | $ 300.00 |
| 71 | Meeting Supplies/Expense | $ 100.00 | $ - | $ 100.00 | $ 74.27 | $ 100.00 | $ 100.00 |
| 72 | Rent | $ 7,800.00 | $ 7,800.00 | $ 7,800.00 | $ 5,200.00 | $ 7,800.00 | $ 7,800.00 |
| 73 | Dues | $ 7,500.00 | $ - | $ 7,500.00 | $ - | $ - | $ 12,500.00 |
| 74 | Miscellaneous-General | $ 3,000.00 | $ 2,551.00 | $ 3,000.00 | $ 1,109.25 | $ 3,000.00 | $ 3,000.00 |
| 75 | Training & Education | $ 1,500.00 | $ 600.00 | $ 1,500.00 | $ 50.00 | $ 1,500.00 | $ 1,500.00 |
| 76 | Insurance & Bonds | $ 11,000.00 | $ 10,709.00 | $ 11,000.00 | $ 180.00 | $ 11,000.00 | $ 12,000.00 |
| 77 | Postage | $ 375.00 | $ 47.68 | $ 375.00 | $ - | $ 375.00 | $ 300.00 |
| 78 | Photocopying | $ 875.00 | $ 355.98 | $ 875.00 | $ 169.27 | $ 875.00 | $ 750.00 |
| 79 | Legal Notices-General | $ 1,500.00 | $ 2,700.20 | $ 1,500.00 | $ - | $ 1,500.00 | $ 2,000.00 |
| 80 | Subscriptions & License Fees | $ 250.00 | $ 355.42 | $ 250.00 | $ 323.06 | $ 250.00 | $ 400.00 |
| 81 | Mileage | $ 5,000.00 | $ 2,013.72 | $ 5,000.00 | $ 928.55 | $ 5,000.00 | $ 5,000.00 |
| 82 | Taxable meal reimbursement | $ 500.00 | $ - | $ 500.00 | $ - | $ 500.00 | $ 500.00 |
| 83 | Lodging/ Staff Travel | $ 1,500.00 | $ - | $ 1,500.00 | $ - | $ 1,500.00 | $ 1,500.00 |
| 84 | Accounting/Financial Services | $ 5,382.00 | $ 29,523.84 | $ 5,580.00 | $ 19,840.51 | $ 5,580.00 | $ 25,438.00 |
| 85 | Audit Fees | $ 15,000.00 | $ 17,841.00 | $ 15,000.00 | $ 240.00 | $ 15,000.00 | $ 30,000.00 |
| 86 | Professional Services-General | $ 120,168.00 | $ 130,762.50 | $ 104,970.00 | $ 53,718.75 | $ 104,970.00 | $ 153,000.00 |
| 87 | Legal Fees-General | $ 10,000.00 | $ 13,162.98 | $ 10,000.00 | $ 8,689.00 | $ 10,000.00 | $ 15,000.00 |
| 88 | Engineering-General | $ 20,000.00 | $ 121,966.48 | $ 35,000.00 | $ 60,640.75 | $ 42,500.00 | $ 75,000.00 |
| 89 | Equipment-Maintenance | $ 500.00 | $ 508.02 | $ 500.00 | $ 205.93 | $ 500.00 | $ 500.00 |
| 90 | Equipment-Lease | $ 2,500.00 | $ 2,067.63 | $ 2,500.00 | $ 1,176.70 | $ 2,500.00 | $ 2,500.00 |
| 91 | Lobbying | $ 20,000.00 | $ 20,000.04 | $ 20,000.00 | $ 11,666.69 | $ 20,000.00 | $ 20,000.00 |
| 92 | Bank fees and charges | $ - | $ - | $ - | $ 40.00 | $ - | $ 750.00 |
| | | | | | | | |
| 93 | Total Expense for Administration: | $ 250,000.00 | $ 370,977.11 | $ 250,000.00 | $ 169,359.21 | $ 250,000.00 | $ 390,338.00 |

Project funding proposed in the 2024 Budget is taken from Table 4-1 Implementation Program Budget found in Section 4 of the LMRWD Watershed Management Plan (as revised in 2022).
Explanations for certain lines follow.

| Line # | **Cooperative Projects** |
|---|---|
| | *Cooperative Projects ate those projects that are intended to be completed by the LMRWD with other partners* |
| 14 | **Eden Prairie Bank Stabilization - Area #3**<br>The goal is to have permits in hand and bid this project in early 2024. The LMRWD received state funds to construct this project and will need to match state funds in an amount equal to the state's contribution. The City of Eden Prairie has indicated it will contribute $500,000 to the project. The LMRWD has applied for a $50,000 grant from Hennepin County. |
| 18-19 | **Seminary Fen Ravine B and Ravine C-2**<br>The City of Chaska provided plans to address several ravines that are actively discharging sediment into the Seminary Fen Wetland Complex. The ravines were labeled A, B And C-2. The City developed a feasibility study to stabilize C-2 in 2022. The City is now planning to implement the recommendations found in the study. They plan to apply for grant funds and have asked the LMRWD to redirect funds in the LMRWD implementation plan to this project rather than the other projects identified in LMRWD Plan implementation table in the year 2024. Funds for site B will be redirected to site C-2. |
| 20 | **Eagle Creek Bank Restoration Town & Country RV Park Feasibility Study**<br>This project is a result of the municipal coordination meeting between the LMRWD and the City of Savage. Signs of hillslope failure have been observed near the campground on the Main Branch of Eagle Creek which is an added environmental stressor on the stream. The District will assess the eroding banks at the campground and determine the urgency for stabilization on Eagle Creek The District will develop a design and stabilize the hillslope failure near the campground on Main Branch of Eagle Creek to reduce sedimentation to the creek. |
| 21 | **Shakopee Riverbank Stabilization Project**<br>This project is a result of the municipal coordination meeting between the LMRWD and the City of Shakopee. This project will include stabilizing sections of the Minnesota River riverbank that are eroding along the City of Shakopee's parallel trunk sanitary sewer line that flows to L-16 and other storm sewer outlets. This is a contribution to the City's plans to stabilize the MN Riverbank from Huber Park downstream to The Landing. The City has received funds from the Federal Government and the State of Minnesota. |
| | **509 Plan Budget** |
| 22 | **Watershed Resource Restoration Fund**<br>This fund implements Goals 2 and 3, which are to protect, improve and restore surface water and ground water quality within the District. This program will fund projects sponsored by LGUs and were not identified at the time the Plan was adopted and/or updated.<br>In 2022, the LMRWD Board of Managers accepted a request from the City of Burnsville to partner on the stabilization of a ravine along Willow Creek. $67,500 of this line was used for that project. This fund was also used to contribute $75,000 to the City of Carver to develop plans for the City's levee improvement project, needed to apply for funding from the State of Minnesota. The Board recently approved a request from the City of Eagan to share in the cost to address a ravine that concentrated flows of stormwater have created. Table 4-1 in the revised Plan has allocated $100,000 to this fund. |
| 23 | **Fen Private Land Acquisition Study**<br>To preserve and protect fens in the District in perpetuity, the District will map and assess the values of adjacent private properties to each fen and work with corresponding municipalities, to consider opportunities to purchase private fen land for conservation. If land acquisition is not feasible, the District will consider opportunities to develop |

| | |
|---|---|
| | agreements with private property owners to ensure management of each fen is consistent and comprehensive. |
| 24 | **Gully Inventory**<br>The gully inventory and condition assessment is an ongoing project. The LMRWD intends to periodically inspect gullies and ravines to assess threats posed and the rate of erosion. The LMRWD will prioritize gullies and ravine based on the inspections and develop a plan to stabilize the highest priority gullies. The LMRWD has asked BWSR to consider supporting use of dredge management funds to stabilize high priority gullies and ravines. |
| 31 | **Downtown Shakopee Stormwater BMPs**<br>The City of Shakopee conducted a study of Downtown Shakopee stormwater and recommended several projects to treat stormwater that currently reaches the MN River untreated. One project, the Lewis Street West/2nd Avenue West Parking Lot was chosen to receive funding in the amount of $77,068, through BWSR's Watershed Based Implementation Funding program. The 2022 LMRWD budget included $50,000 for the feasibility report, which came in under budget and the $50,000 from the LMRWD was not needed to complete the feasibility study. The City of Shakopee they can scale the effectiveness of the BMP to the funding available. The total cost of the project is estimated at over $2,000,000. $50,000 was included in the 2023 budget. An additional $50,000 is contained in Table 4-1 2024 Budget as revised. This would make $150,000 eligible to the City to complete the project. |
| 33 | **Spring Creek Project**<br>Site 1 and Site 2 along Spring Creek will be stabilized using the Carver SWCD's designs (increased riprap size and standard gradation recommended). An analysis of vegetation along Spring is included as part of this project. The creek will be prone to further erosion without the added protection of adequate vegetation. Vegetation management (e.g., removal of invasives, native plantings, etc.), particularly in the floodplain and channel banks, will be important to ensure the integrity of the stabilization. |
| 35 | **Sustainable Lakes Management Plan (Trout Lakes) Implementation**<br>In 2019, the District developed Sustainable Lake Management Plans (SLMPs) for trout lakes within its boundary. Going forward, the District plans to implement the recommended management strategies from the SLMPs, such as routine vegetation surveys and temperature profiling. |
| 36 | **Geomorphic Assessments (Trout Streams)**<br>The trout streams geomorphic assessments will consider changes in trout stream alignment, baseflow, geometry, and selected stream reaches since the last assessment. Stream width-to-depth ratios, stream bed slope, meander pattern, and other bed features shall be modeled according to a stable reference reach. Reference reaches are nearby, hydrologically, and geomorphically stable stream segments. A reference reach could be upstream or downstream, or in a nearby watershed. This assessment is generally considered twice during the Plan cycle, once every 5 years. |
| 37 | **Fen Stewardship Program**<br>The District, in partnership with the DNR and Metropolitan Council, will develop a fen stewardship program for the District's fens. The effort will review historical data, assess current conditions, and develop a road map for restoration, preservation, and protection of the District's fens. Management plans or sustainability reports will be developed for all fens (starting with Seminary Fen and Savage Fen) to effectively manage and protect these groundwater-dependent resources. |
| 41 | **Local Water Management Plan Reviews**<br>The LMRWD is responsible for reviewing and approving local surface water management plans for all cities within the boundaries of the LMRWD. Several Cities LSWMP have not yet been reviewed by the LMRWD and other cities are revising or amending Plans. The LMRWD also reviews the plans to assure they are in conformance with the LMRWD standards. |

| | |
|---|---|
| 42 | **Project Reviews**<br>This item includes costs incurred by the LMRWD to review non-LMRWD projects in cities that have either opted to have the LMRWD review projects or have not yet received a Municipal permit.<br><br>Eden Prairie and Chaska have opted to have the LMRWD review projects within the boundaries of the LMRWD. The LMRWD is also responsible for reviewing MNDOT, and MAC (Metropolitan Airport Commission) projects and for the unincorporated areas of the District. Savage intends to apply for a municipal permit but has not yet been approved. In Shakopee and Bloomington, the LMRWD will continue to review project in the floodplain and High Value Resource areas. The LMRWD collects permit fees on private projects, but fees do not entirely offset the cost of reviews. |
| 43 | **Monitoring**<br>The District will continue to perform water quantity and quality monitoring of resources within the boundaries of the District. The District's Monitoring Plan will be updated to include the geochemistry recommendations from the Fens Sustainability Gaps Analysis report and the monitoring parameter recommendations from the Quarry Lake Sustainable Lake Management Plan report.<br>Over the past few years, the District has collected a large quantity of water quality data. The Plan includes a preliminary assessment of lake water quality data. However, the last comprehensive data evaluation was completed in 2000. Periodic data evaluations are necessary to convert data into information that decision makers can use. Data collected for each water resource will be evaluated on a 3-year or 5-year cycle. As part of Strategy 1.3.1, all water resources within the watershed will be evaluated. An outcome of Strategy 1.3.1 will be groupings of water resources into High, Medium, and Low categories for detailed data assessments and timetables formulated for each category. |
| 49 | **Public Education/CAC/Outreach Program**<br>The 2023 projected costs the LMRWD plans to spend on public education include<br>• Citizen Advisory Committee (CAC)……$14,250.00<br>• District Signage.....$9,000.00<br>• 2School Engagement/Mini-grant Program .....$11,000.00<br>• Community Outreach & Engagement…… $10,500.00<br>• LMRWD website update/maintenance.....$17,700.00<br>• Sponsor Minnesota River Congress…..$400.00<br>• MN River Boat Tour/engagement activity.....$7,500.00<br>• Sponsorship of Salt Symposium and Water Summit.....$500.00<br>• Sponsor Metro Children's Water Festival…… $1,650.00<br>• Social Media.....$12,500.00<br>**TOTAL:.....$85,000.00** |
| | **Nine Foot Channel** |
| 51 | **Dredge Operations/Restoration**<br>The District will continue its role as the local sponsor responsible for providing placement sites for the Army Corps of Engineers. The purpose is to place dredge material from the Minnesota River and maintain a 9-foot-deep river channel. This program includes the identification of locations to temporarily store dredge material from the river, private dredge spoil disposal and transfer, and other beneficial uses of the dredge material. |
| Line # | **Administrative Budget** |
| Note | The 2023 Legislature increased the amount that can be levied to cover administrative expenses. The new formula is calculated as follows:<br>• Multiply the estimated market value listed in the enclosed table for the watershed district by 0.096 percent (0.00096)<br>• Compare that calculated value to the maximum general fund levy limit of $500,000. |

| | |
|---|---|
| | • Use whichever value is less.<br>See the attached memo and Estimated & Taxable Market Values (EMV) table Payable 2023 |
| 67 | **Manager Per Diem**<br>This amount is calculated for 5 Managers, using a per diem of $125/meeting and 2 meetings per month per manager. |
| 73 | **Dues**<br>MAWD dues were included at $12,500. Staff is recommending that the dues for membership in Minnesota Watersheds be included in the budget. |
| 84 | **Accounting /Financial Services**<br>In 2022, Clifton Larson Allen began providing financial/accounting services to the LMRWD. The amount in this line item reflects the amount in the Professional Services Agreement between the LMRWD and CLA. |
| 85 | **Audit Fees**<br>In 2022, the LMRWD retained the services of Global Portfolio Consulting to provide audit services. Global Portfolio Consulting withdrew from the engagement in 2023, without completing the 2021 or 2022 financial audits. Redpath and Company has agreed to perform a two-year audit covering FY 2021 and 2022 at a price of 8$25,000 per year. Redpath has said that is the going rate for audits currently. The LMRWD is issuing a Request for Proposals for Audit Services for FY 2023 and 2024. The RFP has not yet been issued. |
| 86 | **Professional Services General**<br>This line is for administrative services provided to the LMRWD by Naiad Consulting LLC and occasionally other consultants retained by the LMRWD. Naiad Consulting has not increased rates for administrative services since 2019. At that time the hourly rate went from $65/hour to $75/hour. The 2024 budget reflects 150 hours per month at $85/per hour. |
| 88 | **Engineering**<br>This line has been increased to better reflect the actual cost of general engineering expenses. Costs incurred by the District that are charged to this line include preparation for monthly board meeting, Board meeting attendance by technical and engineering staff. |
| 92 | **Bank Fees and Charges**<br>This line has been added to the Budget to reflect the fees charged by US Bank and the 4M Fund. Previously these fees have been charged to the accounting/financial services budget. |

**DDA**
**David Drown Associates, Inc.**
**Public Finance Advisors**

Cologne Office:
10555 Orchard Road
Cologne, MN 55322
Phone: (952) 356-2992
shannon@daviddrown.com

August 11, 2023

Lower Minnesota River Watershed District
Attn: Linda Loomis, Administrator
6677 Olson Memorial Highway
Golden Valley, MN 55427

**RE: Eden Prairie Bluff Stabilization Project**

Honorable Managers and Administrator Loomis:

I have been asked to assist the Lower Minnesota River Watershed District (LMRWD) Board in discussions regarding funding for the Eden Prairie Bluff Stabilization Project. It is my understanding that the project is being considered for implementation in 2024. Several assumptions have been made to continue the funding discussion which include the following:

| | |
|---|---|
| Total Estimated Project Cost: | $5,500,000 |
| State Appropriation (Grant): | 2,750,000 |
| City of Eden Prairie Contribution: | 500,000 |
| LMRWD Project Contribution: | $2,250,000 |

Options that I have been asked to evaluate include a one-time levy of approximately $2,250,000 which may still require temporary financing depending on the project timeline, and the issuance of General Obligation Bonds by the LMRWD to finance the project costs over a longer term.

I have attached several exhibits to provide a general estimate of the tax impacts associated with the one-time levy option (Exhibit 1), financing the project costs over 10-years (Exhibit 2), and financing the project costs over 15-years (Exhibit 3).

I have also attached a preliminary debt service schedule (10-year term) using the funding assumptions outlined above and is based on current interest rates from comparable bond sales. I will be available at the August 16, 2023, board meeting to discuss this material in detail and answer questions.

Thank you for your time and consideration.

Sincerely,

Shannon Sweeney
David Drown Associates, Inc.

**Lower Minnesota River Watershed District** **Exhibit 1**

**Tax Impact Analysis - 2023 Data - One Time Levy**

| | |
|---|---|
| Amount Financed: | $ - |
| Term: | One time levy |
| Interest Rate: | 0.00% |
| **Project Levy:** | **$2,250,000** |
| 2023 Tax Levy | $775,000 |
| Projected Levy | $3,025,000 |
| Pay 2023 Net Tax Capacity | 156,002,755 |
| 2023 Tax Rate | 0.4968% |
| Projected Rate | 1.9391% |

| Assessor's Market Value (Homestead Residential Property) | Current Watershed District Tax: | Projected Watershed District Tax: | **Projected Increase:** |
|---|---|---|---|
| $ 300,000 | $ 14.39 | $ 56.19 | **$ 41.79** |
| $ 500,000 | $ 24.84 | $ 96.95 | **$ 72.11** |
| $ 600,000 | $ 31.05 | $ 121.19 | **$ 90.14** |
| $ 1,000,000 | $ 55.89 | $ 218.15 | **$ 162.26** |

| Assessor's Market Value (Commercial/Industrial Property) | Current Watershed District Tax: | Projected Watershed District Tax: | **Projected Increase:** |
|---|---|---|---|
| $ 1,000,000.00 | $ 95.63 | $ 373.27 | **$ 277.64** |
| $ 2,000,000.00 | $ 194.99 | $ 761.08 | **$ 566.10** |
| $ 5,000,000.00 | $ 493.06 | $ 1,924.53 | **$ 1,431.47** |
| $ 10,000,000.00 | $ 989.85 | $ 3,863.59 | **$ 2,873.75** |

**Lower Minnesota River Watershed District** **Exhibit 2**

**Tax Impact Analysis - 2023 Data - $2.365 mil Financed - 10 yr term on debt**

| | | |
|---|---|---|
| Amount Financed: | $ | 2,365,000 |
| Term: | | 10 years |
| Interest Rate: | | 3.73% |
| **Debt Service Levy** | | **$300,000** |
| 2023 Tax Levy | | $775,000 |
| Projected Levy | | $1,075,000 |
| Pay 2023 Net Tax Capacity | | 156,002,755 |
| 2023 Tax Rate | | 0.4968% |
| Projected Rate | | 0.6891% |

| Assessor's Market Value (Homestead Residential Property) | Current Watershed District Tax: | Projected Watershed District Tax: | **Projected Increase:** |
|---|---|---|---|
| $ 300,000 | $ 14.39 | $ 19.97 | **$ 5.57** |
| $ 500,000 | $ 24.84 | $ 34.45 | **$ 9.62** |
| $ 600,000 | $ 31.05 | $ 43.07 | **$ 12.02** |
| $ 1,000,000 | $ 55.89 | $ 77.52 | **$ 21.63** |

| Assessor's Market Value (Commercial/Industrial Property) | Current Watershed District Tax: | Projected Watershed District Tax: | **Projected Increase:** |
|---|---|---|---|
| $ 1,000,000.00 | $ 95.63 | $ 132.65 | **$ 37.02** |
| $ 2,000,000.00 | $ 194.99 | $ 270.47 | **$ 75.48** |
| $ 5,000,000.00 | $ 493.06 | $ 683.92 | **$ 190.86** |
| $ 10,000,000.00 | $ 989.85 | $ 1,373.01 | **$ 383.17** |

**Lower Minnesota River Watershed District** **Exhibit 3**

**Tax Impact Analysis - 2023 Data - $2.365 mil Financed - 15 yr term on debt**

| | | |
|---|---|---|
| Amount Financed: | $ | 2,365,000 |
| Term: | | 15 years |
| Interest Rate: | | 3.74% |
| **Debt Service Levy** | | **$222,000** |
| 2023 Tax Levy | | $775,000 |
| Projected Levy | | $997,000 |
| Pay 2023 Net Tax Capacity | | 156,002,755 |
| 2023 Tax Rate | | 0.4968% |
| Projected Rate | | 0.6391% |

| Assessor's Market Value (Homestead Residential Property) | Current Watershed District Tax: | Projected Watershed District Tax: | **Projected Increase:** |
|---|---|---|---|
| $ 300,000 | $ 14.39 | $ 18.52 | **$ 4.12** |
| $ 500,000 | $ 24.84 | $ 31.95 | **$ 7.12** |
| $ 600,000 | $ 31.05 | $ 39.94 | **$ 8.89** |
| $ 1,000,000 | $ 55.89 | $ 71.90 | **$ 16.01** |

| Assessor's Market Value (Commercial/Industrial Property) | Current Watershed District Tax: | Projected Watershed District Tax: | **Projected Increase:** |
|---|---|---|---|
| $ 1,000,000.00 | $ 74.52 | $ 95.86 | **$ 21.35** |
| $ 2,000,000.00 | $ 194.99 | $ 250.84 | **$ 55.85** |
| $ 5,000,000.00 | $ 493.06 | $ 634.30 | **$ 141.24** |
| $ 10,000,000.00 | $ 989.85 | $ 1,273.39 | **$ 283.54** |

**$2,365,000**
**General Obligation Bonds, Series 2024A**

| **Uses of Funds** | | |
|---|---|---|
| River Bank Stabilization Project | | 5,500,000.00 |
| Other | | - |
| **Total Project Costs** | | **5,500,000.00** |
| Underwriter's Discount Allowance | 0.000% | - |
| Unused Underwriter's Discount Allowance | | - |
| Fiscal Fee | | 19,000.00 |
| Bond Counsel | | 13,500.00 |
| Paying Agent | | 1,500.00 |
| Printing & Misc | | 2,000.00 |
| Rating Agency | | 14,000.00 |
| Capitalized Interest | | 78,929.58 |
| Accrued Interest | | - |
| Rounding | | - |
| | | 5,628,929.58 |

| **Sources of Funds** | |
|---|---|
| Bond Issue | **2,365,000.00** |
| Construction Fund Earnings | 13,929.58 |
| State Appropriation & Eden Prairie Contribution | 3,250,000.00 |
| | 5,628,929.58 |

| **Bond Details** | |
|---|---|
| Set Sale Date | 1/17/2024 |
| Sale Date | 2/21/2024 |
| Dated Date | 3/1/2024 |
| Closing Date | 3/1/2024 |
| 1st Interest Payment | 2/1/2025 |
| Proceeds spent by: | 12/31/2025 |
| | *to Dated Date* |
| Purchase Price | 2,365,000.00 |
| Net Interest Cost | 591,774.58 |
| Net Effective Rate | **3.7341%** |
| Average Coupon | 3.7341% |
| Yield | 4.3089% |
| Average Life | 6.701 |
| Call Option | 2/1/2032 |
| Purchaser | Preliminary |
| Bond Counsel | Taft |
| Pay Agent | U.S. Bank, N.A. |
| Tax Status | **Tax Exempt, Bank Qualified** |
| Continuing Disclosure | Limited |
| Rebate | Subject to Rebate |
| Statutory Authority | M.S. 103B, 103D, & 475 |

**Payment Schedule & Cashflow**

| *Payment Schedule* | | | | | | *Pledged Revenues* | | | *Account Balances* | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12-Month Period ending | Principal | Interest Rate | Interest | **Payment Total** | plus 5% Coverage | Collection Year | Tax Levy | Other Revenues | Surplus (deficit) | Account Balance |
| 3/1/2024 | - | | - | **-** | | | | Capitalized & accrued interest > | | 78,930 |
| 2/1/2025 | - | 3.65% | 78,929.58 | **78,929.58** | 78,930 | 2024 | - | - | (78,930) | - |
| 2/1/2026 | 200,000 | 3.55% | 86,105.00 | **286,105.00** | 300,410 | 2025 | 300,410 | - | - | - |
| 2/1/2027 | 210,000 | 3.40% | 79,005.00 | **289,005.00** | 303,455 | 2026 | 303,455 | - | - | - |
| 2/1/2028 | 215,000 | 3.40% | 71,865.00 | **286,865.00** | 301,208 | 2027 | 301,208 | - | - | - |
| 2/1/2029 | 225,000 | 3.40% | 64,555.00 | **289,555.00** | 304,033 | 2028 | 304,033 | - | - | - |
| 2/1/2030 | 230,000 | 3.40% | 56,905.00 | **286,905.00** | 301,250 | 2029 | 301,250 | - | - | - |
| 2/1/2031 | 240,000 | 3.40% | 49,085.00 | **289,085.00** | 303,539 | 2030 | 303,539 | - | - | - |
| 2/1/2032 | 250,000 | 3.65% | 40,925.00 | **290,925.00** | 305,471 | 2031 | 305,471 | - | - | - |
| 2/1/2033 | 255,000 | 4.00% | 31,800.00 | **286,800.00** | 301,140 | 2032 | 301,140 | - | - | - |
| 2/1/2034 | 265,000 | 4.00% | 21,600.00 | **286,600.00** | 300,930 | 2033 | 300,930 | - | - | - |
| 2/1/2035 | 275,000 | 4.00% | 11,000.00 | **286,000.00** | 300,300 | 2034 | 300,300 | - | - | - |
| | 2,365,000 | | 591,774.58 | **2,956,774.58** | 3,100,667 | | 3,021,737 | - | | - |

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. – 2021/2022 Financial Audit**

**Prepared By**
Linda Loomis, Administrator

**Summary**
Work has begun on the financial audit. A date for receipt has not been set. The Board should have received a request from the auditor asking Managers to share any concerns they may have. Documents (grant agreements, insurance policies, etc.) required for the audit are being shared with the auditor.

**Attachments**
No attachments

**Recommended Action**
No action recommended – for information only

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. B. – Lower Minnesota River East One Watershed One Plan**

**Prepared By**
Linda Loomis, Administrator

**Summary**
The Lower Minnesota River East One Watershed One Plan Policy committee met on June 20, 2023. The group decided that a Collaborative Joint Powers Organization (JPO) would be formed to implement the plan. A draft Joint Powers Agreement is attached for the Board's information. At the July 20th meeting the LMRWD indicated that it would cooperate with the JPO, if the Board determines that it is in the best interest of the LMRWD to join the JPO that it would join.

There has been some back and forth between Scott County and BWSR regarding the 1W1P planning process and the confusion that is created conducting the 1W1P process and watershed district/watershed management organization planning processes. Many of the stakeholders overlap and it is very time-consuming for parties that have been asked to participate in both processes. BWSR has set up a meeting August 17th at 2:00pm, to discuss this apparent duplication of processes.

The next meeting of the Policy committee is August 17, 2023, 3:00pm to 5:00 pm, in-person at the office of the LeSueur County SWCD, 181 W Minnesota Street, Le Center, MN. There will be a virtual option. Minutes for the July 20, 2023 Policy Committee meeting are not yet available.

**Attachments**
Draft Joint Powers Agreement for the Implementation of the Lower Minnesota River East Watershed Comprehensive Watershed Comprehensive Water Management Plan

**Recommended Action**
No action recommended

**JOINT POWERS AGREEMENT FOR THE IMPLEMENTATION OF THE LOWER MINNESOTA RIVER EAST WATERSHED COMPREHENSIVE WATER MANAGEMENT PLAN**

Pursuant to Minnesota Statutes, section 471.59, this Joint Powers Agreement ("Agreement") is entered into by and among the political subdivisions and local governmental units of the State of Minnesota identified as follows:

The Counties of Le Sueur, Rice, and Scott each by and through its respective Board of Commissioners;

The Le Sueur, Rice, and Scott Soil and Water Conservation Districts, each by and through its respective Board of Supervisors (collectively referred to as the "SWCDs");

The Scott Watershed Management Organization, by and through its respective Board of Managers (referred to as the "Watershed Management Organization"); and

The Lower Minnesota River Watershed District, by and through its respective Board of Managers (referred to as the "Watershed District).

Together, the above identified Counties, SWCD's, Watershed Management Organization, and Watershed District collectively formed the Lower Minnesota River East Watershed Implementation Partnership and, for purposes of this Agreement, said political subdivisions, local units of government, and those added in accordance with the terms of this Agreement, are herein collectively referred to as "Parties" and individually as a "Party."

## Recitals

WHEREAS, pursuant to Minnesota Statutes, sections 103B.305, subdivision 5 and 103B.3363, each of the Parties to this Agreement is a local unit of government having the responsibility and authority to separately or cooperatively, by joint agreement pursuant to Minnesota Statutes, section 471.59, to prepare, develop, adopt, implement, and administer a comprehensive local water management plan, or a substitute thereof, and carry out implementation actions, programs, and projects toward achievement of goals and objectives of such plans; and

WHEREAS, pursuant to Minnesota Statutes, sections 103B.101 and 103B.801, the Minnesota Board of Water and Soil Resources (BWSR) is authorized, to coordinate the water and resource planning and implementation activities of counties, SWCDs, watershed management organization, and watershed district and to administer and oversee the Minnesota Comprehensive Watershed Management Planning Program, known as the One Watershed, One Plan program; and

WHEREAS, each of the Parties exercises water management authority and responsibility within the Lower Minnesota River East Watershed Management Area, a geographical area consisting of those portions of Le Sueur, Rice, and Scott counties that drain into the Lower Minnesota River East Watershed as depicted on Exhibit A, attached hereto and incorporated herein; and

WHEREAS, some of the Parties had previously entered into the Lower Minnesota River East Watershed Memorandum of Agreement ("MOA") with the last date of signature being April 11, 2022, to develop the One Watershed, One Plan ("Plan") for the Lower Minnesota River East Watershed. Under the terms of the MOA, the Plan will be completed, be submitted to the Minnesota Board of Water and Soil Resources ("BWSR") for approval and will then be considered for adoption by the Parties to this Agreement. Those governmental entities that approve the Plan shall be eligible to be a part of this Agreement. The terms of the MOA also require that the structure for administration of the Plan be determined. The MOA will expire one year after the term of the BWSR the One Watershed, One Plan grant dated June 30, 2025. This Agreement shall not be construed as to modify or supplant the terms or provisions of the MOA; and

WHEREAS, with matters that relate to coordination of water management authorities pursuant to Minnesota Statutes, chapters 103B, 103C, and 103D, and with public drainage systems pursuant to Minnesota Statutes, chapter 103E, this Agreement does not change the rights or obligations of the public drainage system authorities; and

WHEREAS, this Agreement and the Lower Minnesota River East Comprehensive Watershed Management Plan does not replace or supplant local land use, planning/zoning authority of the respective Parties, existing watershed management plans of the respective Parties that are a part of the 7 County Metro Area, and the Parties intend that this Agreement shall not be construed in that manner.

## TERMS AND CONDITIONS

NOW THEREFORE, pursuant to Minnesota Statutes, section 471.59 and other relevant state law and in consideration of the mutual promise and benefits that the Parties shall derive herefrom, all Parties hereby agree:

1. Purpose and Establishment

    a) Purpose: This Agreement establishes the terms and conditions, governing structure, and processes by which the Parties will institute the implementation of the Plan. The Plan provides a framework for consistency and cooperation for entities that operate within the Lower Minnesota River East Watershed to allow for the implementation of projects within the watershed that provide the highest return on investment for addressing water quality/quantity issues within the watershed, and to allow the funding from the Minnesota Board of Water and Soil Resources ("BWSR") to be

passed through to the Parties for administration consistent with State statutes and guidelines and the Plan. Consistent with its terms and conditions, this Agreement authorizes the Parties to cooperatively exercise their common and similar power of local water planning and management notwithstanding the territorial limits within which they may otherwise exercise separately and to take action that will promote the goals listed in Minnesota Statutes, section 103B.801 and fulfill responsibilities under Minnesota Statutes, chapter 103B.

b) Established: This Agreement establishes a joint powers entity (hereinafter, the "Entity"). The name of the Entity is "Lower Minnesota River East Watershed Partnership, Lower Minnesota River East Watershed Joint Powers Organization, Lower Minnesota River East Watershed Implementation Partnership".

c) Recitals: All recitals set forth above are hereby incorporated into this Agreement.

2. Eligibility and Procedure to Become A Party

a) Qualifying Party: A county, SWCD, watershed management organization, watershed district, or tribal community located and authorized to carry out water planning and resource management responsibilities within the Lower Minnesota River East Management Area is eligible to become a Party to this Agreement. To become a Party, the county, SWCD, watershed management organization, watershed district or tribal community shall have first adopted the Plan.

b) Initial Parties: A county, SWCD, watershed management organization, watershed district, or tribal community may be an Initial Party by qualifying under section 2(a), by adopting the Plan and by its governing board agreeing to become a Party and be bound by the terms of this Agreement within 60 days of State approval of the Plan. Such local unit of government shall also give notice of plan adoption in accordance with provisions of Minnesota Statutes, chapters 103B and 103D. Any qualifying county, SWCD, or water management organization, watershed district, or tribal community that desires to become a Party after expiration of the 60-day period for joining as an Initial Party, will be eligible to become a Party as an additional party pursuant to Section 2.c., below.

c) Adding Additional Parties: A qualifying local unit of government that desires to become a Party to this Agreement at any time later than 60-days following State approval of the Plan, may become a Party upon the adoption of the Plan by the Party's governing board and by submitting to the Entity evidence its governing board agrees to the terms and conditions of this Agreement and to be bound by the same.

Upon receipt of such evidence, the governing board shall issue a signature page to the local government unit and instructions to execute and return the same to the Entity along with the name and contact data of the representatives appointed by the local government unit to serve on the governing board.

3. Powers and Formation of the Governing Board

a) Board: A joint powers board, known as the Lower Minnesota River East Watershed Joint Powers Board (LMREWJPB), shall be formed to oversee the implementation of the Plan. The Board shall consist of one individual selected by each Party to the Agreement. The Party shall determine its representative and an alternate to serve in the absence of the representative. Members of the Board are neither deemed employees of the Board nor entitled to any compensation from the Entity.

b) Board Term and Vacancy: The term of a Board representative shall be for a period of two years with the ability of the Party to appoint a representative to successive terms. If the Party fails to appoint a representative, the incumbent shall serve until such appointment occurs. If a representative resigns or is no longer able to serve, the alternate shall serve until a representative is appointed.

c) Officers: The Board shall elect from its members a Chair and a Vice Chair at the first meeting of each new calendar year. The duties of the Chair include presiding at all meetings, acting as the administrative leader of the Entity, and carrying out such functions as the Board assigns to the Chair. The Vice Chair shall act as the Chair in the Chair's absence. The Board may elect or appoint such other officers as it deems necessary to conduct the affairs of the Entity.

d) Meetings: The Board shall comply with all statutes and rules requiring open and public meetings. The conduct of all meetings of the BOARD NAME shall be generally governed by the most recent edition of Robert's Rules of Parliamentary Law. A quorum of the BOARD NAME shall consist of a simple majority of the members. A quorum shall consist of 50 percent, plus one of the total membership. All votes by BOARD NAME members or alternate member shall be made in person. Notice of BOARD NAME meetings and a proposed agenda shall be mailed to all Board members not less than five (5) days prior to the scheduled meeting date of the Joint Powers Board meeting. The minutes of any meeting shall be made available to all BOARD NAME members prior to the next meeting.

e) Voting: Each representative who is present shall be entitled to one vote. A motion or resolution shall be approved by a favorable vote of a simple

majority of the members present, provided enough members are present to make a quorum. A supermajority vote of 75 percent of those members present shall be required for final plan submittal, changes to the bylaws, or Joint Powers Agreement.

f) Operations: The Board shall meet twice a year or more often as deemed necessary by the Board.

g) Bylaws: The Board may adopt bylaws consistent with this Agreement and applicable law and may amend the same on a vote of simple majority of all the Board representatives. The Board may act only if there is a quorum. A quorum is a simple majority of the Board.

h) Budgeting and Funding:
   i. Annually, the BOARD NAME shall adopt a budget. The Board shall approve the yearly budget for the organization and the yearly implementation plan by super majority of 75% of the quorum.
   ii. The BOARD NAME has no authority to levy taxes.
   iii. Local funding may be provided by establishing a "membership dues" system payable by DATE of each year. The amount of membership dues will be based on a TYPE OF APPROACH. The BOARD NAME will have the authority to establish annual dues for each Member.

i) Committees: The Board may create committees as it deems necessary to review and examine specific issues, topics of concern, and carry out implementation of this plan. The Chair, or by a majority vote of the BOARD NAME, may appoint standing or ad hoc committees to address issues or facilitate the BOARD NAME activities.
   i. Any committee must include at least one LMREW board and/or staff member or proxy.
   ii. A committee should also include other related service providers and subject matter experts.
   iii. The BOARD NAME Chair may appoint the Chair and Vice Chair of a committee or a pair of Co-Chairs at his/her discretion.
   iv. A committee member may resign at any time from the subcommittee upon providing 30 days written notice.

j) Powers: The Board shall have the following powers:

   i) The Board may apply for and accept gifts, grants or money, other personal property or assistance that is available through the United States government, the State of Minnesota or any person, association or agency in the furtherance of the goals and objectives of the Plan;

ii) Agreements and Contracts: The Board may enter into such agreements or contracts as necessary to implement the terms of the Plan including the contracting for a project coordinator, administrative, legal or expert services. The Board may contract with a Party to implement a Project set forth in the yearly Implementation plan;

iii) Insurance: The Board shall obtain any liability insurance or other insurance it deems necessary to insure itself for any action arising out of this Agreement.

iv) The Board shall pay for services performed consistent with the purpose of the Agreement and the Plan. The Board may develop a process to expedite the payment of invoices provided that all payments shall be subject to ratification by the Board at the next meeting. The Board shall account for disbursement of funds in a manner consistent with generally accepted accounting practices; and

v) Property: The BOARD NAME has no authority to purchase property or equipment. Any property or equipment that is provided to the BOARD NAME to accomplish the goals of the One Watershed One Plan shall continue to be owned by the entity providing such property or equipment for use by the BOARD NAME.

vi) Staff: The BOARD NAME shall not have authority to hire staff. Any staff providing services in conjunction with this Agreement shall remain an employee of the respective member entity.

vii) Reservation of Powers: All responsibilities and powers not specifically set out to be jointly exercised by the BOARD NAME under this Agreement are hereby reserved to the respective governing bodies of the members.

viii) Funding of Operations: The funding of the Entity and the implementation of the plan shall be limited to grant revenues, gifts, or monies from any person, entity, or association. The Parties shall only be responsible for agreed upon contributions of in-kind services and staff time, unless the Party's governing board, in its sole discretion, affirmatively elects to do otherwise.

4. Term and Termination

a) Effective Date: This Agreement is effective upon signature of all Initial Parties and will remain in effect unless terminated consistent with terms of this Agreement or as otherwise provided under the law.

b) Termination: The Parties acknowledge their respective and applicable obligations, if any, under Minnesota Statutes, section 471.59, subdivision 5 after the Agreement has been terminated or the purpose of the Agreement has been completed. This Agreement terminates upon the occurrence of any one of the following events, whichever occurs first:

i. By motion or resolution adopted by the governing bodies of all then-existing Parties;
ii. By resolution or motion by the Board upon ongoing failure to obtain adequate funding for Plan implementation;
iii. By order of a Court of competent jurisdiction.

c) Asset Disbursement: Upon termination, any assets remaining shall be disbursed as follows:
i. Assets that have been purchased with pass through funding wherein the agreement requires tracing of the asset and specific disposal requirement shall be disposed of in accord with the funding agreement;
ii. Remaining assets shall be liquidated and any monies shall first be applied to any debt or obligation remaining;
iii. After satisfaction of any debt or obligation there remains any assets, it shall be divided evenly to the then remaining Parties to the Agreement at the time of termination.

d) Withdrawal: Any member may withdraw from this Agreement upon 90 days written notice. A withdrawing member shall not be entitled to the distribution of any assets or funds. In the event of withdrawal by any member, this Agreement shall remain in full force and effect as to all remaining members. The withdrawal shall not relieve any Party of an obligation in effect for the existing terms of a grant agreement nor shall it relieve ENTITY NAME of paying for any obligation assumed by the Party until such time as the withdrawal is effective. Notice shall be done by certified US Mail delivered to the fiscal agent and the current Board Chair.

5. General Provisions

a) Compliance with Laws/Standards: The Parties agree to abide by all applicable federal, state, and local laws, statutes, ordinances, rules, and regulations.

b) Timeliness: The Parties agree to perform obligations under this Agreement in a timely manner and inform each other about delays that may occur.

c) Applicability: The Entity shall be considered a separate and distinct public entity to which the Parties have transferred all responsibility and control for actions taken pursuant to this Agreement. The Entity shall comply with all laws and rules that govern a public entity in the State of Minnesota and shall be entitled to the protections of Minnesota Statutes, chapter 466.

d) Indemnification and Hold Harmless: The Entity shall fully defend, indemnify, and hold harmless the Parties against all claims, losses, liability, suits, judgments, costs and expenses by reason of the action or inaction of the Governing Board and/or employees and/or the agents of the Entity. This Agreement to indemnify and hold harmless does not constitute a waiver by any participant on limitations on liability provided under Minnesota Statutes, section 466.04 or any other statutes regarding the limitation of liability for political subdivisions of the State of Minnesota.

To the full extent permitted by law, actions by the Parties pursuant to this Agreement are intended to be and shall be construed as a "cooperative activity" and it is the intent of the Parties that they shall be deemed a "single governmental unit" for the purpose of liability, as set forth in Minnesota Statutes, section 471.59, subdivision 1a(a); provided further that for purposes of the statute, each Party to this Agreement expressly declines responsibility for the acts or omissions of the other Party.

The Parties of this Agreement are not liable for the acts or omissions of the other participants to this Agreement except to the extent to which they have agreed in writing to be responsible for acts or omissions of the other Parties.

e) Records Retention and Data Practices: The parties agree that records created pursuant to the terms of this Agreement will be retained in a manner that meets their respective entity's records retention schedules that have been reviewed and approved by the State in accordance with Minnesota Statutes§ 138.17. The Parties further agree that records prepared or maintained in furtherance of the agreement shall be subject to the Minnesota Government Data Practices Act.

f) Amendments: Any proposed amendments to this Agreement may be initiated by the Board and, if approved by the Board by a supermajority of 75%, the Board may send the same to the Parties' governing bodies for consideration. No amendment to this Agreement is effective until all Parties' governing boards have approved the amendment.

g) Dispute Resolution: If a dispute arises out of or relates to this Agreement, or the alleged breach thereof, and if the Parties to the dispute are unable to resolve the issue through good faith discussions, the Parties may agree to attempt to resolve the dispute by mediation within 30 days of notice of the dispute. If the Parties to the dispute agree to mediation, they shall work

cooperatively to select a mediator, the cost of which shall be shared equally among the Parties to the dispute.

6. Miscellaneous

a) Counterparts: This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same Agreement. Any counterpart signature transmitted by facsimile or by sending a scanned copy by electronic mail or similar electronic transmission shall be deemed an original signature. This executed Agreement, including all counterparts, shall be filed with each Party to this Agreement with a notification of the Agreement's effective date.

b) Savings Clause: In the event any provision of this Agreement is determined by a court of law to be null and void, the remaining provisions of this Agreement shall continue in full force and effect.

The remainder of this page left intentionally blank

UPDATE WITH YOUR SIGNATURE BLOCK, BELOW IS AN EXAMPLE

County of NAME

_____

Chair

Dated: _____

Approved as to form and execution:

_____

NAME County Attorney

Dated: _____

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. C. – City of Carver Levee**

**Prepared By**
Linda Loomis, Administrator

**Summary**
The City of Carver has schedules a meeting for August 22nd, to review preliminary layout and hydraulic impacts for the Merriam Junction project crossing the Minnesota River and the Carver Levee Improvement Project.

Permitting requirements for the project by the LMRWD and MNDNR and FEMA, will also be discussed.

**Attachments**
No attachments

**Recommended Action**
No action recommended

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. D. – Dredge management**

**Prepared By**
Linda Loomis, Administrator

**Summary**
Dredging of the main channel has been completed. It was estimated that 23,961 CYs of material were placed on the LMRWD dredge material management site. The LMRWD has received notices that additional dredging of the private terminal barge slips will occur this fall.

i. **Vernon Avenue reconstruction and culvert replacement project**
Work continues on this project. On Thursday, August 3rd, the City of Savage held a Technical Evaluation Panel (TEP) for the wetland delineation, as required under the Wetland Conservation Act (WCA). The TEP agreed with the findings of the wetland delineation prepared by ISG on behalf of the LMRWD. The Level 2 Wetland Delineation Report can be found on the LMRWD website.

The Architectural History Literature Review for the LMRWD Vernon Avenue Road Improvements Project, dated July 2023, recommended that no further work is needed on the Archeology side of things. However, more work is recommended on the Architectural History side of things. Based on the findings of 106 Group's architectural history literature review for the Project, two properties within the recommended architectural history APE (the Chicago, St. Paul, Minneapolis & Omaha Railroad and an electrical utility transmission corridor) require survey and evaluation to assess their potential eligibility for listing in the NRHP in order to comply with Section 106[1].

According to the recommendation of 106 Group:

"The first step of this process involves a reconnaissance architectural history survey to evaluate the potential eligibility of each resource. If neither resource is recommended potentially eligible following the reconnaissance survey, no further architectural history work will be needed, and the results will be transmitted to the Minnesota State Historic Preservation Office (SHPO) for concurrence (**note: SHPO review may take between 30 and 60 days to complete**). If either resource is recommended to be potentially eligible, it will then undergo an intensive survey to make a more informed assessment of its eligibility. The results of the intensive survey will then be transmitted to SHPO for concurrence. If the resource(s) evaluated are recommended eligible for listing in the NRHP, and SHPO concurs with recommendation, an assessment of effects (AoE) will be required to assess whether or not the Project undertaking will adversely impact the historic resource (**note: specific, finalized details regarding the Project undertaking will be required from you in order to complete the AoE**). If it is determined that the Project will result in adverse effects to a historic property, mitigation measures will need to be determined in consultation with SHPO.

Per the request by the LMRWD, the time needed for "best-" and "worst-case" scenarios for future work is outlined below. These estimates are based on 106 Group's current and anticipated workloads for the coming months and are inclusive of anticipated review time by SHPO.

1. **Best-case scenario** (reconnaissance survey, no resources recommended eligible): 6-8 weeks to complete all work.
2. **Worst-case scenario** (intensive survey, resource(s) recommended eligible, and AoE): 10-12 weeks to complete all work.
3. **Note**: these timelines do not include mitigation if an historic resource is recommended eligible, and it is determined that the Project undertaking will adversely impact said resource. Mitigation will need to be determined in consultation with SHPO and can take various forms. We can provide you with a scope of work and estimate for mitigation assistance if/when the approach is determined."

106 Group has prepared a proposal and work order to complete the recommended work. The Board should accept the proposal and authorize execution of the work order.

**Attachments**
-Cargill East River Dredge Site Access Road & Culvert Improvement Project, Savage, Minnesota Architectural History Reconnaissance Survey and Assessment of Effects
-Work Order Form for Consultant Agreement Work Order 2023-04

**Recommended Action**
Motion to approve Cargill East River Dredge Site Access Road & Culvert Improvement Project, Savage, Minnesota Architectural History Reconnaissance Survey and Assessment of Effects and authorize execution of Work Order 2023-04

[1] Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires federal agencies to consider the effects on historic properties of projects they carry out, assist, fund, permit, license, or approve throughout the country. If a federal or federally-assisted project has the potential to affect historic properties, a Section 106 review will take place.

Section 106 gives the ACHP, interested parties, and the public the chance to weigh in on these matters before a final decision is made. This process is an important tool for citizens to lend their voice in protecting and maintaining historic properties in their communities.

106GROUP

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**106group.com**

August 7, 2023

Hannah LeClaire, PE
Water Resources Scientist
Young Environmental Consulting Group, LLC
4309 Edinbrook Terrace
Brooklyn Park, MN 55443

Re: *Cargill East River Dredge Site Access Road & Culvert Improvement Project,*
*Savage, Minnesota*
*Architectural History Reconnaissance Survey and Assessment of Effects*

Dear Hannah:

106 Group is pleased to submit a scope of work for the above-mentioned project. The Lower Minnesota River Watershed District (LMRWD) proposes road improvements for Vernon Avenue between Highway 13 and the Minnesota River, which is the haul road/access road to the LMRWD's Dredge Site on the Minnesota River in Savage, Minnesota (project area). It is anticipated that the area of disturbance within the project area will not go beyond 10-feet (ft) to 20-ft of the current edge of Vernon Avenue.

106 Group has prepared this proposal because our initial Architectural History literature review report recommended additional survey of properties that are 45 years of age and have not been previously evaluated, and an assessment of effects for one previously recommended eligible property. The architectural history properties were identified in the *Architectural History Literature Review for the Lower Minnesota River Watershed District (LMRWD) Vernon Avenue Road Improvements Project* report (106 Group, July 2023).

## Regulatory Framework

This project anticipates the need for a Section 404 Permit from the U.S. Army Corps of Engineers (USACE) and, therefore, will be required to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

This scope of work will include the following tasks:

## Reconnaissance Architectural History Survey

- The architectural history Area of Potential Effects (APE) previously developed by 106 Group as part of the architectural history literature review for this Project will be utilized for the reconnaissance survey. This architectural history APE accounts for all anticipated physical, auditory, vibration, and visual effects to historic properties.
- Based on the results of the previously completed architectural history literature review, it is known that reconnaissance survey will require evaluation of two (2) linear structures within the APE (the Chicago, St. Paul, Minneapolis & Omaha Railroad and an electrical utility transmission corridor). Properties that meet the criteria for survey are 45 years of age or older and have not been evaluated within the last 10 years, per the SHPO *Historic and Architectural Survey Manual* (2017).
- The research previously conducted remotely at SHPO as part of the architectural history literature review will be utilized to inform the reconnaissance survey. This research identified all known National Register of Historic Places (NRHP) listed, eligible, and previously inventoried properties within the recommended architectural history APE, as well as previous survey reports and applicable historical contexts.
- Property-specific research for the reconnaissance survey will be limited to online research of maps, aerial photographs, and other online sources.
- The two (2) properties that meet the criteria for reconnaissance survey will be documented with field notes and digital photographs.
- According to SHPO's *Historic and Architectural Survey Manual* (2017), linear resources, such as railroads and transmission lines, should be inventoried as potential historic districts. As such, "each linear historic district is assigned an inventory number and a Multiple Property Inventory Form is completed. Each associated feature and single resource segment is assigned an inventory number and an Individual Property Inventory Form is completed." Therefore, this study will need to include the preparation of a Minnesota Multiple Property Inventory Form and Individual Property Inventory Form for both resources, assuming no more than four (4) forms in total.
- It is assumed that a custom historic context related to the development of electrical utilities in Savage will need to be prepared for the reconnaissance survey, and that the railroad will be evaluated using the existing *Railroads in Minnesota, 1862-1956* Multiple Property Documentation Form (2007).

- Based on a desktop review, of the two linear properties identified for reconnaissance survey, we anticipate that one (1) may be eligible for listing in the NRHP and, therefore, will require intensive architectural history survey: the Chicago, St. Paul, Minneapolis & Omaha Railroad (detailed below under Intensive Architectural History Survey). We will notify you upon completion of field survey and preliminary evaluation if any additional properties are recommended potentially eligible for listing in the NRHP, thereby warranting further study.

## Intensive Architectural History Survey

- As described above, we anticipate that one (1) property will require intensive architectural history survey in order to determine its eligibility for listing in the NRHP. This property will be documented with field notes and photographs at the same time as the reconnaissance survey.
- Additional property-specific research will include online research of maps, aerial photographs, and other sources. In-person research may also be conducted at the Minnesota Historical Society and University of Minnesota.
- An updated Minnesota Multiple Property Form will be prepared for the linear resource evaluated at the intensive level.
- It is assumed that the *Railroads in Minnesota, 1862-1956* Multiple Property Documentation Form (2007) used to evaluate the railroad during the reconnaissance survey will be sufficient to evaluate the property at the intensive level.

## Assessment of Effects

- Based on the results of the previously completed architectural history literature review, it is known that one (1) property, the Minneapolis, St. Paul, Rochester, and Dubuque Electric Traction Company “Dan Patch Line” (XX-RRD-MNS001), was previously surveyed in 2020 at the intensive level and recommended eligible.
- Because this property was evaluated during the intensive survey and recommended eligible for listing in the NRHP, an assessment of effects (AoE) will be required to determine whether or not the Project undertaking will adversely impact the historic resource. This scope of work includes such an analysis for up to two (2) properties, in the event that the Chicago, St. Paul, Minneapolis & Omaha Railroad is recommended eligible for listing in the NRHP.

- Photographic documentation of current conditions of the Project area and potential visual effects to/from the properties will be carried out at the same time as the reconnaissance survey.
- The study itself will include an analysis of the properties' character-defining features that may be affected by the proposed undertaking, and how the proposed undertaking will impact the ability of the properties to convey their historical significance. The AoE study will provide a recommendation regarding effects to historic properties for review by LMRWD and Young Environmental for submittal to USACE and SHPO for their determination of effects.
- One comprehensive architectural history report will be prepared describing project methodology, APE rationale, previous investigations, historic contexts, architectural history survey results, assessment of effects analysis, and recommendations. One copy of the draft report, all Property Inventory Forms, and digital location data for inventoried properties, as required per SHPO, will be prepared for your review in electronic format. It is assumed that no more than one round of client review of this report will be required.
- One copy of the final report and all inventory forms addressing comments received will be prepared in electronic format for distribution to appropriate agencies for review and concurrence.

### Assumptions

For the purpose of this scope, it is assumed that:

- The architectural history survey will follow the SHPO guidelines for reporting and preparation of inventory forms as outlined in the *Historic and Architectural Survey Manual* (2017).
- This scope of work assumes no more than two (2) architectural history properties will need to be documented during the reconnaissance survey, no more than one (1) property will be documented during the intensive survey, and AoE analysis will be completed for no more than two (2) historic properties. If additional properties are identified, the scope, costs, and schedule will need to be negotiated.
- Specific, finalized details regarding the Project undertaking, such as project plans, renderings, and cross-sections of the road profile at the railroad crossing, will be provided prior to the completion of the AoE study.

We request that you provide the following:

- An electronic map of the project boundaries, preferably in GIS shapefile format, if the limits of construction have changed since submission of our preliminary report;
- A survey letter for use if anyone approaches our staff while conducting the architectural history survey;
- Any previous communication with SHPO and/or USACE;
- Project plans, renderings, and a cross-section of the road profile at the railroad crossing; and
- Any other pertinent project data in electronic format.

## Cost & Schedule

106 Group can complete the tasks described above for an amount not to exceed **$20,757[1].**

| Task | Total |
|---|---|
| Reconnaissance Survey | $9,294 |
| Intensive-Level Survey | $7,153 |
| Assessment of Effects | $4,310 |
| **Total** | **$20,757** |

We can complete the tasks described above within 10-12 weeks following receipt of an executed agreement.

We appreciate this opportunity to continue working with you on this project. If you have any questions or require further information, please do not hesitate to contact me via email at MeredithAnderson@106group.com or phone at 651-403-8710.

Sincerely,
106 GROUP LTD.

Meredith Anderson
Dr. Cultural Resource Specialist

[1] The price quoted in this proposal is guaranteed for sixty (60) days from the date of submission. If more than sixty days elapse between submission and acceptance of this proposal, 106 Group reserves the right to make appropriate adjustments to the price.

# WORK ORDER FORM FOR CONSULTANT AGREEMENT WORK ORDER 2023-04

This Work Order is entered into and authorized this 16th day of August 2023, by and between **Lower Minnesota River Watershed District** (hereinafter called LMRWD) and **106 Group LTD** (hereinafter called 106 Group).

The parties agree that the 106 Group shall perform the attached services for the Cargill East River Dredge Site Access Road & Culvert Improvement Project – Architectural History Reconnaissance Survey and Assessment of Effects in accordance with the terms of the Agreement dated April 19, 2023.

**1. Compensation:**

The basis of compensation for the attached Services shall be the hourly rate per 106 Group's rate sheet, plus expenses, subject to a not-to-exceed cap of $20,757 without further authorization.

**2. Other Terms:**

No additional terms.

IN WITNESS WHEREOF, the parties have made and executed this Work Order as of the day and year first above written.

| **Owner: Lower Minnesota River Watershed District** | | **Consultant: 106 Group LTD** | |
|---|---|---|---|
| By: | _____ | By: | DocuSigned by: A. Anne Ketz 2C03DFC7CFD746A... |
| Name: | Linda Loomis | Name: | Anne Ketz |
| Title: | Administrator | Title: | CEO |

106GROUP

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St Paul MN 55108

**Locations**
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Washington DC

**106group.com**

August 7, 2023

Hannah LeClaire, PE
Water Resources Scientist
Young Environmental Consulting Group, LLC
4309 Edinbrook Terrace
Brooklyn Park, MN 55443

Re: *Cargill East River Dredge Site Access Road & Culvert Improvement Project,*
*Savage, Minnesota*
*Architectural History Reconnaissance Survey and Assessment of Effects*

Dear Hannah:

106 Group is pleased to submit a scope of work for the above-mentioned project. The Lower Minnesota River Watershed District (LMRWD) proposes road improvements for Vernon Avenue between Highway 13 and the Minnesota River, which is the haul road/access road to the LMRWD's Dredge Site on the Minnesota River in Savage, Minnesota (project area). It is anticipated that the area of disturbance within the project area will not go beyond 10-feet (ft) to 20-ft of the current edge of Vernon Avenue.

106 Group has prepared this proposal because our initial Architectural History literature review report recommended additional survey of properties that are 45 years of age and have not been previously evaluated, and an assessment of effects for one previously recommended eligible property. The architectural history properties were identified in the *Architectural History Literature Review for the Lower Minnesota River Watershed District (LMRWD) Vernon Avenue Road Improvements Project* report (106 Group, July 2023).

## Regulatory Framework

This project anticipates the need for a Section 404 Permit from the U.S. Army Corps of Engineers (USACE) and, therefore, will be required to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

This scope of work will include the following tasks:

## Reconnaissance Architectural History Survey

- The architectural history Area of Potential Effects (APE) previously developed by 106 Group as part of the architectural history literature review for this Project will be utilized for the reconnaissance survey. This architectural history APE accounts for all anticipated physical, auditory, vibration, and visual effects to historic properties.
- Based on the results of the previously completed architectural history literature review, it is known that reconnaissance survey will require evaluation of two (2) linear structures within the APE (the Chicago, St. Paul, Minneapolis & Omaha Railroad and an electrical utility transmission corridor). Properties that meet the criteria for survey are 45 years of age or older and have not been evaluated within the last 10 years, per the SHPO *Historic and Architectural Survey Manual* (2017).
- The research previously conducted remotely at SHPO as part of the architectural history literature review will be utilized to inform the reconnaissance survey. This research identified all known National Register of Historic Places (NRHP) listed, eligible, and previously inventoried properties within the recommended architectural history APE, as well as previous survey reports and applicable historical contexts.
- Property-specific research for the reconnaissance survey will be limited to online research of maps, aerial photographs, and other online sources.
- The two (2) properties that meet the criteria for reconnaissance survey will be documented with field notes and digital photographs.
- According to SHPO's *Historic and Architectural Survey Manual* (2017), linear resources, such as railroads and transmission lines, should be inventoried as potential historic districts. As such, "each linear historic district is assigned an inventory number and a Multiple Property Inventory Form is completed. Each associated feature and single resource segment is assigned an inventory number and an Individual Property Inventory Form is completed." Therefore, this study will need to include the preparation of a Minnesota Multiple Property Inventory Form and Individual Property Inventory Form for both resources, assuming no more than four (4) forms in total.
- It is assumed that a custom historic context related to the development of electrical utilities in Savage will need to be prepared for the reconnaissance survey, and that the railroad will be evaluated using the existing *Railroads in Minnesota, 1862-1956* Multiple Property Documentation Form (2007).

- Based on a desktop review, of the two linear properties identified for reconnaissance survey, we anticipate that one (1) may be eligible for listing in the NRHP and, therefore, will require intensive architectural history survey: the Chicago, St. Paul, Minneapolis & Omaha Railroad (detailed below under Intensive Architectural History Survey). We will notify you upon completion of field survey and preliminary evaluation if any additional properties are recommended potentially eligible for listing in the NRHP, thereby warranting further study.

## Intensive Architectural History Survey

- As described above, we anticipate that one (1) property will require intensive architectural history survey in order to determine its eligibility for listing in the NRHP. This property will be documented with field notes and photographs at the same time as the reconnaissance survey.
- Additional property-specific research will include online research of maps, aerial photographs, and other sources. In-person research may also be conducted at the Minnesota Historical Society and University of Minnesota.
- An updated Minnesota Multiple Property Form will be prepared for the linear resource evaluated at the intensive level.
- It is assumed that the *Railroads in Minnesota, 1862-1956* Multiple Property Documentation Form (2007) used to evaluate the railroad during the reconnaissance survey will be sufficient to evaluate the property at the intensive level.

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- Because this property was evaluated during the intensive survey and recommended eligible for listing in the NRHP, an assessment of effects (AoE) will be required to determine whether or not the Project undertaking will adversely impact the historic resource. This scope of work includes such an analysis for up to two (2) properties, in the event that the Chicago, St. Paul, Minneapolis & Omaha Railroad is recommended eligible for listing in the NRHP.

- Photographic documentation of current conditions of the Project area and potential visual effects to/from the properties will be carried out at the same time as the reconnaissance survey.
- The study itself will include an analysis of the properties' character-defining features that may be affected by the proposed undertaking, and how the proposed undertaking will impact the ability of the properties to convey their historical significance. The AoE study will provide a recommendation regarding effects to historic properties for review by LMRWD and Young Environmental for submittal to USACE and SHPO for their determination of effects.
- One comprehensive architectural history report will be prepared describing project methodology, APE rationale, previous investigations, historic contexts, architectural history survey results, assessment of effects analysis, and recommendations. One copy of the draft report, all Property Inventory Forms, and digital location data for inventoried properties, as required per SHPO, will be prepared for your review in electronic format. It is assumed that no more than one round of client review of this report will be required.
- One copy of the final report and all inventory forms addressing comments received will be prepared in electronic format for distribution to appropriate agencies for review and concurrence.

### Assumptions

For the purpose of this scope, it is assumed that:

- The architectural history survey will follow the SHPO guidelines for reporting and preparation of inventory forms as outlined in the *Historic and Architectural Survey Manual* (2017).
- This scope of work assumes no more than two (2) architectural history properties will need to be documented during the reconnaissance survey, no more than one (1) property will be documented during the intensive survey, and AoE analysis will be completed for no more than two (2) historic properties. If additional properties are identified, the scope, costs, and schedule will need to be negotiated.
- Specific, finalized details regarding the Project undertaking, such as project plans, renderings, and cross-sections of the road profile at the railroad crossing, will be provided prior to the completion of the AoE study.

We request that you provide the following:

- An electronic map of the project boundaries, preferably in GIS shapefile format, if the limits of construction have changed since submission of our preliminary report;
- A survey letter for use if anyone approaches our staff while conducting the architectural history survey;
- Any previous communication with SHPO and/or USACE;
- Project plans, renderings, and a cross-section of the road profile at the railroad crossing; and
- Any other pertinent project data in electronic format.

## Cost & Schedule

106 Group can complete the tasks described above for an amount not to exceed **$20,757[1].**

| Task | Total |
|---|---|
| Reconnaissance Survey | $9,294 |
| Intensive-Level Survey | $7,153 |
| Assessment of Effects | $4,310 |
| **Total** | **$20,757** |

We can complete the tasks described above within 10-12 weeks following receipt of an executed agreement.

We appreciate this opportunity to continue working with you on this project. If you have any questions or require further information, please do not hesitate to contact me via email at MeredithAnderson@106group.com or phone at 651-403-8710.

Sincerely,
106 GROUP LTD.

Meredith Anderson
Dr. Cultural Resource Specialist

[1] The price quoted in this proposal is guaranteed for sixty (60) days from the date of submission. If more than sixty days elapse between submission and acceptance of this proposal, 106 Group reserves the right to make appropriate adjustments to the price.

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. F. – 2024 Legislative Action**

**Prepared By**
Linda Loomis, Administrator

**Summary**
At the July 19, 2023, Board of Managers meeting, the Board tabled this item and requested more information regarding past legislative priorities. I did not get information pulled together in time for this meeting, so it is recommended that this item be tabled again and continued at the September 20, 2023, Board of Managers meeting.

**Attachments**
No attachments

**Recommended Action**
Motion to table this item to September 20, 2023

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. H. – LMRWD Projects**

**Prepared By**
Linda Loomis, Administrator

**Summary**

**i. Area #3**

At the July 19, 2023, Board of Managers meeting, the Board asked staff to determine the boundaries of the project area and determine a value for said property. The LMRWD requested proposals from consultants to perform this work. WSB was the only firm in the LMRWD consultant pool that performs this type of work. A proposal from WSB is attached. WSB was authorized to go ahead and start the work, as the property owner has the parcel that includes the project area on the market and would like this information. Legal Counsel has reviewed the proposal and has no issues with the proposed action or sub-consultants. The Board of Managers should approve the proposal and authorize the work.

A professional services agreement (PSA) between WSB and the LMRWD is being prepared. The Board should authorize execution of the PSA, subject to review by legal counsel.

Additionally, 106 Group completed its Architectural History Literature Review for the LMRWD Area 3 Slope Stabilization Project Report. To summarize the findings, 106 Group provided the following comments:

- Archaeological Literature Review and Assessment
  - Our research informed our assessment of the Area of Potential Effects (APE) as having low potential to contain intact archaeological resources that may be eligible for listing in the National Register. Therefore, we are recommending **no further archaeological work** for the Project as currently planned.
  - Our research did not include an assessment of human remains potential. There are three burial mound sites located near the recommended APE, and previous disturbance may have shifted human remains and associated funerary objects from their original locations into the recommended APE. We have initiated consultation with the OSA and MIAC, and ongoing consultation with OSA and MIAC is recommended.
- Architectural History Literature Review
  - Three properties that had been previously surveyed were identified within the recommended APE. These properties were previously surveyed at the reconnaissance level and were subsequently recommended for additional research and survey at the intensive level due to their possible NRHP

eligibility. We are recommending intensive survey for each of these properties in order to comply with Section 106.

- Three additional properties, all 45 years of age or older and not previously inventoried, were identified within the recommended APE during our research. We are also recommending intensive survey for these three additional properties in order to comply with Section 106.

106 Group was asked to submit a proposal to complete the Architectural History review. The proposal they provided is attached. Work Order Form for Consultant Agreement Work Order 2023-03 is attached. The Board should approve the proposal and authorize execution of Work Order 2023-03.

**Attachments**
Lower Minnesota River Watershed District (LMRWD) – R/W Proposal from WSB dated August 1, 2023
LMRWD Area 3 Slope Stabilization Project, Eden Prairie, Minnesota, Architectural History Reconnaissance Survey
Work Order Form for Consultant Agreement Work Order 2023-03

**Recommended Action**
Motion to approve LMRWD R/W Proposal and authorize work to proceed
Motion to approve PSA between WSB and LMRWD subject to review by legal counsel
Motion to approve proposal from 106 Group for Area 3 Architectural History Reconnaissance Survey and authorize execution of Work Order 2023-03

**ii. Spring Creek**

At the June 21, 2023, Board of Managers meeting, the Board authorized ISG to begin design work on the project. As ISG has begun to design a project to stabilize the creek banks at Sites 1 & 2, Young Environmental has begun work to obtain permits required for the project. Technical Memorandum – Spring Creek Site, Sites 1 & 2 Bank Stabilization Project – Environmental Permitting Update dated August 9, 2023, is attached for the Board's information. No action is being requested by the Board currently.

**Attachments**
Technical Memorandum – Spring Creek Site, Sites 1 & 2 Bank Stabilization Project – Environmental Permitting Update dated August 9, 2023

**Recommended Action**
No action recommended

August 1, 2023

Ms. Meghan Litsey, CPESC VIA EMAIL: meghan@youngecg.com
Senior Water Resources Planner
Young Environmental Consulting Group, LLC

Re: Lower Minnesota River Watershed District (LMRWD) – R/W Proposal

Dear Ms. Litsey:

WSB is pleased to submit this proposal for the acquisition services required on LMRWD voluntary acquisition. The services provided will be in accordance with the MnDOT right of way Manual, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended and other applicable state and federal laws and rules. Lisa Beckman will lead the team; Brent Rolf will perform acquisition services.

We will provide the following scope of services:

Project Management:

General project management, status reports, coordination of all activities and subconsultants. Capitol Lien will provide Ownership & Encumbrance Reports for the one (1) affected tax parcel.

Pre-Acquisition:

Early Notification Letters, initial landowner meeting and site visit.

Valuation Services:

Valuations will be performed by subconsultant Christy Mackaman, CM Valuation. She will require 8 (eight) weeks to complete the report.

If the valuation report is over $10,000 in compensation we will need a review by an independent review appraiser, Julie Kalahar, JAK Appraisals. For proposal purposes, we have assumed we will need a review appraisal. If the valuation is less than $10,000, we will do an internal review verifying the information.

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

Acquisition Services:

Prepare and present offer documents, mailing via certified mail, if necessary, conduct Good Faith negotiations, and close out files. We will record the conveyance and submit for payment.

The total fee for the project is $11,469.00

Sincerely,

WSB

Lisa Beckman
Sr. Right of Way Specialist

**Young Environmentail Conslting Group, LLC**
Lower Minnesota River Watershed District
Right of Way Services
August 1, 2023

| | Task Description | Project Manager | R/W Agent | | | TOTAL HOURS | Costs |
|---|---|---|---|---|---|---|---|
| | | Lisa Beckman | Brent Rolf | | | | |
| **1** | **Project Management** | **4** | **1** | | | **5** | **$1,038** |
| 1.1 | General Project Management, Status Update Reports | | | | | | |
| 1.2 | Review title work obtained by Goodhue County; RR permitting | | | | | | |
| **2** | **Pre-Acquisition Services** | **1** | **4** | | | **5** | **$807** |
| 2.1 | Early Notification Letters | | | | | | |
| 2.2 | Field Title Reports | | | | | | |
| **3** | **Valuation Services** | **2** | | | | **2** | **$446** |
| 3.1 | Coordinate valuations and reviews | | | | | | |
| 3.2 | Review factual information on valuations less than $10,000 (we will absorb the review fee if a formal review is not needed) | | | | | | |
| **3** | **Acquisition Services** | **4** | **16** | | | **20** | **$3,228** |
| 3.1 | Prepare offer documentation | | | | | | |
| 3.2 | Negtiations, Administrative Settlements, Obtain Easements, Mortgage Consents, if LTV is over 80% | | | | | | |
| **Total Hours - WSB Staff** | | **11** | **21** | | | **32** | |
| Hourly Fees (includes overhead and profit) | | $223 | $146 | | | | |
| **Sub-Total: WSB Right of Way Labor** | | | | | | | **$5,519** |
| | | | | | | | |
| **Expenses:** | | | | | | | |
| Mileage, certified mailings, misc | | | | | | | **$250** |
| **Sub-Consultant:** | | | | | | | |
| Ownership & Encumbrance Reports - Capitol Lien | | | | | | | $200 |
| 1-Appraisal by CM Valuations | | | | | | | $4,000 |
| 1-Review Appraisals by Julie Kalahar | | | | | | | $1,500 |
| **Sub-Total: Sub-Consultant Services** | | | | | | | **$5,700** |
| | | | | | | | |
| **Total Right of Way Services** | | | | | | | **$11,469** |

**ASSUMPTIONS:**

1. We have assumed one (1) tax parcel will be acquire in fee simple through voluntary acquisition.
2. We have assumed no relocaiton tasks.
3. Valuation report type is preliminary and may change perimeters dependent on ffinal acquisition limits being completed.
4. Estimate includes three trips to the project – one to conduct field title meetings and the remainder to present the offers and negotiate. The balance of the work will be conducted by mail, phone or e-mail.

106GROUP

**Main Office**
1295 Bandana Blvd N
Suite 335
St Paul MN 55108

**Locations**
Boston MA
Richmond VA
Washington DC

**106group.com**

August 7, 2023

Erica Bock
Water Resources Scientist
Young Environmental Consulting Group, LLC
4309 Edinbrook Terrace
Brooklyn Park, MN 55443

Re: *LMRWD Area 3 Slope Stabilization Project,*
*Eden Prairie, Minnesota*
*Architectural History Reconnaissance Survey*

Dear Erica:

106 Group is pleased to submit a scope of work for the above-mentioned project. The Lower Minnesota River Watershed District (LMRWD) proposes to stabilize the eroding bluff at "Area 3" along the Lower Minnesota River (project area). Area 3 is located along the left bank of the Lower Minnesota River in Eden Prairie. Project activities will include minor tree removal, grading, excavation, filling (riprap replacement), and soil stabilization.

106 Group has prepared this proposal because our initial Architectural History literature review report recommended additional survey of properties that are 45 years of age and have not been previously surveyed, and additional survey of properties that were initially inventoried over 10 years ago. The architectural history properties were identified in the *Architectural History Literature Review for the Lower Minnesota River Watershed District (LMRWD) Area 3 Slope Stabilization Project* report (106 Group, July 2023).

## Regulatory Framework

This project anticipates the need for a Section 404 Permit from the U.S. Army Corps of Engineers (USACE) and, therefore, will be required to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

This scope of work will include the following tasks:

### Reconnaissance Architectural History Survey

- The architectural history APE previously developed by 106 Group as part of the architectural history literature review for this Project will be utilized

for the reconnaissance survey. This architectural history APE accounts for all anticipated physical, auditory, vibration, and visual effects to historic properties.

- Based on the results of the previously completed architectural history literature review, it is known that reconnaissance survey will require evaluation of one (1) structure (Hennepin Canal, HE-EPC-095), two (2) linear resources (Riverview Road – Hennepin Townsite Segment, HE-EPC-096 and Transmission Corridor), one (1) building (House and Garage), and one (1) site (Landfill) within the APE. Properties that meet the criteria for survey are 45 years of age or older and have not been evaluated within the last 10 years, per the SHPO *Historic and Architectural Survey Manual* (2017).
- The research previously conducted remotely at SHPO as part of the architectural history literature review will be utilized to inform the reconnaissance survey. This research identified all known National Register of Historic Places (NRHP) listed, eligible, and previously inventoried properties within the recommended architectural history APE, as well as previous survey reports and applicable historical contexts.
- Property-specific research for the reconnaissance survey will be limited to online research of maps, aerial photographs, and other online sources.
- The five (5) properties that meet the criteria for reconnaissance survey will be documented with field notes and digital photographs.
- According to SHPO's *Historic and Architectural Survey Manual* (2017), linear resources, such as roads and transmission lines, should be inventoried as potential historic districts. As such, "each linear historic district is assigned an inventory number and a Multiple Property Inventory Form is completed. Each associated feature and single resource segment is assigned an inventory number and an Individual Property Inventory Form is completed." Therefore, this study will need to include the preparation of a Minnesota Multiple Property Inventory Form and Individual Property Inventory Form for both the Riverview Road – Hennepin Townsite Segment (HE-EPC-096) and the Transmission Corridor, assuming no more than four (4) forms in total for both resources. The remaining three (3) properties will be documented using a Minnesota Individual Property Inventory Form.
- It is assumed that two custom historic contexts related to the development of roads and canals, respectively, in Eden Prairie will need to be prepared for the reconnaissance survey in order to evaluate these properties.

- Based on a desktop review of the properties identified for reconnaissance survey, we anticipate that two (2) may be eligible for listing in the NRHP and, therefore, will require intensive architectural history survey: Riverview Road – Hennepin Townsite Segment (HE-EPC-096) and Hennepin Canal (HE-EPC-095). Additionally, one (1) linear resource that was identified during the architectural history literature review as having been previously surveyed and recommended individually eligible for listing in the NRHP (Yorkville and Bloomington Road, HE-EPC-285) will require intensive architectural history survey. We will notify you upon completion of field survey and preliminary evaluation if any additional properties are recommended potentially eligible for listing in the NRHP, thereby warranting further study.

## Intensive Architectural History Survey

- As described above, we anticipate that three (3) properties will require intensive architectural history survey in order to determine their eligibility for listing in the NRHP. These properties will be documented with field notes and photographs at the same time as the reconnaissance survey.
- Additional property-specific research will include online research of maps, aerial photographs, and other sources. In-person research may also be conducted at the Minnesota Historical Society and University of Minnesota.
- Expanded Minnesota Multiple Property Forms and Individual Property Forms will be prepared for the linear resource evaluated at the intensive level.
- It is assumed that the custom contexts developed during the reconnaissance survey will be sufficient to evaluate these properties at the intensive level.

## Assessment of Effects

- In the event that any of the properties evaluated during the intensive survey are recommended eligible for listing in the NRHP, and SHPO concurs with the recommendation, an assessment of effects (AoE) will be required to determine whether or not the Project undertaking will adversely impact the historic resources. This scope of work includes such an analysis for up to two (2) properties.
- Photographic documentation of current conditions of the Project area and potential visual effects to/from the historic properties will be carried out at the same time as the reconnaissance survey.

- The study itself will include an analysis of the properties' character-defining features that may be affected by the proposed undertaking, and how the proposed undertaking will impact the ability of properties to convey their historical significance. The AoE study will provide a recommendation regarding effects to historic properties for review by Young Environmental and the LMRWD and for submittal to USACE and SHPO for their determination of effects.
- One comprehensive architectural history report will be prepared describing project methodology, APE rationale, previous investigations, historic contexts, architectural history survey results, assessment of effects analysis, and recommendations. One copy of the draft report, all Property Inventory Forms, and digital location data for inventoried properties, as required per SHPO, will be prepared for your review in electronic format. It is assumed that no more than one (1) round of client review of this report will be required.
- One copy of the final report and all inventory forms addressing comments received will be prepared in electronic format for distribution to appropriate agencies for review and concurrence.

### Assumptions

For the purpose of this scope, it is assumed that:

- The architectural history survey will follow the SHPO guidelines for reporting and inventory forms as outlined in the *Historic and Architectural Survey Manual* (2017).
- This scope of work assumes no more than five (5) architectural history properties will need to be documented during the reconnaissance survey, no more than three (3) properties during the intensive survey, and an assessment of effects analysis will be completed for no more than two (2) historic properties. If additional properties are identified, the scope, costs, and schedule will need to be negotiated. Additionally, if fewer intensive evaluations or assessment of effects are needed there will be a cost savings to you.
- Specific, finalized details regarding the Project undertaking will be provided prior to the completion of the AoE study.

We request that you provide the following:

- An electronic map of the project boundaries, preferably in GIS shapefile format, if the limits of construction have changed since submission of our preliminary report;
- A survey letter for use if anyone approaches our staff while conducting the architectural history survey;
- Any previous communication with SHPO and/or USACE;
- Project plans and renderings; and
- Any other pertinent project data in electronic format.

## Cost & Schedule

106 Group can complete the tasks described above for an amount not to exceed **$33,255[1].**

| Task | Total |
|---|---|
| Reconnaissance Survey | $13,695 |
| Intensive-Level Survey | $15,125 |
| Assessment of Effects | $4,435 |
| **Total** | **$33,255** |

We can complete the tasks described above within 10-12 weeks following receipt of an executed agreement.

We appreciate this opportunity to work with you on this project. If you have any questions or require further information, please do not hesitate to contact me via email at MeredithAnderson@106group.com or phone at 651-403-8710.

Sincerely,
106 GROUP LTD.

Meredith Anderson
Sr. Cultural Resource Specialist

[1] The price quoted in this proposal is guaranteed for sixty (60) days from the date of submission. If more than sixty days elapse between submission and acceptance of this proposal, 106 Group reserves the right to make appropriate adjustments to the price.

# WORK ORDER FORM FOR CONSULTANT AGREEMENT WORK ORDER 2023-03

This Work Order is entered into and authorized this 16th day of August 2023, by and between **Lower Minnesota River Watershed District** (hereinafter called LMRWD) and **106 Group.**

The parties agree that 106 Group shall perform the attached services for Area 3 Slope Stabilization Project – Architectural History Reconnaissance Survey in accordance with the terms of the Agreement dated April 19, 2023.

**1. Compensation:**

The basis of compensation for the attached services shall be the hourly rate per 106 Group's rate sheet subject to a not-to-exceed cap of $33,255 without further authorization.

**2. Other Terms:**

No additional terms.

IN WITNESS WHEREOF, the parties have made and executed this Work Order as of the day and year first above written.

| **Owner: Lower Minnesota River Watershed District** | | **Consultant: 106 Group** | |
|---|---|---|---|
| By: | _____ | By: | DocuSigned by: k. Anne Ketz 2C03DFC7CFD746A... |
| Name: | Linda Loomis | Name: | Anne Ketz |
| Title: | Administrator | Title: | CEO |

106GROUP

**Main Office**
1295 Bandana Blvd N
Suite 335
St Paul MN 55108

**Locations**
Boston MA
Richmond VA
Washington DC

**106group.com**

August 7, 2023

Erica Bock
Water Resources Scientist
Young Environmental Consulting Group, LLC
4309 Edinbrook Terrace
Brooklyn Park, MN 55443

Re: *LMRWD Area 3 Slope Stabilization Project,*
*Eden Prairie, Minnesota*
*Architectural History Reconnaissance Survey*

Dear Erica:

106 Group is pleased to submit a scope of work for the above-mentioned project. The Lower Minnesota River Watershed District (LMRWD) proposes to stabilize the eroding bluff at "Area 3" along the Lower Minnesota River (project area). Area 3 is located along the left bank of the Lower Minnesota River in Eden Prairie. Project activities will include minor tree removal, grading, excavation, filling (riprap replacement), and soil stabilization.

106 Group has prepared this proposal because our initial Architectural History literature review report recommended additional survey of properties that are 45 years of age and have not been previously surveyed, and additional survey of properties that were initially inventoried over 10 years ago. The architectural history properties were identified in the *Architectural History Literature Review for the Lower Minnesota River Watershed District (LMRWD) Area 3 Slope Stabilization Project* report (106 Group, July 2023).

## Regulatory Framework

This project anticipates the need for a Section 404 Permit from the U.S. Army Corps of Engineers (USACE) and, therefore, will be required to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

This scope of work will include the following tasks:

### Reconnaissance Architectural History Survey

- The architectural history APE previously developed by 106 Group as part of the architectural history literature review for this Project will be utilized

for the reconnaissance survey. This architectural history APE accounts for all anticipated physical, auditory, vibration, and visual effects to historic properties.

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- One copy of the final report and all inventory forms addressing comments received will be prepared in electronic format for distribution to appropriate agencies for review and concurrence.

### Assumptions

For the purpose of this scope, it is assumed that:

- The architectural history survey will follow the SHPO guidelines for reporting and inventory forms as outlined in the *Historic and Architectural Survey Manual* (2017).
- This scope of work assumes no more than five (5) architectural history properties will need to be documented during the reconnaissance survey, no more than three (3) properties during the intensive survey, and an assessment of effects analysis will be completed for no more than two (2) historic properties. If additional properties are identified, the scope, costs, and schedule will need to be negotiated. Additionally, if fewer intensive evaluations or assessment of effects are needed there will be a cost savings to you.
- Specific, finalized details regarding the Project undertaking will be provided prior to the completion of the AoE study.

We request that you provide the following:

- An electronic map of the project boundaries, preferably in GIS shapefile format, if the limits of construction have changed since submission of our preliminary report;
- A survey letter for use if anyone approaches our staff while conducting the architectural history survey;
- Any previous communication with SHPO and/or USACE;
- Project plans and renderings; and
- Any other pertinent project data in electronic format.

## Cost & Schedule

106 Group can complete the tasks described above for an amount not to exceed **$33,255[1].**

| Task | Total |
|---|---|
| Reconnaissance Survey | $13,695 |
| Intensive-Level Survey | $15,125 |
| Assessment of Effects | $4,435 |
| **Total** | **$33,255** |

We can complete the tasks described above within 10-12 weeks following receipt of an executed agreement.

We appreciate this opportunity to work with you on this project. If you have any questions or require further information, please do not hesitate to contact me via email at MeredithAnderson@106group.com or phone at 651-403-8710.

Sincerely,
106 GROUP LTD.

Meredith Anderson
Sr. Cultural Resource Specialist

[1] The price quoted in this proposal is guaranteed for sixty (60) days from the date of submission. If more than sixty days elapse between submission and acceptance of this proposal, 106 Group reserves the right to make appropriate adjustments to the price.

# Technical Memorandum

Young Environmental Consulting Group, LLC

**To:** Linda Loomis, Administrator
Lower Minnesota River Watershed District (LMRWD)

**From:** Hannah LeClaire, PE, Project Manager
Meghan Litsey, Senior Water Resources Planner
Della Schall Young, CEO

**Date:** August 9, 2023

**Re:** Spring Creek Site Sites 1 & 2 Bank Stabilization Project—Environmental Permitting Update

---

At the Lower Minnesota River Watershed District (LMRWD) board meeting in June 2023, the LMRWD selected ISG to design the Spring Creek Sites 1 & 2 Bank Stabilization Project. ISG is responsible for the engineering design of the project and the construction administration, and Young Environmental Consulting Group (Young Environmental) is responsible for overseeing the project coordinating project permitting requirements. Since approval of the project in June 2023, work has been progressing on the project design. The following memo provides updated information concerning the environmental permitting and review requirements for the project to date. As more information becomes available, Young Environmental will update the LMRWD board.

**Water Resources**

Spring Creek was the primary water resource identified within the project limits. Spring Creek is not considered a public water by the Minnesota Department of Natural Resources and therefore will not require a public waters permit. Because the project will place bank stabilization measures along the streambank and there will be grading in the stream, the project might require a United States Army Corps of Engineers (USACE) Section 404 permit. The United States Fish and Wildlife Service's National Wetlands Inventory (NWI) was reviewed to determine the presence of water resources and potential wetlands in the project area. The desktop review from the NWI indicates the presence of riverine wetland within the project area where bank stabilization measures are proposed. An official wetland delineation might be required to determine whether potential wetland impacts comply with the City of Carver (City) and USACE permit requirements. However, more coordination with the City and the USACE is needed to determine the official designation of the creek before we can determine whether a delineation is required.

Based on the Area 3 Project and Vernon Avenue Road Improvements Project, if a wetland delineation is required, the estimated cost could be between $10,000 and $15,000.

**Cultural Resources**

Permitting agencies and permit applications occasionally require a Phase 1 Cultural Survey, including but not limited to the USACE Section 404 permit. A Phase 1 Cultural Survey is the first step in the cultural resource compliance process. It includes background research to identify any cultural properties or resources that might be located within the project area. A literature review is used initially to examine what is written and known about an area to determine the necessity of fieldwork. After initial consultation with the USACE, the project was determined to be in the City of Carver Historic District and near other historic resources. Therefore, there is potential for the project to require, at a minimum, a Phase 1 Cultural Survey. However, more coordination is required with the City and USACE to determine that.

Based on the Area 3 Project and Vernon Avenue Road Improvements Project, if a Phase 1 Cultural Resources Survey is required, the estimated cost could be between $15,000 and $20,000.

**Recommendations**

No Board action is required at this time. More coordination is needed to determine the final permitting requirements for the Spring Creek Site 1 & 2 Bank Stabilization Project. An environmental permitting update will be provided at the September Board Meeting.

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. I. – Permits & Project Reviews**

**Prepared By**
Linda Loomis, Administrator

**Summary**

i. **Xcel Driveway (LMRWD No. 2022-015)**
Xcel Energy has a facility in Shakopee that requires a second driveway. The project is located is a LMRWD High Value Resource District and Young Environmental Consulting Group has reviewed the project on behalf of the LMRWD and recommends conditional approval of the permit contingent upon receipt of a copy of the NPDES stormwater permit, contact information for the person(s) responsible for erosion and sediment control features, documentation of approval from the City of Shakopee, documentation of approval from the Prior Lake Outlet Channel Joint Powers Organization and final construction plans signed by a professional engineer.

**Attachments**
Technical Memorandum – Xcel Driveway (LMRWD No. 2022-015) dated August 9, 2023

**Recommended Action**
Motion to conditionally approve a permit for Xcel Driveway (LMRWD No. 2022-015), contingent upon receipt of a copy of the NPDES stormwater permit, contact information for the person(s) responsible for erosion and sediment control features, documentation of approval from the City of Shakopee, documentation of approval from the Prior Lake Outlet Channel Joint Powers Organization and final construction plans signed by a professional engineer

ii. **Burnsville Sanitary Landfill Expansion – Amendment (LMRWD No. 2022-040)**
At the March 2023 Board of Managers meeting, a permit was approved for the Burnsville Sanitary Landfill Expansion. The permittee is now asking for an amendment to the permit, because of conditions placed on the permittee by the City of Burnsville and the US Army Corps of Engineers (USACE). Young Environmental Consulting Group have reviewed the proposal on behalf of the LMRWD and recommends amending the permit with the stipulation that the applicant send the USACE permit to the LMRWD before work can be completed in the wetlands within the Annex Development Area.

**Attachments**
Technical Memorandum – Burnsville Sanitary Landfill Expansion – Amendment (LMRWD No. 2022-040)

**Recommended Action**
Motion to amend Burnsville Sanitary Landfill Expansion, LMRWD Permit No. 2022-040 with the following stipulation: the Applicant must send the USACE permit to the LMRWD before work can be completed in wetland within the Annex Development Area

### iii. 5250 Eagle Creek Boulevard, Shakopee – work without a permit

The homeowner at this address placed fill in the wetland within Dean Lake. The LMRWD, the City of Shakopee, and the DNR were notified, and no permits were obtained before placement of the fill. Dean Lake is the waterbody where this work occurred. According to the City no fill was placed below the Ordinary High-Water (OHW) mark. Because no fill was placed below the OHW the DNR does not require a public waters work permit. Dean Lake does not have a mapped floodplain, so it is unlikely that the permit was required by the LMRWD. The City has ordered the fill be removed and will inspect the property once the removal is complete. Young Environmental, on behalf of the LMRWD, plans to join the City when the property is inspected, to determine if this work would have required permits. The City has indicated that it will be satisfied if the fill is removed. The LMRWD will decide whether a permit is necessary once the property has been inspected.

**Attachments**
No attachments

**Recommended Action**
No action recommended

### iv. 535 Lakota Lane, Chanhassen – work without a permit

At the June 21, 2023, Board of Managers meeting, the Board authorized legal counsel to reinitiate proceedings against the owner of this property. Legal counsel did proceed and the LMRWD has received a response from the owners attorney. The response if attached for the Board's information. Attorney Kolb has spoken with legal counsel for the owner, but no communication has been received from the property owner.

**Attachments**
ANSWER - in the case of LMRWD, Plaintiff, vs. Eco Real Estate Holding, LLC and Andrew Polski individually and as a Registered agent for Eco Real Estate Holding LLC, defendants; State of Minnesota, County of Carver, District Court First Judicial District

**Recommended Action**
No action recommended

Young Environmental Consulting Group, LLC

# Technical Memorandum

**To:** Linda Loomis, Administrator
Lower Minnesota River Watershed District (LMRWD)

**From:** Karina Weelborg, Water Resources Scientist
Hannah LeClaire, PE, Project Manager

**Date:** August 9, 2023

**Re:** Xcel Driveway | LMRWD No. 2022-015

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Xcel Energy has applied for an individual project permit from the LMRWD to construct a driveway near Quarry Lake to connect the Xcel Energy Blue Lake Peaking Plant (Xcel Plant) to the Quarry Lake Park parking lot in the City of Shakopee (City), as shown in Figure 1. The applicant's engineer, Advanced Engineering and Environmental Services, LLC (AE2S), has provided site plans for the Xcel Driveway Project (Project) along with the permit application.

Currently, access to the Xcel Plant is often disrupted by trains at the Union Pacific Railroad crossing on 70th Street West. The proposed project consists of constructing approximately 4,400 feet of driveway to allow access to the Xcel Plant without train interruption. The project would disturb approximately 3.4 acres, creating 0.17 acres of new impervious surface and reconstructing 1.03 acres of impervious surface. The project is not located within the Steeps Slopes Overlay District or floodplain, but it is in a High Value Resource Area (HVRA), because Quarry Lake is a Minnesota Department of Natural Resources (MnDNR)-designated trout lake. The applicant proposes to begin construction immediately following approval from all governing bodies.

The City of Shakopee has its LMRWD Municipal Permit, except for projects located in an HVRA; therefore, the project requires an LMRWD individual project permit.

## Summary

**Project Name:** Xcel Driveway

**Purpose:** Construction of a driveway to connect the Xcel Energy Plant to the Quarry Lake Park parking lot

**Project Size:**

| Area Disturbed | Existing Impervious Area | Proposed Impervious Area | Net Increase Impervious Area |
|---|---|---|---|
| 3.4 acres | 2.98 acres | 3.15 acres | 0.17 acres |

**Location:** 1200 70th Street
Shakopee, MN 55379

**LMRWD Rules:** Rule B – Erosion and Sediment Control
Rule D – Stormwater Management

**Recommended Board Action:** Conditional approval

## Discussion

The LMRWD received the following documents for review:

- Stormwater Management Plan by AE2S; dated July 28, 2023; received July 28, 2023.
- HydroCAD model by AE2S; dated July 28, 2023; received July 28, 2023.
- P8 Model by AE2S; dated June 20, 2023; received June 20, 2023.
- LMRWD online permit application; received November 21, 2022.
- Xcel Energy – Blue Lake Peaking Plant Driveway Construction Plans by AE2S; dated June 2023; revised July 31, 2023; received July 31, 2023.
- LMRWD permit fee by Veit & Company, LLC; received July 20, 2023.
- Draft maintenance agreement; received July 28, 2023.

The application was deemed complete on July 31, 2023**,** and the documents received provide the minimum information necessary for permit review.

*Rule B – Erosion and Sediment Control*

The LMRWD regulates land-disturbing activities that affect 5,000 square feet or more within an HVRA under Rule B. The proposed project would disturb approximately 3.4 acres within the LMRWD boundary in the Quarry Lake HVRA. The applicant has

provided an erosion and sediment control plan and a Stormwater Pollution Prevention Plan (SWPPP). To ensure protection of Quarry Lake during construction, the erosion and sediment control plan incorporates redundant perimeter control on all areas that would otherwise drain towards the lake. The contractor is:

Veit & Company, LLC
Tom Libbesmeier
14000 Veit Place, Rogers, MN 55374
763.428.6792
Tlibbesmeier@veitusa.com

The project generally complies with Rule B, but a copy of the National Pollutant Discharge Elimination System (NPDES) construction stormwater permit and contact information for the person responsible for the inspection and maintenance of erosion and sediment control features are needed before the LMRWD can issue a permit.

*Rule D – Stormwater Management*

The project proposes the creation of 0.17 acres of new impervious surface and reconstruction of 1.03 acres of impervious surface. The applicant is proposing to construct five infiltration basins to meet the LMRWD stormwater management requirements. A portion of the project discharges to an existing stormwater pond (Pond 1) that ultimately outlets to the Prior Lake Outlet Channel (PLOC), which is regulated by the PLOC Joint Powers Agreement (JPA). Approval from the JPA will be required to issue an LMRWD permit. The remaining project discharges to Quarry Lake.

Section 5.4.1 of Rule D requires applicants to demonstrate no increase in the proposed runoff rates compared to existing conditions. The applicant submitted a HydroCAD analysis demonstrating the proposed infiltration basins will provide rate control for the project. The existing and proposed runoff rates are summarized in **Table 1**. The reported runoff rates show a decrease from existing conditions, meeting the LMRWD's rate control requirements.

*Table 1. Xcel Driveway Runoff Rate Summary*

| Outlet | Rainfall Event (24-hour depth) | Existing (cfs) | Proposed (cfs) | Change (cfs) |
|---|---|---|---|---|
| Total Site | 2-year (2.85") | 17.9 | 14 | -3.9 |
| | 10-year (4.24") | 34.1 | 26.2 | -7.9 |
| | 100-year (7.42") | 86.9 | 74.7 | -12.2 |
| Quarry Lake | 2-year (2.85") | 14.8 | 10.9 | -3.9 |
| | 10-year (4.24") | 29.3 | 21.4 | -7.9 |
| | 100-year (7.42") | 79.5 | 67.3 | -12.2 |

| Outlet | Rainfall Event (24-hour depth) | Existing (cfs) | Proposed (cfs) | Change (cfs) |
|---|---|---|---|---|
| PLOC | 2-year (2.85”) | 3.1 | 3.1 | 0 |
| | 10-year (4.24”) | 4.8 | 7.8 | 0 |
| | 100-year (7.42”) | 7.4 | 7.4 | 0 |

Section 5.4.2 of Rule D requires stormwater runoff volume reduction on site to be equivalent to 0.55 inch of runoff from new and reconstructed impervious surface. The project proposes 1.2 acres of new or reconstructed impervious surface. Therefore, the project must provide 0.055 acre-feet (2,396 cubic feet) of volume retention to meet Rule D requirements. The HydroCAD analysis submitted by the applicant demonstrates a volume reduction of 0.69 acre-feet (30,050 cubic feet). The project’s volume control is greater than required and complies with Rule D volume requirements. **Table 2** shows the volume retention of each pond.

*Table 2. Xcel Driveway Volume Control Summary*

| Best Management Practice (BMP) | Volume Retention (CF) |
|---|---|
| Proposed North Basin | 7,187 |
| Proposed North Basin 2 | 3,158 |
| Proposed Southwest Basin | 5,400 |
| Proposed South Basin | 11,105 |
| Proposed Southeast Basin | 3,250 |
| **Total** | **30,100** |

Section 5.4.3 of Rule D requires projects located in an HVRA to have a net decrease in total phosphorus (TP) and total suspended solids (TSS) to receiving waterbodies when compared to existing conditions. The applicant proposed using the same six stormwater infiltration basins to meet the water quality requirements of the LMRWD. Water quality calculations were completed using a Minimal Impact Design Standards (MIDS) model and the supporting documentation was submitted.

*Table 3. Xcel Driveway Water Quality Summary*

| | TP (lb/yr) | TSS (lb/yr) |
|---|---|---|
| Existing | 2.0 | 352 |
| Proposed | 1.8 | 264.5 |
| Difference | 0.2 | 87.5 |
| % Reduction | 10% | 25% |

As presented, the pollutant load would be reduced for both TP and TSS, meaning the project meets the water quality requirements established under Rule D.

## Recommendations

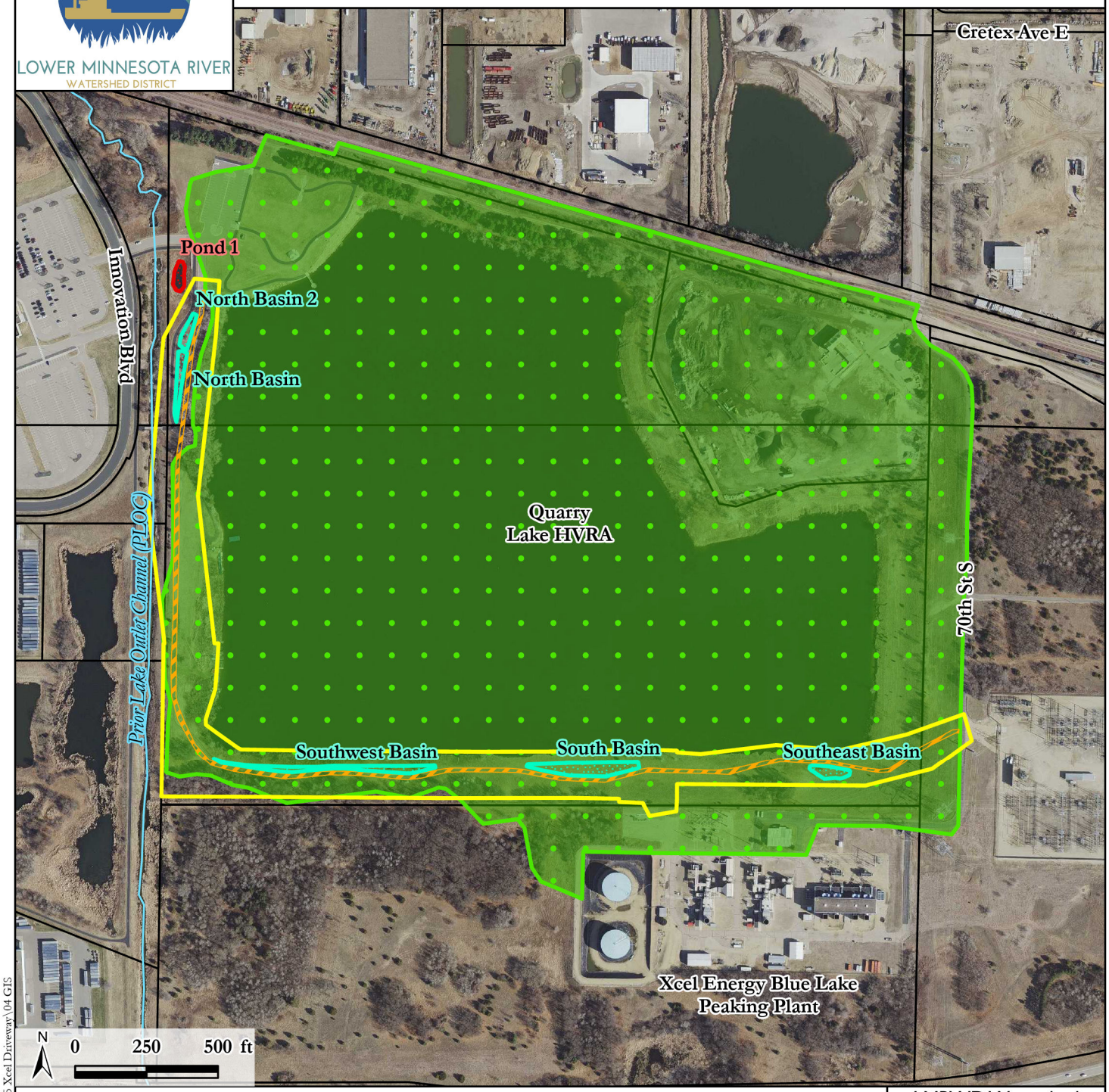
Based on review of the project, we recommend conditional approval contingent on the receipt of the following:

- Copy of the NPDES construction stormwater permit.
- Contact information for the person responsible for erosion and sediment control features.
- Documentation of approval from the City of Shakopee.
- Documentation of approval from the PLOC JPA.
- Final construction plans signed by a professional engineer.

## Attachments

- Figure 1—Xcel Driveway Project Location Map

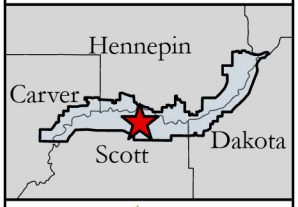
# Figure 1: Xcel Driveway Project Location
# LMRWD No. 2022-015




## Legend

- Project Location
- Proposed Driveway
- Existing Pond 1
- Proposed Infiltration Basins
- Parcels
- High Value Resource Area
- Prior Lake Outlet Channel

LMRWD Watershed Location Map

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Projects\LMRWD\Project Reviews\02 In Process\2022-015 Xcel Driveway\04 GIS

Young Environmental Consulting Group, LLC

# Technical Memorandum

**To:** Linda Loomis, Administrator
Lower Minnesota River Watershed District (LMRWD)

**From:** Erica Bock, Water Resources Scientist
Hannah LeClaire, PE, Project Manager

**Date:** August 9, 2023

**Re:** Burnsville Sanitary Landfill Expansion—Amendment
(LMRWD No. 2022-040)

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At the March 2023 Board meeting, the LMRWD conditionally approved a permit application by Carlson McCain for the Burnsville Sanitary Landfill Expansion project (Project, Attachment 1).

The applicant contacted the LMRWD on July 21, 2023, notifying the LMRWD that to begin construction of the levee proposed for the Annex Development Area (ADA), the City of Burnsville (City) is first requiring excavation and removal of old river dredge material that is located on the north side of the site on the bank of the Minnesota River (Figure 1). In 2001, the City issued an interim use permit (IUP) to allow dredge material to be stored on the property owned by the Burnsville Sanitary Landfill (BSL) for use as daily cover at the landfill. Dredge material disposal operations ended in 2011; however, the dredge material has remained on-site since then. The Planned Unit Development (PUD) Agreement executed in August 2022 between the City and BSL requires that the landfill remove the dredge material and restore the ground to existing contours before levee construction, as it will cut off all access to the dredge disposal area.

The project requires an amendment review to evaluate whether the additional land disturbance and work in the floodplain is compliant with LMRWD Rule B—Erosion and Sediment Control and Rule C—Floodplain and Drainage Alteration. Additionally, since the project was conditionally approved in March, the applicant has provided all the requested conditional approval items, except for the US Army Corps of Engineers (USACE) permit for wetland mitigation, which will be provided in September. The applicant is requesting that the LMRWD issue a permit to begin work in the dredge restoration area and non-wetland areas.

## Summary

**Project Name:** Burnsville Sanitary Landfill Annex Development Area Permit Modification

**Purpose:** Reconfigure the existing permitted waste limits at the landfill and increase the capacity through vertical expansion **including removal of Minnesota River dredge material**

**Project Size:**

| | Existing | Proposed | Change |
|---|---|---|---|
| Total Area Disturbed | - | **221.7 acres** | - |
| Total Impervious | 1.19 acres | 2.69 acres | +1.5 acres |
| Total Semi-Pervious | 213.44 acres | 209.89 acres | -3.55 acres |

**Location:** 2650 Cliff Road West
Burnsville, MN 55337

**LMRWD Rules:** Rule B – Erosion and Sediment Control
Rule C – Floodplain and Drainage Alteration
Rule D – Stormwater Management

**Recommended Board Action: Approval**

## Discussion

The LMRWD received the following conditional approval items:

- Planned Unit Development Agreement; dated October 31, 2022; received July 28, 2023.
- Final signed construction plan by Carlson McCain; dated July 27, 2023; received July 28, 2023.
- Minnesota Pollution Control Agency (MPCA) Solid Waste Facility Permit; dated November 18, 2022; received July 28, 2023.
- Minnesota Board of Water and Soil Resources (BWSR) Wetland Conservation Act (WCA) Notice of Decision; dated August 16, 2022; received July 28, 2023.
- Contractor information; received July 28, 2023.
- MPCA National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit Notice of Coverage; dated July 31, 2023; received August 1, 2023.

The LRMWD received the following documents for amendment review:

- Phase 1 Stormwater Pollution Prevention Plan (SWPPP) by Carlson McCain; dated July 10, 2023; received July 21, 2023.
- City of Burnsville Interim Use Permit; dated April 2, 2001; received July 24, 2023.
- USACE Wetland Permit for the North Development Area; dated December 21, 2004; received July 24, 2023.
- Proposed wetland mitigation areas by Carlson McCain; received July 24, 2023.

The documents received provide the minimum information necessary for an amendment review.

*Rule B – Erosion and Sediment Control*

The LMRWD regulates land-disturbing activities that affect one acre or more under Rule B. The proposed dredge removal would disturb approximately **17.7 additional acres** within the LMRWD boundary. The applicant has provided an erosion and sediment control plan and a SWPPP. The contractors and people responsible for the inspection and maintenance of erosion and sediment control features are:

Contractor:
Cory Van Engen
Frattalone Companies, Inc.
3205 Spruce Street, St. Paul, MN 55117
651-484-0448
coryv@frattaloneco.com

Erosion and Sediment Control:
Wayne Dilly
Landfill Operations Manager
952-656-5006

The applicant submitted a copy of the NPDES Construction Stormwater Permit. The project complies with Rule B.

*Rule C – Floodplain and Drainage Alteration*

The LMRWD requires the applicant to provide documentation that the proposed work in the floodplain will not cause an increase in the 100-year water surface elevation. The project is located within the Minnesota River 100-year floodplain, as seen on the Flood Insurance Rate Map (FIRM) Panel 27053C0462F, effective November 4, 2016, with 100-year water surface elevations of 716.8 and 716.6.

Because this portion of the project proposes to excavate **121,174 cubic yards** of dredge material and return the ground to the original contours, creating net cut and more storage within the floodplain, the dredge material excavation will not cause an increase in 100-year water surface elevations, meeting the minimum requirements of Rule C.

*Additional Considerations*

Moving the dredge material from its current location must be completed during non-flood conditions. The project is expected to take two months to complete the removal of all dredge material. As part of previous USACE wetland mitigation requirements at this site, the USACE is requiring that the dredge material be removed before they issue their new permit. To allow removal of the dredge material, we recommend approval of the Project with a special stipulation that the final USACE permit be submitted to the LMRWD before any work in wetlands within the ADA can be completed.

## Recommendations

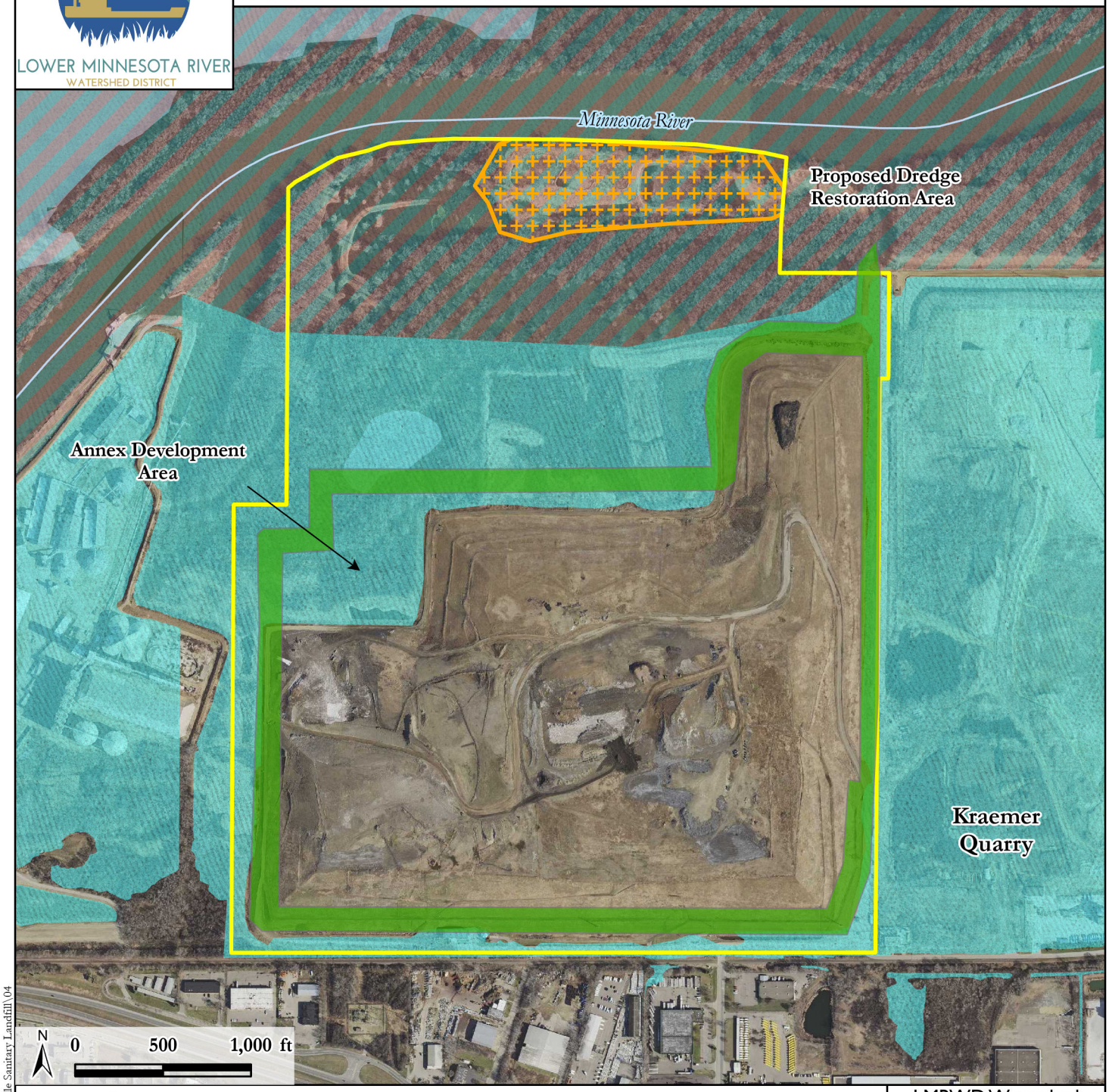
The additional land disturbance and work in the floodplain meets the minimum requirements of the LMRWD rules, and the applicant has provided all required conditional approval items except for the USACE permit for wetland impacts. We recommend approval of the project including excavation and removal of the Minnesota River dredge material with the following stipulation:

- The applicant must send the USACE permit to the LMRWD before work can be completed in wetlands within the Annex Development Area.

## Attachments

- Figure 1—Burnsville Sanitary Landfill Project Location Map
- Attachment 1—Burnsville Sanitary Landfill Expansion March 2023 LMRWD Board meeting review

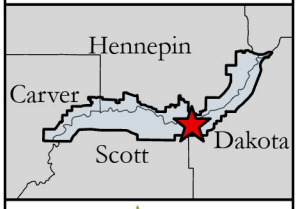
# Figure 1: Burnsville Sanitary Landfill Project Location
# LMRWD No. 2022-040 Amendment




## Legend

- Project Location
- Public Waters
- Post-Project Levee
- Proposed Dredge Restoration Area
- 100-yr Floodplain
- Floodway
- Public Waterbodies

LMRWD Watershed Location Map

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# Technical Memorandum

**To:** Linda Loomis, Administrator
Lower Minnesota River Watershed District

**From:** Erica Bock, Water Resources Scientist
Hannah LeClaire, PE

**Date:** March 8, 2023

**Re:** Burnsville Sanitary Landfill Expansion | No. 2022-040

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Burnsville Sanitary Landfill, Inc. (BSL) has applied for an individual project permit from the Lower Minnesota River Watershed District (LMRWD) to expand its mixed municipal solid waste disposal facility (Facility) by 23.6 million cubic yards and raise the top elevation of the landfill by 260 feet. The Facility is located at 2650 Cliff Road West, Burnsville, Minnesota, and within the LMRWD. The applicant's engineer, Carlson McCain, submitted the permit application, associated application exhibits, and site plans for the Burnsville Sanitary Landfill Expansion project.

The current Facility consists of 177 acres of developed land disposal areas, with an additional approximately 39 undeveloped acres that are permitted for land disposal. The project proposes to reconfigure the levee on the north side of the Facility and add approximately 27 undeveloped acres as part of the Annex Development Area (ADA). This reduces the overall size of the Facility from 216 acres to 204 acres (Figure 1). All existing disposal areas (lined[1] and unlined[2]) have been previously covered[3]. Going forward, all unlined areas that will accept new waste will be lined in accordance with federal and state regulations.

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[1] Lined areas consist of two-foot thick compacted clay liner overlain by a 60-mil-thick high density polyethylene geomembrane.
[2] Unlined areas predate the Resource Conservation and Recovery Act Subtitle D liner requirements for landfills.
[3] "Covered" in this context means that the waste has been covered by engineered, impermeable soil and vegetation.

In addition to reconfiguring the permitted waste limits, BSL will construct three new stormwater ponds to manage stormwater runoff. The project is not located within the High Value Resource Area or Steep Slopes Overlay District, but it is located within the Minnesota River floodplain. The applicant proposes to begin construction in the fall of 2023. A previous review of the Draft BSL Environmental Impact Statement (EIS) was completed in July 2021 (Attachment 1). From the review, it was determined that the project triggered LMRWD Rule B – Erosion and Sediment Control, Rule C – Floodplain and Drainage Alteration, and Rule D – Stormwater Management. Because the City of Burnsville (City) does not have its LMRWD municipal permit, this project requires an LMRWD individual permit.

## Summary

**Project Name:** Burnsville Sanitary Landfill Annex Development Area Permit Modification

**Purpose:** Reconfigure the existing permitted waste limits at the landfill and increase the capacity through vertical expansion

**Project Size:**

| | Existing | Proposed | Change |
|---|---|---|---|
| Area Disturbed | - | 204 acres | - |
| Total Impervious | 1.19 acres | 2.69 acres | +1.5 acres |
| Total Semi-Pervious | 213.44 acres | 209.89 acres | -3.55 acres |

**Location:** 2650 Cliff Road West
Burnsville, MN 55337

**LMRWD Rules:** Rule B – Erosion and Sediment Control
Rule C – Floodplain and Drainage Alteration
Rule D – Stormwater Management

**Recommended Board Action:** Conditional approval

## Discussion

The LMRWD received the following documents for review:

- LMRWD online permit application, received November 21, 2022
- LMRWD Application Exhibits for Burnsville Sanitary Landfill by Carlson McCain,

dated November 18, 2022, received November 21, 2022
- HEC-RAS model by Carlson McCain, received November 22, 2022, revised February 7, 2023, received February 9, 2023
- Permit application fee of $1,500, received December 13, 2022
- Response to LMRWD comments, by Carlson McCain, dated December 21, 2022, received December 21, 2022
- Stormwater pond management agreement between Burnsville Sanitary Landfill and the City of Burnsville, dated October 30, 2006, received December 21, 2022
- Revised Appendix C Stormwater, by Carlson McCain, dated January 17, 2023, received January 18, 2022
- Minimal Impact Design Standards (MIDS) Summary, by Carlson McCain, dated January 17, 2023, received January 18, 2023
- Topography of existing stormwater ponds by Carlson McCain, dated February 7, 2023, received February 9, 2023

The application was deemed complete on February 15, 2023, and the documents received provide the minimum information necessary for permit review.

*Rule B – Erosion and Sediment Control*

The LMRWD regulates land-disturbing activities that affect **one acre** or more under Rule B. The proposed project would disturb approximately **204 acres** within the LMRWD boundary. The applicant has provided an erosion and sediment control plan and a Stormwater Pollution Prevention Plan (SWPPP). The project generally complies with Rule B, but a copy of the National Pollutant Discharge Elimination System (NPDES) construction stormwater permit and contact information for the contractor are needed before the LMRWD can issue a permit.

*Rule C – Floodplain and Drainage Alteration*

The LMRWD requires the applicant provide documentation that the proposed floodplain fill will not cause an increase in 100-year water surface elevations. The project is located within the Minnesota River 100-year floodplain, as seen on the Flood Insurance Rate Map (FIRM) Panel 27053C0462F, effective November 4, 2016, and in Figure 2. The project proposes **23,800 cubic yards of cut** and **437,700 cubic yards of fill** within the floodplain and no compensatory storage. The proposed conditions relocate the existing levee further back from the Minnesota River and will occupy approximately **11,743 cubic yards** less volume than what the existing levee occupies. The landfill expansion will occur in the ineffective area of the floodplain. An ineffective area of the floodplain is used to describe areas of a cross section where flow is not being conveyed, therefore development within ineffective areas have little to no effect on conveyance and resulting water surface elevations.

According to the application submitted by Carlson McCain, “existing conditions” are

defined as the existing topographic condition of the Facility at the time of the application. The proposed conditions were modeled as the proposed final footprint of the landfill. These conditions are shown in Figure 3 on a cross section from the HEC-RAS model. The submitted HEC-RAS model shows the changes in the floodplain between the existing and proposed conditions of the project below the 100-year water surface elevation and shows no change in the 100-year water surface elevation, meeting the minimum requirements of Rule C.

*Rule D – Stormwater Management*

The project proposes a total of **212.58 acres of impervious and semi-pervious surfaces**, including 27 acres that have not yet been developed. A new liner system is proposed for the lined and unlined portions of the landfill. Although the proposed final cover and liner system is considered semi-impervious by the LMRWD, stormwater management will still be required to manage discharge rates and protect water quality of downstream receiving waters.

During past reviews, the LMRWD recommended that the applicant use a modified Soil Conservation Service (SCS) curve number for stormwater calculations that account for the maximum water retention available within the final cover system as well as the final landfill slopes. The applicant calculated an appropriate **curve number of 65** for the semi-pervious areas; however, because the applicant had previously built and submitted their HydroCAD model for the EIS, they maintained their more conservative estimate of **71 for all semi-pervious areas**. The entire site drains to seven stormwater best management practices (BMPs) (four existing, three proposed) around the perimeter of the facility and ultimately discharges to the same waterbody, the Minnesota River (Figure 4).

Section 5.4.1 of Rule D requires applicants demonstrate no increase in the proposed runoff rates compared to existing conditions.

*Table 1. Burnsville Sanitary Landfill Runoff Rate Summary*

| Rainfall Event (24-hour depth) | Existing (cfs) | Proposed (cfs) |
|---|---|---|
| 2-year (2.83”) | 62.94 | 24.62 |
| 10-year (4.21”) | 167.38 | 70.42 |
| 100-year (7.44”) | 558.06 | 501.67 |

The reported runoff rates show a decrease from existing conditions for the 2-, 10-, and 100-year events, meeting the rate control requirements of Rule D. A summary of runoff at each of the seven BMPs is shown in Attachment 2.

Section 5.4.2 of Rule D requires projects to retain 1 inch of runoff from the new and fully reconstructed impervious areas. There are **212.58 acres** of proposed impervious and semi-pervious area. Therefore, the project must provide **771,665 cubic feet** of volume retention to meet Rule D requirements. Infiltration is not allowed on-site because it could mobilize high levels of contaminants in the soil or groundwater. The applicant proposes to use five stormwater sedimentation ponds (two existing, three proposed) around the perimeter of the landfill for volume control to meet Rule D requirements. The sedimentation ponds include a combination of permanent (dead) storage and extended detention storage above the permanent pool to provide additional water quality or rate control (live storage).

*Table 2. Burnsville Sanitary Landfill Volume Control Summary*

| BMP | Volume (CF) – Live Storage |
|---|---|
| Proposed North Pond | 338,370 |
| Proposed Northwest Pond | 267,058 |
| Proposed West Pond | 263,501 |
| Existing Southwest Pond | 146,273 |
| Existing Southeast Pond | 102,424 |
| **Total** | **1,117,626** |

The project's volume control has been achieved through live storage in the proposed and existing sedimentation ponds, and the project complies with Rule D volume requirements.

Section 5.4.3 of Rule D requires a no net increase in total phosphorus (TP) or total suspended solids (TSS) to receiving waterbodies when compared to existing conditions. The applicant proposed using the same five stormwater sedimentation ponds to meet the water quality requirements of the LMRWD. Water quality calculations were completed using a MIDS model and the supporting documentation was submitted.

*Table 3. Burnsville Sanitary Landfill Water Quality Summary*

| | TP (lb/yr) | TSS (lb/yr) |
|---|---|---|
| Existing | 326.91 | 129,372.2 |
| Proposed | 315.33 | 124,788.6 |
| Difference | 11.58 | 4,583.6 |
| % Reduction | 4% | 4% |

As presented, the pollutant load would be reduced for both TP and TSS, meaning the project meets the water quality requirements established under Rule D.

*Additional Considerations*

After review of the permit application materials, final supplemental EIS, and EIS Record of Decision, there are other resources of concern that should be taken into consideration when completing this project. To modify the levee as part of the proposed conditions, LMRWD recommends continued and early coordination with the Federal Emergency Management Agency (FEMA) and Minnesota DNR (MnDNR). The LMRWD is requesting a copy of the Letter of Map Revision (LOMR) when it is approved. Potential impacts to groundwater and other natural resources in the area should be acknowledged, mitigated, and avoided. The supplemental EIS addresses many of the potential environmental impacts and was reviewed thoroughly by project stakeholders (including the LMRWD). The Final EIS was approved on March 2, 2022.

During the Burnsville Planning Commission meeting on August 8, 2022, a representative from the Minnesota Pollution Control Agency (MPCA) spoke about groundwater monitoring given the landfill's proximity to Kraemer Lake and the Minnesota River. There are groundwater monitoring wells that surround the Facility and are sampled twice a year. Those samples are submitted to the MPCA for annual review and there have been no groundwater issues detected to date. The MPCA has currently approved a Solid Waste Facility permit that would allow for an expansion of the landfill's disposal capacity and regulation of waste disposal activities for the next 10 years. However, as conditions change, the MPCA permit can also change. Modifications can be made to the MPCA permit at any time to address problems that may arise. If there are contaminants detected in the groundwater, the MPCA permit requires corrective action. The LMRWD is requesting a copy of the MPCA Solid Waste Facility permit.

## Recommendations

Based on review of the project, we recommend conditional approval contingent on the receipt of the following:

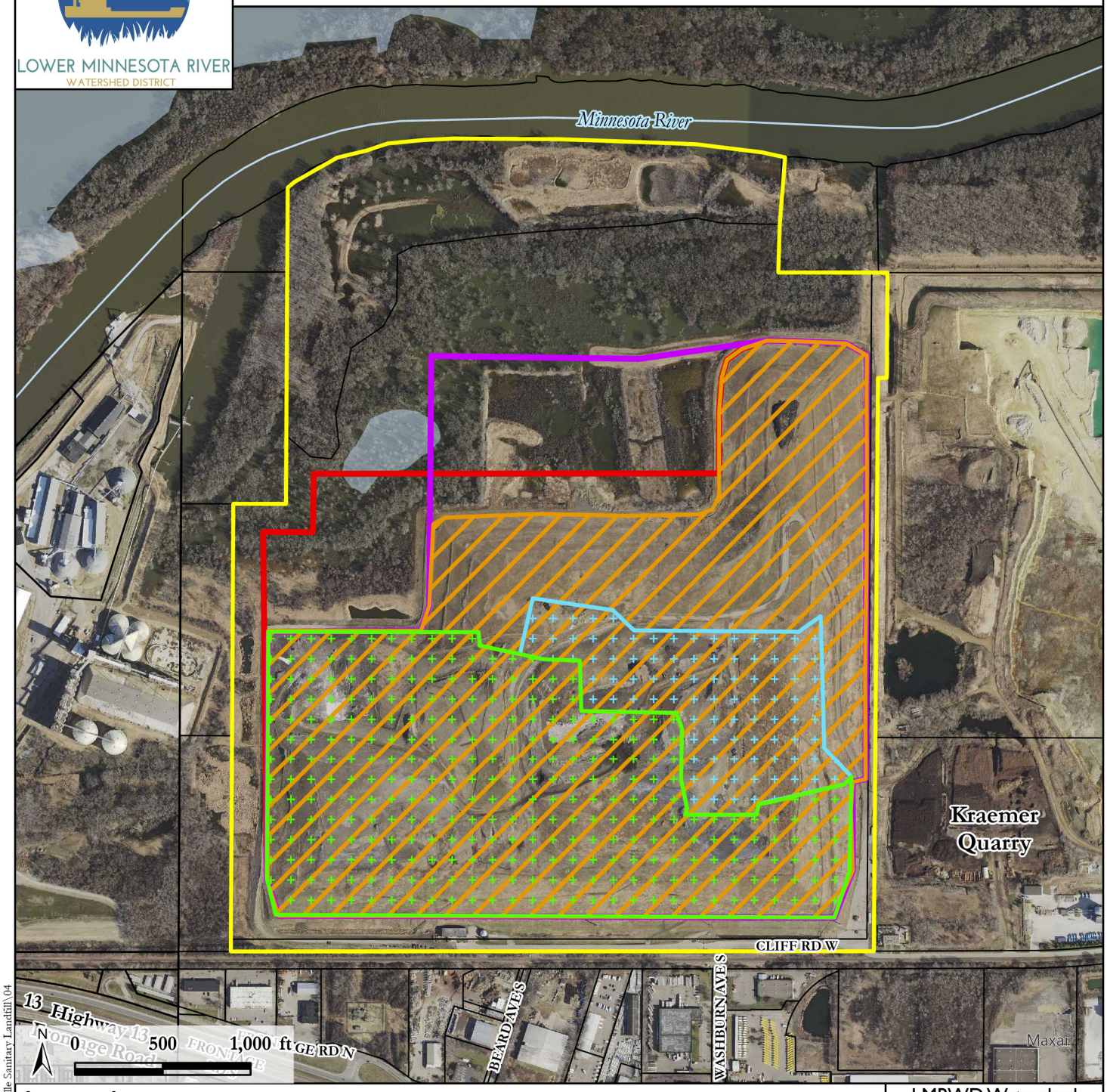
- Copy of the NPDES construction stormwater permit
- Contact information for the contractor(s)
- Documentation of approval from the City of Burnsville, including Wetland Conservation Act Permit Amendment
- Copy of approved permit from US Army Corps of Engineers (USACE)
- Copy of approved MPCA Solid Waste Facility permit
- Copy of approved MnDNR permit
- Final construction plans signed by a professional engineer

Because a LOMR application will not be submitted until after the levee is reconstructed, LMRWD will request a copy of the approved LOMR from FEMA when it is available.

## Attachments

- Figure 1—Burnsville Sanitary Landfill Project Location Map
- Figure 2—Burnsville Sanitary Landfill Floodplain Map
- Figure 3—HEC-RAS Cross Section
- Figure 4—Burnsville Sanitary Landfill Stormwater Management
- Attachment 1 – Burnsville Sanitary Landfill Expansion Environmental Impact Statement Review
- Attachment 2 – Runoff Rate Summary

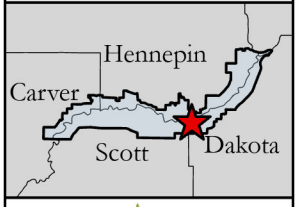
# Figure 1: Burnsville Sanitary Landfill Project Location
# LMRWD No. 2022-040




## Legend

- Project Location
- Existing Waste Limits
- Lined Disposal Cells Boundary
- Existing Permitted Facility Limit
- Proposed Permitted Facility Limit
- Unlined Disposal Cells Boundary
- Parcels
- Public Waters
- Public Waterbodies

LMRWD Watershed Location Map

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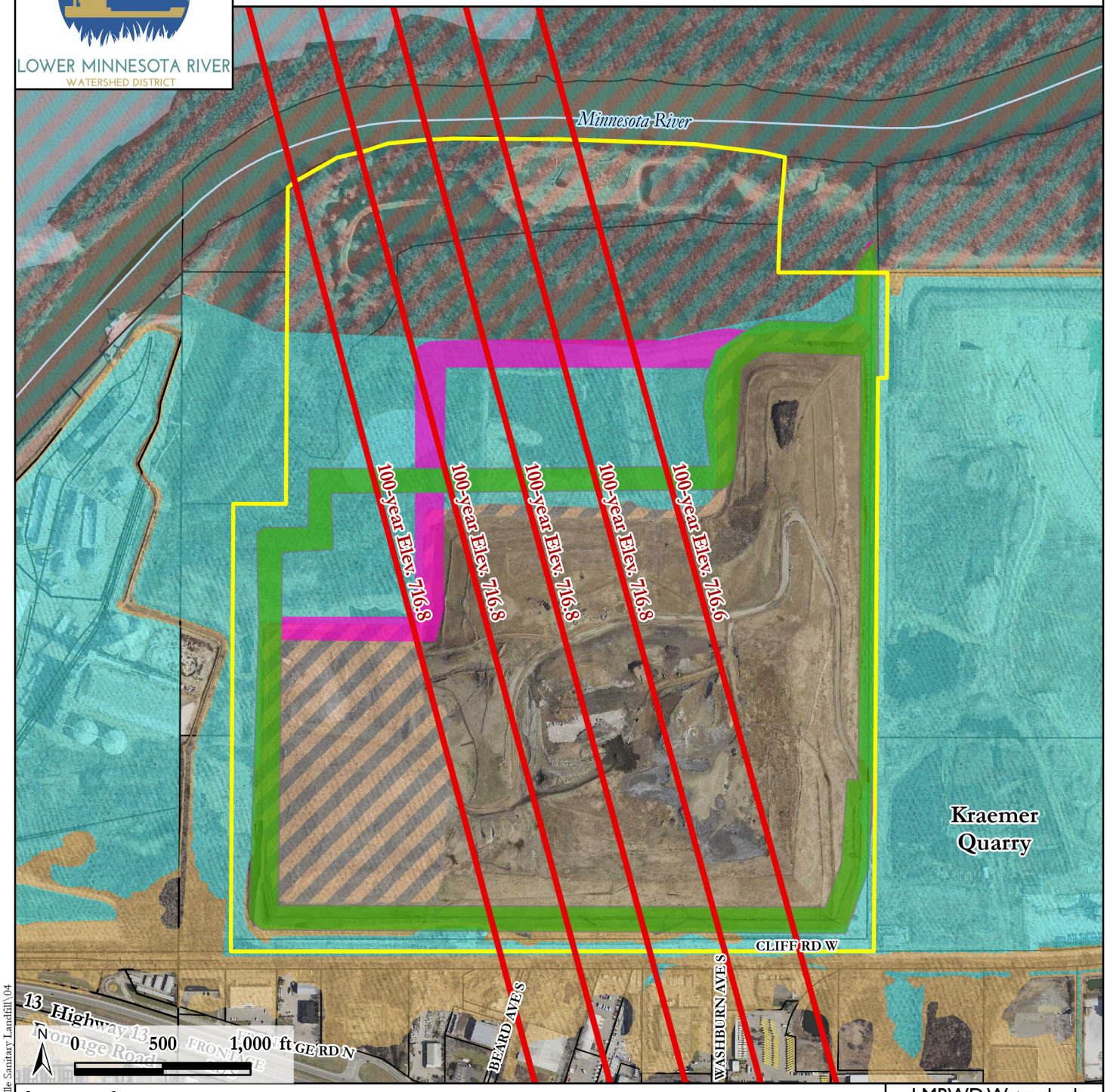
Projects\LMRWD\Project Reviews\02 In Process\Burnsville Sanitary Landfill\04

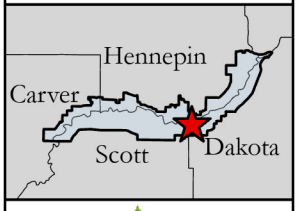
# Figure 2: Burnsville Sanitary Landfill Floodplain Map




## Legend

- Project Location
- Public Waters
- Public Waterbodies
- Model Cross Sections
- Post-Project Levee
- Pre-Expansion Levee
- 100-yr Floodplain
- 500-yr Floodplain
- Floodway
- Levee Floodplain Area
- Parcels

LMRWD Watershed Location Map

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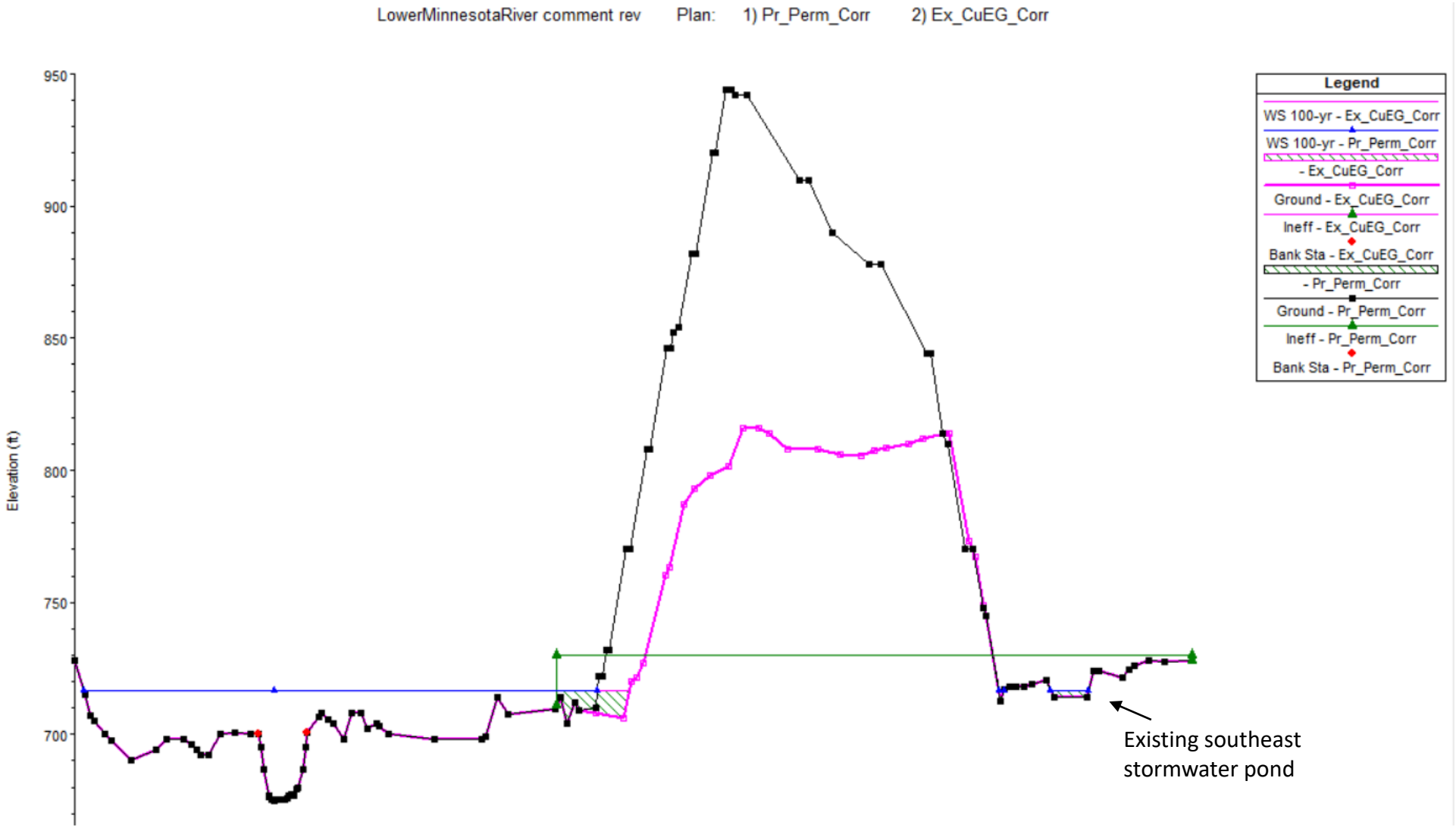
# Cross Section 30

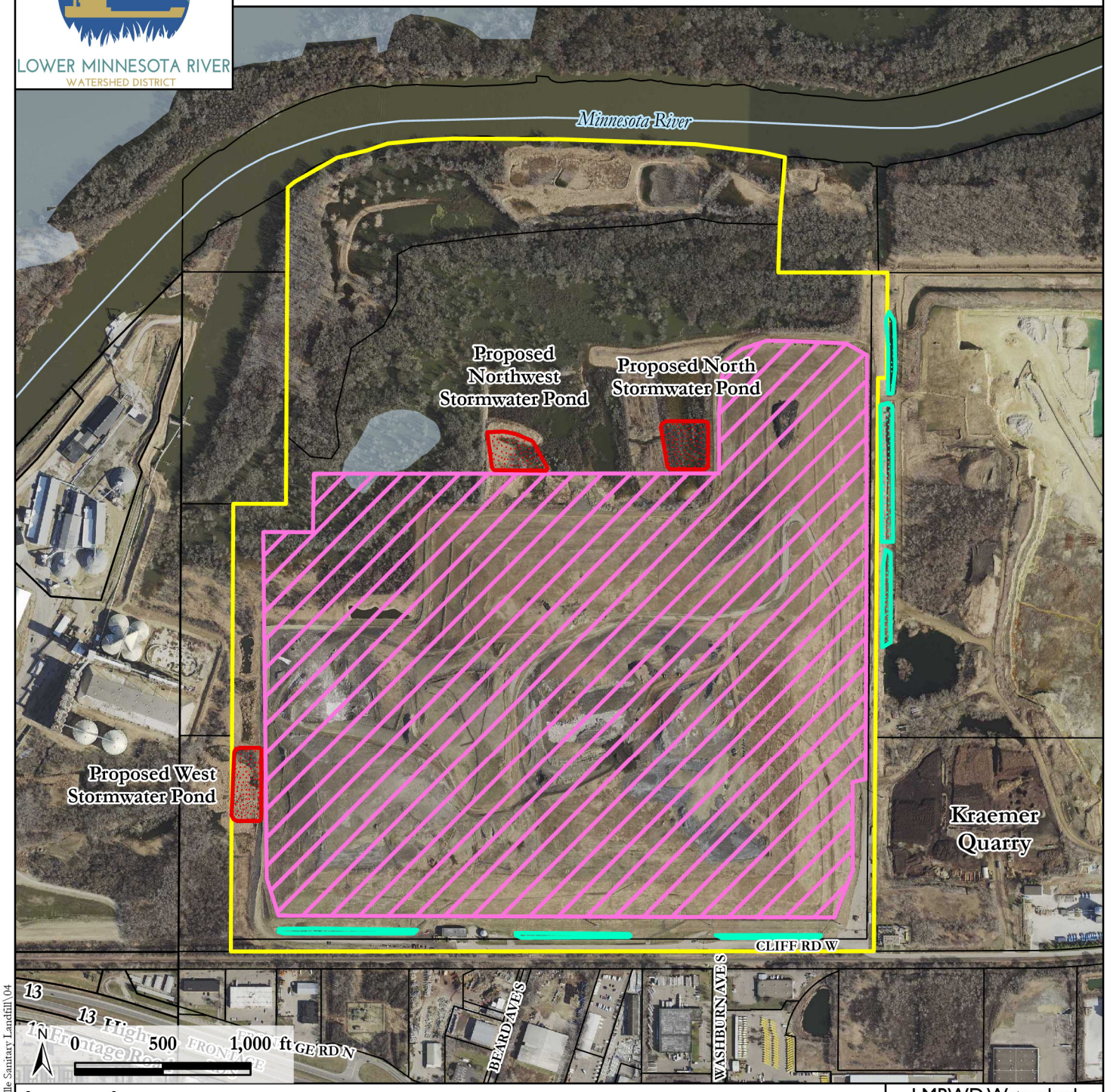
Proposed conditions =

Existing conditions =

Ineffective area =



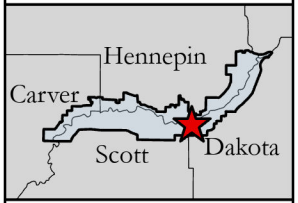
# Figure 4: Burnsville Sanitary Landfill Stormwater Management
# LMRWD No. 2022-040




## Legend

- Project Location
- Public Waters
- Public Waterbodies
- Proposed Permitted Facility Limit
- Proposed Stormwater Pond
- Existing BMP
- Parcels

LMRWD Watershed Location Map

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Young Environmental Consulting Group, LLC

# Technical Memorandum

**To:** Linda Loomis, Administrator
Lower Minnesota River Watershed District

**From:** Kaci Fisher, Environmental Specialist
Katy Thompson, PE, CFM

**Date:** July 12, 2021

**Re:** Burnsville Sanitary Landfill Expansion Environmental Impact Statement Review

---

Burnsville Sanitary Landfill, Inc. (BSL) proposes to expand its mixed municipal solid waste disposal facility by 23.6 million cubic yards and raise the top elevation of the landfill by 260 feet within the Annex Development Area (ADA) which is located in the City of Burnsville (Figure 1) and is within the Lower Minnesota River Watershed District (LMRWD or District).

On June 1, 2021, the Minnesota Pollution Control Agency (MPCA) published the Draft Supplemental Environmental Impact Statement (EIS) for the Burnsville Sanitary Landfill Expansion Project (Project) for public comment. Young Environmental Consulting Group, LLC reviewed the EIS for potential applicable District rules.

The project is not located within the High Value Resource Areas or Steep Slopes Overlay Districts, but it is in the 100-year FEMA floodplain. The project appears to trigger *Rule B—Erosion and Sediment Control*, *Rule C—Floodplain and Drainage Alteration,* and potentially *Rule D—Stormwater Management*. The City of Burnsville does not have an approved municipal permit, so an Individual Project Permit will be required for this project. A project summary and comments on the EIS are provided below.

## Project Summary

| | |
|---|---|
| Project Name: | Burnsville Sanitary Landfill, Inc. |

| | |
|---|---|
| Purpose: | Expanding existing landfill |
| Project Size: | 204 acres |
| Location: | 2650 Cliff Road West, Burnsville, MN 55337 |
| Applicable LMRWD Rules: | *Rule B—Erosion and Sediment Control*<br>*Rule C—Floodplain and Drainage Alteration*<br>*Rule D—Stormwater Management* |
| Recommended Board Action: | No action; information only |

## Comments on the EIS

*Rule B—Erosion and Sediment Control*

The LMRWD regulates land-disturbing activities that affect one acre or more outside of the special overlay districts. The proposed expansion area, labeled as ADA in the EIS, appears to be more than 20 acres. The project will require a District permit for erosion and sediment control.

*Rule C—Floodplain and Drainage Alteration*

The proposed expansion appears to be entirely within the 100-year floodplain of the Minnesota River as seen on the Flood Insurance Rate Map (FIRM) panel 27053C0462F, effective November 4, 2016. To meet the minimum requirements of Rule C, the LMRWD individual project permit application should include the amount of fill within the floodplain as well as a no-rise certification.

Additionally, the EIS mentions realigning the levee, referencing Figure 6-5. However, the levee location in this figure does not appear to be represented. Is it BLS's intent to realign the existing levee to go around the ADA? If so, we recommend early coordination with both the Minnesota Department of Natural Resources (MnDNR) and FEMA.

*Rule D—Stormwater Management*

The LMRWD requires stormwater management for projects that create one or more acres of new impervious surfaces. Rule D necessitates that proposed runoff rates for 2-, 10-, and 100-year events do not exceed existing conditions. Table 1, taken directly from the draft EIS and shown below, does not include the 100-year rates. To receive a LMRWD permit, the applicant must confirm that the 100-year event does not exceed existing runoff rates.

*Table 1. Runoff Rates Summary from Draft EIS*

| Storm Event | Peak Runoff Rates (cu. ft./sec.) | | Percent Change Post-Project to Pre-Expansion |
|---|---|---|---|
| | Pre-Expansion | Post-Project | |
| 2-year | 55.10 | 22.71 | -58.8% |
| 10-year | 148.96 | 63.62 | -57.3% |
| 500-year | 962.33 | 1,413.70 | +46.9% |

The project proposes to overlay capped unlined areas with new lined waste up to approximately 31.75 acres. Additionally, a new liner will be added to the ADA, which is approximately 22 acres. The LMRWD recommends considering the final landfill cover system as a quasi-impervious layer that may have the same effects as an impervious layer unless BSL can prove otherwise.

*Additional Considerations*

The proposed landfill cap and liner system may be similar to an artificial turf system. Both systems provide an upper media layer that can filter or infiltrate stormwater, but both are limited by a lower impervious layer. In addition, water that filters through the upper media is collected in a drainage system and discharged elsewhere to prevent it from infiltrating the underlying aquifer.

Rather than considering the proposed landfill cap and liner entirely impervious or entirely pervious, we propose three alternative methods for determining the final hydrology for the site:

1. Using a modified SCS curve number that accounts for the maximum water retention available within the final cover system (if the cover soil's moisture-storage capacity and other necessary soil properties are known) as well as the final landfill slopes
2. Modeling the final cover system and drainage layer in a method consistent with artificial turf methodology[1]
3. Utilizing the Hydrologic Evaluation of Landfill Performance (HELP) program[2] to evaluate the evapotranspiration, infiltration, and filtration of the final cover

[1] https://www.hydrocad.net/curvenumber.htm

[2] https://www.epa.gov/land-research/hydrologic-evaluation-landfill-performance-help-model

## Recommendations

No Board action is required at this time. This memo will also be submitted to MPCA as part of the EIS comment period, with the following initial feedback:

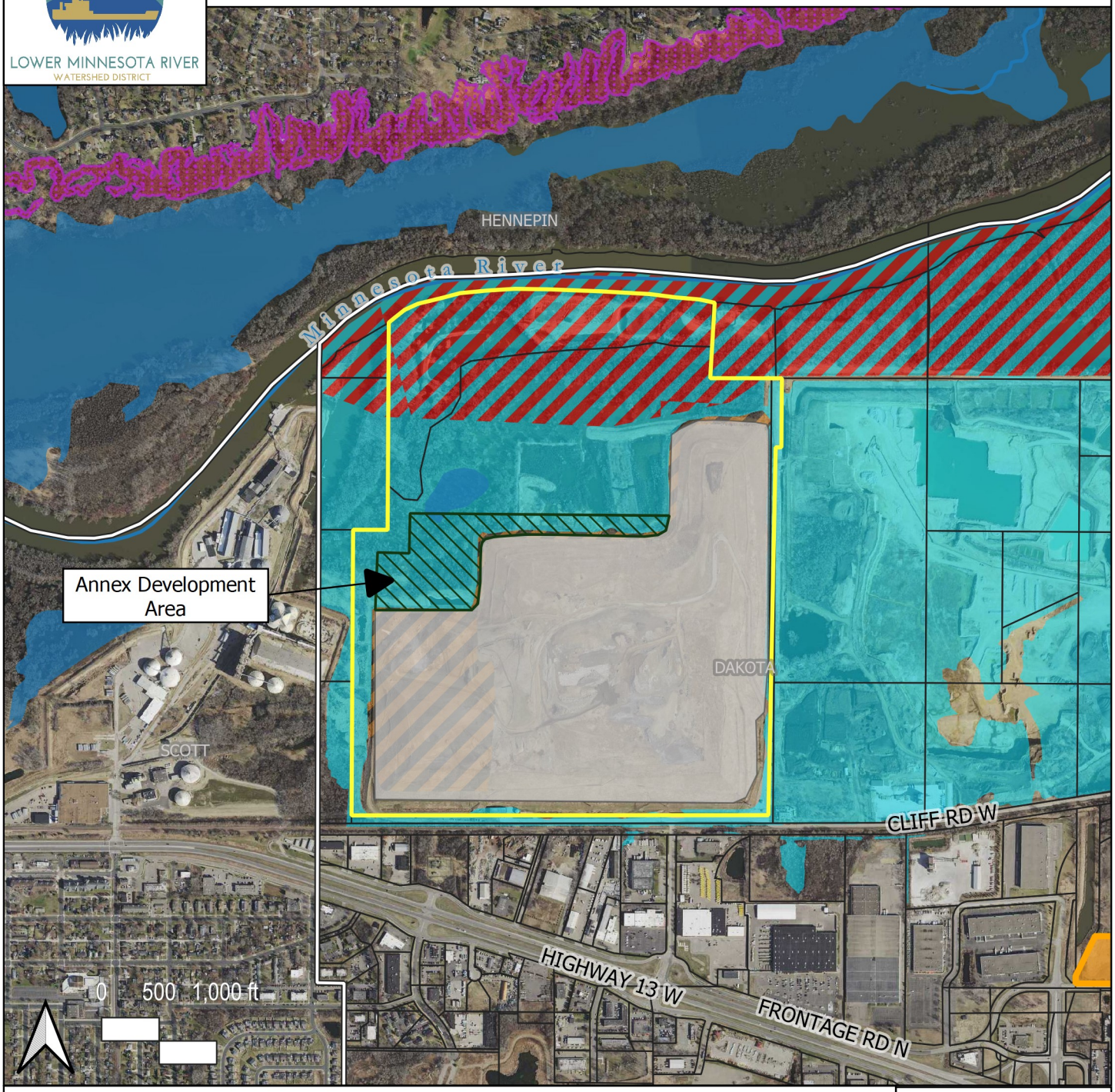
- The proposed project appears to trigger Rules B, C, and D. BSL must obtain an LMRWD Individual Project Permit for the applicable rules before the start of construction activities until such time as the City of Burnsville receives its municipal permit from the LMRWD.
- As presented, the applicant will need to provide documentation that the proposed floodplain fill will not cause an increase in water surface elevations (i.e., a no-rise certification).
- If the existing levee will be modified as part of this project, we recommend early coordination with the MnDNR and FEMA.
- The proposed cap and liner are considered impervious by the LMRWD, and stormwater management will be needed on-site to manage discharge rates and protect water quality of downstream receiving waters.

Attachment:

- Figure 1. Burnsville Sanitary Landfill Project Location Map

LOWER MINNESOTA RIVER
WATERSHED DISTRICT

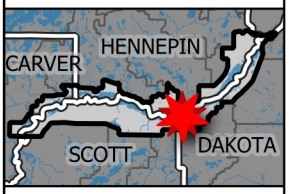
# Figure 1: Burnsville Sanitary Landfill Project Location




## LEGEND

- Project Location
- Burnsville Sanitary Landfill
- Proposed Expansion
- Burnsville Sanitary Landfill
- Public Waterways
- Public Waters
- County Boundaries
- Dakota Co. Parcels
- High Value Resource Area Overlay District
- Steep Slopes Overlay District [SSOD]
- 100-yr Floodplain
- Floodway
- Reduced Flood Risk Due to Levee

LMRWD Watershed Location Map

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Attachment 2 - Runoff Rate Summary

| **exisiting conditions** | **2 year- 2.83 inches** | **10 year - 4.21 inches** | **100 year - 7.44 inches** |
|---|---|---|---|
| **outlets** | outflow (cfs) | outflow (cfs) | outflow (cfs) |
| North Pond | 10.28 | 25.7 | 46.13 |
| Northwest Pond | 20.36 | 43.34 | 131.81 |
| South Pond | 0.06 | 0.15 | 27.53 |
| Southest Pond | 21.47 | 51.5 | 158.66 |
| Southwest Pond | 0.54 | 13.99 | 58.83 |
| East Ditch | 10.23 | 12.78 | 16.63 |
| East Ditch 4 secondary overflow | | 19.92 | 118.47 |
| **Total** | **62.94** | **167.38** | **558.06** |

| **proposed conditions** | **2 year - 2.83 inches** | **10 year - 4.21 inches** | **100 year - 7.44 inches** |
|---|---|---|---|
| **outlets** | outflow (cfs) | outflow (cfs) | outflow (cfs) |
| Proposed North Pond | 2.39 | 3.83 | 51.62 |
| Proposed Northwest Pond | 2.95 | 4.58 | 51.14 |
| South Pond | 0.07 | 2.68 | 49.35 |
| Southeast Pond | 6.2 | 20.58 | 53.61 |
| Southwest Pond | 0.41 | 12.22 | 68.03 |
| East Ditch | 9.54 | 21.55 | 134.28 |
| Proposed West Pond | 3.06 | 4.98 | 93.64 |
| **Total** | **24.62** | **70.42** | **501.67** |

STATE OF MINNESOTA

COUNTY OF CARVER

DISTRICT COURT

FIRST JUDICIAL DISTRICT
Case Type: Civil - Other

Court File No. _____

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Lower Minnesota River Watershed District,

Plaintiff,

vs.

ANSWER

Eco Real Estate Holdings LLC; and
Andrew Polski, individually and as a
Registered agent for Eco Real Estate Holdings LLC,

Defendants.

---

Defendants Eco Real Estate Holdings LLC and Andrew Polski, individually, for their Answer to Plaintiffs' Complaint state as follows:

1. Defendants deny each and every thing, matter and allegation set forth in Plaintiff's Complaint, except to the extent admitted or modified herein.

2. Defendants admit paragraphs 1, 3, 5, 6, 7, 8, 14, 16, 17, 18, 19, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 36, 41, 43, 48, 50, 55, 57, 62, 64, 65, 69, 71, 73, 74, 75, 76, and 78.

3. Defendants deny or are without sufficient knowledge or information to either affirm or deny the statements and allegations set forth in the following paragraphs of the Complaint, and therefore deny said statements and allegations and hold Plaintiffs to their strict proof thereof: 9, 10, 11, 12, 13, 20, 21, 22, 23, 37, 44 and 51.

4. Defendants deny the statements and allegations set forth in paragraphs 34, 39, 79, 80, 82 and 83.

5. Defendants state in connection with the allegations contained in paragraph 2 that Eco Real Estate Holdings LLC is a Minnesota Limited Liability Company filed on February 17, 2012 with its principal executive office address listed with the Minnesota Secretary of State as 535 Lakota Lane, Chanhassen, Minnesota 55318 and its registered office address listed as 13940 301st Ave., Princeton, Minnesota 55371, but are without sufficient knowledge or information to either affirm or deny that on May 26, 2022, Plaintiff's attorney, John Kolb, sent correspondence to Defendants by certified mail-return receipt requested using the before-referenced addresses and P.O. Box 451, Excelsior, MN 55317 and P.O. Box 1199, Clark, CO 80428. Three out of the four envelopes were returned to Mr. Kolb's office and the only letter that was signed for was at the P.O. Box 1199, Clark, CO 80428 address.

6. Defendants admit in part and deny in part the allegations set forth in paragraph 4 as follows: Eco Real Estate Holdings LLC is the sole owner of the subject property. Andrew L. Polski has no ownership interest in the property except as agent for and sole Member of said LLC.

7. Defendants admit the allegations contained in paragraph 15(a), (c), and (d) but state in connection therewith that Defendants believed in good faith that the contractor had obtained all required permits to perform the work in question and state that as to paragraph 15(b) that this was done by the previous owner.

8. Defendants admit the allegations in paragraphs 38 and 45 but state in connection therewith that this was done by the previous owner.

9. Defendants admit the allegations in paragraph 40 but state in connection therewith that the Defendant is working to correct the alleged violations.

10. Defendants deny the allegations contained in paragraph 46 and state in connection therewith that the Defendant is actively working with the Watershed District to correct the alleged violation.

11. Defendants admit the allegations in paragraphs 47, 52, 53, 54, 58, 59, 60, 61, 66, 67, 68, and 81 but state in connection therewith that the Defendant is working with an engineering surveying company to correct the alleged deficiencies.

12. Defendants admit the allegations in paragraph 72 but state in connection therewith that Defendant did not remove the trees in question as any tree removal was done by others prior to Defendant's purchase of the property.

**JOSLIN & MOORE LAW OFFICES, P.A.**

Dated: July 27, 2023

Clark A. Joslin

Clark A. Joslin, #52802
221 NW 2nd Ave.
Cambridge, MN 55008
Phone: 763/689-4101
Fax: 763/689-9794
Email: cjoslin@joslinmoore.com
Attorneys for Defendants

**ACKNOWLEDGMENT**

The undersigned hereby acknowledges that pursuant to Minnesota Statutes Section 549.211, subdivision 1, costs, disbursements, and reasonable attorney and witness fees may be awarded to the opposing party or parties in this litigation if the Court should find that the undersigned acted in bad faith, asserted a claim or defense that is frivolous and that is costly to the other party, asserted an unfounded position solely to delay the ordinary course of the proceedings or to harass, or committed a fraud upon the Court.

Clark A. Joslin

Clark A. Joslin, #52802