



Vermillion River Watershed Joint Powers Organization

2023 Activity Report and Financial Statement



Figure 1. Shoreline of East Lake in Lakeville, part of an area restored by a habitat restoration project by VRWJPO and the City of Lakeville with a Conservation Partners Legacy Grant from the Minnesota Department of Natural Resources.

Our Mission:

To collaboratively provide education, science, and support to restore and protect the Vermillion River Watershed's natural resources for all who live, work, and play within its boundaries.

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Watershed Map

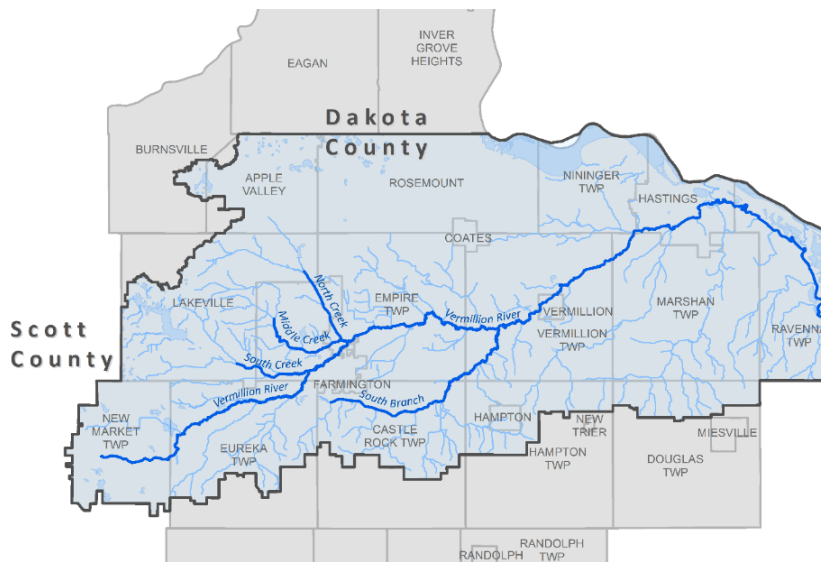


Figure 2. Map of the Vermillion River Watershed political boundaries.

Vermillion River Watershed Joint Powers Organization (VRWJPO)
 4100 220th St. W. #103, Farmington, MN 55024
www.vermillionriverwatershed.org
 (952) 891-7000
vrwjpo@co.dakota.mn.us

2023 Joint Powers Board Members:

Dakota County Commissioner Mike Slavik
 Scott County Commissioner Tom Wolf
 Dakota County Commissioner Mary Hamann-Roland

Staff:

Travis Thiel, Administrator

travis.thiel@co.dakota.mn.us

Melissa Bokman-Ermer, Co-Administrator

mbokman@co.scott.mn.us

Kelly Perrine, Sr. Watershed Specialist

kelly.perrine@co.dakota.mn.us

Jeff Dunn, Water Resources Engineer

jeff.dunn@co.dakota.mn.us

Brita Moore-Kutz, Communications & Outreach Specialist

brita.moore-kutz@co.dakota.mn.us

Paula Liepold, Water Resources Educator

paula.liepold@co.dakota.mn.us

Introduction

The Vermillion River Watershed, the land area that drains to the river and its connected water, encompasses an area in southeastern Scott County and central Dakota County of over 335 square miles. Geographically, it is the largest watershed in the seven-county Twin Cities metro area. The headwaters of the Vermillion River are in New Market Township, Scott County. The river flows across central Dakota County and into the Mississippi River near Red Wing, with the four major tributaries of the South Branch, North Creek, Middle Creek, and South Creek, as well as many minor tributaries. Twenty communities, including all or portions of Apple Valley, Burnsville, Castle Rock Township, Coates, Douglas Township, Elko New Market, Empire, Eureka Township, Farmington, Hampton, Hampton Township, Hastings, Lakeville, Marshan Township, New Market Township, Nininger Township, Ravenna Township, Rosemount, Vermillion, and Vermillion Township, reside within the political boundaries of the Vermillion River Watershed. The Prairie Island Indian Community encompasses the furthest downstream part of the river.

The name “Vermillion” was derived from the bright red and orange-colored ocher found by the Dakota Indigenous people in the seams of Chimney Rock in Marshan Township, and of other outcrops of the St. Peter sandstone beside or near the course of this river. The Dakota called it Wa Se Sa Wa Kpa, meaning Red Paint River. The color vermilion is a rich shade of red-orange (information in part from *Minnesota Place Names: A Geographical Encyclopedia* by Warren Upham, MN Historical Society Press).

About 49 stream miles of the Vermillion River’s main stem and tributaries are Minnesota Department of Natural Resources (DNR)-designated trout streams, making the river a unique natural resource in a metropolitan area. The watershed supports several lakes, such as Lake Marion, East Lake, Empire Lake, Long Lake, Farquar Lake, Alimagnet Lake, Lake Rebecca, and Lake Isabelle. Residents enjoy public greenspaces such as city parks, county parks, and greenways. Communities in the watershed are growing and developing rapidly, which profoundly affects the Vermillion River’s water quality and quantity, though the majority land use in the watershed is still agriculture for now.

The Minnesota Pollution Control Agency (MPCA) lists several reaches of the Vermillion River and its tributaries and local recreational lakes as impaired (not meeting water quality standards) due to issues including phosphorus, total suspended solids (TSS), low dissolved oxygen, bacteria, and poor quality or quantity of fish and macroinvertebrates. Some portions of the river and tributaries, as well as groundwater, have concerning nitrate and chloride levels.

Fortunately, there are practices people can implement to improve these conditions. VRWJPO, with support from local partners, completes projects every year that reduce pollutants going into streams, lakes, and groundwater. They also educate residents about what they can do to clean up water. Thanks to this work, several streams and lakes have seen positive trends in phosphorus, TSS, and bacteria levels since the inception of the VRWJPO. The organization promotes best management practices (BMPs) such as cleaning up storm drains, planting raingardens and cover crops, and using less de-icing salt to address ongoing issues.

Governance & Personnel

Dakota and Scott counties signed a [Joint Powers Agreement \(JPA\)](#) in 2002, establishing the VRWJPO to fulfill the conditions required by the Metropolitan Surface Water Management Act ([MN Statute 103B.201](#)). The counties jointly fund activities of the VRWJPO and are statutorily responsible for management, with Dakota County being the fiscal agent and providing several other services. The JPA allows a three-member Joint Powers Board (JPB), comprised of two Dakota County Commissioners and one Scott County Commissioner. A nine-member citizen advisory Watershed

Planning Commission (WPC) supports the JPB, consisting of eight Dakota County residents and one Scott County resident. A Technical Advisory Group (TAG) provides informal technical consultation.

Statute requires watershed management organizations to abide by Watershed Management Plans for their work. Plans must be updated every ten years at most. The VRWJPO's current activities are defined in its [2016-2025 Watershed Plan](#).

Joint Powers Board

The JPB directs watershed administration, policy, budget, and implementation of the Vermillion River Watershed Management Plan (Plan). The JPB met nine times in 2023. Members included:

- Commissioner Mike Slavik, Dakota County District 1 (Chair)
- Commissioner Tom Wolf, Scott County District 2 (Vice Chair)
- Commissioner Mary Hamann-Roland, Dakota County District 7 (Secretary-Treasurer)

Watershed Planning Commission

WPC members are appointed by the JPB under authority of the Joint Powers Agreement to advise the Board on policy, programs, or other matters that may come before the Board. The WPC is responsible for guiding implementation of the Watershed Plan, annual work plans, and budget. In 2023, the WPC met eight times. Members included:

- James Kotz, Rosemount (Chair)
- Joshua Borton, Farmington (Vice Chair)
- Brad Blackett, Apple Valley
- Kevin Chamberlain, Nininger Township
- Stephen Hamrick, Lakeville
- Linda Larson, Rosemount
- Andrew Riesgraf, Apple Valley
- Sandra Weber, Castle Rock Township

Technical Advisory Group

The VRWJPO consults with the TAG, consisting of local, regional, state, and other partners with expertise and interest in watershed issues. The group meets as needed to discuss emerging scientific, technical, and policy impacts on the Vermillion River Watershed. Representatives include but are not limited to:

- Cities and townships in the watershed
- Dakota and Scott Counties
- Dakota and Scott Soil and Water Conservation Districts
- Prairie Island Indian Community
- Minnesota Board of Water and Soil Resources (BWSR)
- Minnesota Pollution Control Agency (MPCA)
- Minnesota Department of Agriculture (MDA)
- Minnesota Department of Health (MDH)
- Minnesota Department of Natural Resources (DNR)
- Metropolitan Council
- Environmental consulting and engineering firms

Administration & Staff

The VRWJPO is staffed with an administrator from Dakota County and a co-administrator from Scott County, with four Dakota County staff designated to focus their activities on the watershed full or part time. Other County employees provide support for specific projects. The counties' Soil and Water Conservation Districts (SWCDs) provide monitoring and technical assistance services for the VRWJPO.

Legal Counsel

The establishing JPA provides that the Dakota County and Scott County Attorney's Offices shall provide legal services to VRWJPO as needed and in accordance with law.

Consultants

The VRWJPO enters contracts with consultants to provide engineering and environmental professional services for water resources management projects. The approved consultant list for 2022-23 is as follows:

Company	Address	City	State
Alliant Engineering, Inc.	733 Marquette Ave #700	Minneapolis	MN
Barr Engineering Company	4300 Market Pointe Drive, Suite 200	Minneapolis	MN
Davey Resource Group	1196 7 th St. E.	St. Paul	MN
Emmons & Olivier Resources, Inc.	1919 University Ave W, Ste. 300	St. Paul	MN
Geosyntec Consultants	100 S. Washington Ave, Ste. 1590	Minneapolis	MN
Houston Engineering	7550 Meridian Circle North, Suite 120	Maple Grove	MN
Inter-Fluve	1539 Grand Ave, Second Floor	St. Paul	MN
KLJ	370 Wabasha St., Ste 300	St. Paul	MN
Landbridge Ecological	670 Vandalia Street	St. Paul	MN
Minnesota Native Landscapes, Inc.	8740 77th Street Northeast	Otsego	MN
Moore Engineering, Inc.	2 Carlson Pkwy, Ste. 110	Plymouth	MN
Native Resource Preservation	260 Wentworth Ave. E. Ste. 115	West St. Paul	MN
RES	20276 Delaware Ave.	Jordan	MN
SRF Consulting Group, Inc.	3701 Wayzata Blvd.	Minneapolis	MN
Stantec	7500 Olson Memorial Hwy, Ste. 300	Golden Valley	MN
WSB	701 Xenia Avenue South, Suite 300	Minneapolis	MN

Awarded contracts

The VRWJPO also entered two contracts because the projects required solicitation in 2023 as noted below:

- HkGi – for public engagement for the 2026-2035 Vermillion River Watershed Plan development
- Fossil Graphics – for fabricating six interpretive signs at VRWJPO project locations

2023 Work Plan and Activities

Administration and Operations

Administrative responsibilities included staff training and supervision; coordinating and documenting VRWJPB meetings, decisions, and directions; coordinating and documenting WPC meetings, decisions, and recommendations; managing the budget; setting priorities and developing work plans; managing contracts; reporting; and seeking funding. See [Appendix A](#) for VRWJPB actions taken throughout the year.

Regulation

The local government units of the 20 communities in the watershed have land-use planning and zoning authority. All except Eureka Township implement [VRWJPO Standards](#) through local ordinances and apply their own permit programs. Local communities may request assistance with project site reviews or regulatory issues for specific site developments. VRWJPO often provides comments on development plans or environmental documents. For the current Watershed Plan, the VRWJPO developed a Standards Evaluation program through which it reviews community permitting activities and example projects. With the start of the watershed plan update in 2023, the VRWJPO has paused this program to take feedback from local communities and decide how it will be implemented in the next plan.

The VRWJPO issued two permits for land disturbance activities in Eureka Township in 2023 under the Standards. No variances were issued.

Research and Planning

Feasibility Study for Alimagnet Lake Alum Treatments

Alimagnet Lake, split between the Cities of Apple Valley and Burnsville, is an impaired water body due to excess phosphorus that results in algae blooms and poor conditions for recreation. VRWJPO and the Cities of Apple Valley and Burnsville conducted a feasibility study in 2023 to determine potential effectiveness of aluminum sulfate (alum) on treating the lake for internal phosphorus. Alum chemically binds to phosphorus, creating accumulations of heavier particulate material (floc). This floc settles in lake-bottom sediment, reducing phosphorus in the water column. The partners received a \$36,000 grant from the BWSR Watershed-Based Implementation Fund (WBIF) to complete the study, then later a \$287,000 Clean Water Fund (CWF) competitive grant to implement alum treatments [starting in 2024](#).

2026-2035 Watershed Management Plan



Figure 3. Apple Valley resident Cindi Dayus shares input for the 2026-2035 Vermillion River Watershed Plan.



Figure 4. VRWJPO Administrator Travis Thiel presents at the October 12 Plan kickoff meeting.

Per [Minnesota Statute](#), watershed organizations are required to update their Watershed Management Plans every ten years. VRWJPO's current Plan expires at the end of 2025. To allow thorough public input, the VRWJPO kicked off development of the 2026-2035 Plan in spring 2023 with a 60-day comment period for state review agencies and local stakeholders. Staff then contracted Twin Cities-based planning consultant HKGi to create a public engagement plan, starting Oct. 12, 2023, with a statutorily required Initial Planning Meeting. With guidance from VRWJPO and Dakota County Planning staff, HKGi designed a survey, set up virtual stakeholder meetings, assisted in the coordination of public stakeholder meetings, and created graphic materials to help VRWJPO gather comments from the public on what they'd like to see in the next-generation Watershed Plan. Visit the [Plan web page](#) to learn more about the planning process.

Monitoring and Assessment

Vermillion River Monitoring Network

The [Vermillion River Monitoring Network](#) assesses water quality, quantity, and habitat in the Vermillion River Watershed. The data collected through this network helps the VRWJPO and local stakeholders better understand the health of streams and plan projects that make a significant difference.

Staff with Dakota and Scott SWCDs monitor [eight locations](#) on the Vermillion River and major tributaries on a biweekly basis from snowmelt (mid-March) through Nov. 1. Monitoring activities include sample collection, continuous temperature monitoring, biological monitoring, and equipment maintenance. Samples are categorized by whether they were collected at baseflow, runoff, or snowmelt. In 2023, most samples were collected during baseflow or low water level conditions due to a persistent drought that began in late spring. It was the third summer in a row of intense drought conditions across the state.

Read the [2023 report summary](#). Key results:

Chemical Monitoring

- **Nitrate** is a form of nitrogen. Agricultural fertilizers often supplement the soil with nitrogen to help plants grow, but nitrogen that isn't used may leach through porous soil into groundwater or nearby waterbodies as nitrates. The monitoring site on the South Branch has the highest nitrate concentration, which has been steadily increasing since 2001, according to historical monitoring reports. The state standard for waters for domestic consumption is 10 mg/L, which includes coldwater reaches of the Vermillion and tributaries. **No samples collected in 2023 were above the standard.** VRWJPO is working closely with the Dakota SWCD and Dakota County Groundwater Protection Unit to implement nitrate reduction strategies in the area.
- **Total Phosphorus (TP)** is a common impairment in the Vermillion River Watershed. It naturally occurs in soil, though some use additional phosphorus fertilizer for plant growth. Stormwater runoff can carry excess phosphorus into lakes and streams and cause algae blooms. The state standard for all waters is 0.15 mg/L or lower. Samples hovered around the standard at all stations in 2023, with some above the standard during runoff and snowmelt but returning to standard at baseflow. The two monitoring stations furthest downstream in the watershed have shown the greatest drop in TP levels since 2001 at all weather conditions.
- **Dissolved oxygen (DO)** level medians met the state standard of 7 mg/L and above for coldwater reaches and 5 mg/L and above for warmwater reaches during baseflow, except at the South Creek site. DO levels are usually higher during snowmelt and lower during runoff events. The two North Creek sites have historically had the greatest drop in DO during runoff, but both remained above standard in 2023 runoff samples.
- **Total suspended solids (TSS)** is a measure of suspended particles in the water. Sources may include eroded soil, sediment, decaying vegetation, and algae. Levels in 2023 were below or slightly above the state standards of 10 mg/L for coldwater and 30 mg/L for warmwater at all stations during baseflow. A few samples at runoff and snowmelt were at 50 mg/L or more. This reflects past trends.
- **Chloride (salt)** levels are currently below state standards for impairment of 230 mg/L at all stations. Future urbanization may contribute to increased levels in both surface and groundwater due to greater need for de-icing salt on concrete surfaces. Sites at North Creek and South Creek, the most urban subwatersheds, have shown high levels of chloride since monitoring began in 2020. Station VR24, near the river headwaters in New Market Township, has had the highest chloride readings, possibly due to other sources from agriculture or septic system discharge. VRWJPO encourages residents to use snow removal practices with no or very little salt, as snowmelt and runoff can carry salt into storm drains and waterbodies and harm freshwater aquatic life.
- **Chlorophyll-*a*** is an indirect indicator of nutrient levels (nitrogen or phosphorus) in surface water. This can come from algae biomass, which often springs up as a result of excess nutrients. No 2023 samples exceeded the state standard of 35 mg/L. The highest levels appeared at NC808 on North Creek at runoff. Levels were somewhat increased at all stations from past years, though the VRMN has only sampled for chlorophyll-*a* since 2019 so there is no long-term trend to report yet.
- **Escherichia coli (*E. coli*)** bacteria is a good indicator for the general amount of disease-causing pathogens in the water. Levels are often higher after runoff events and may result from septic system discharge, agricultural runoff, livestock, urban runoff, and sediment. The state standard is 126 most probable number of organisms (MPN)/100mL. To meet the standard, no more than 10% of all samples in one month may exceed this number. The Vermillion River has been on the state Impaired Waters List for bacteria since 2006. Levels peaked at VR24 in 2021, which was an above-average year for precipitation in the Twin Cities Metro area. VR24 has remained the highest concentration of *E. coli*, though it shows less variability between 2022-23 than previously. Other sites in the watershed had low-level exceedances and a slight increase from 2022.

Temperature Monitoring

The coldwater reaches of the Vermillion River and its tributaries are home to a self-sustaining brown trout population, so there is great interest in reducing or maintaining water temperatures suitable for trout. Temperature standards are applied to the middle watershed (coldwater) but are not applicable to reaches in the upper and lower parts of the watershed (warmwater).

Optimal temperature for adult brown trout is <18°C, tolerance 18-20°C, resistance 20-22°C, and complete mortality at 25°C. The temperature data for 2023 for two North Creek coldwater stations in Farmington shows temperature maxima were measured in the complete trout mortality range (> 25°C) during all summer months, with the highest median water temperatures observed in July.

Biological Monitoring

VRWJPO annually samples the conditions of fish, macroinvertebrates, and habitat.

Fish and Macroinvertebrates

Fish sampling occurs at a few sites each year ([map](#)) so that all sites are monitored every two or three years. The results of this sampling provide a measure of the biological health of the stream system as indicated through the index of biological integrity (IBI). IBI is a biologically based, multi-metric method for measuring the integrity of aquatic systems. Values below the threshold indicate impairment. VRWJPO consults with the Minnesota DNR and Stantec to gather fish data. Read the [2023 fish monitoring report](#).

In 2023, seven sites were monitored in various parts of the watershed for macroinvertebrate health. The 2023 macroinvertebrate IBI scoring data is not available yet as of April 2024.

Habitat

Habitat assessments were completed using the MPCA's Minnesota Stream Habitat Assessment protocol to further evaluate and understand the biological integrity of stream reaches. Of the seven sites monitored in 2023 ([map](#)), **six sites scored fair and one site scored poor**.

Site Name	Stream Reach	Long-Term Average	2023 Score, if applicable
A1	Upper Main Stem Vermillion River	Fair	
A2	South Creek	Fair	
A3	South Creek	Fair	Fair
A4	Upper Main Stem Vermillion River	Fair	
A5	Middle Main Stem Vermillion River	Fair	Fair
A6	Middle Main Stem Vermillion River	Fair	
A7	North Creek	Good	Fair
A8	Middle Main Stem Vermillion River	Good	
A9	Middle Main Stem Vermillion River	Fair	

Site Name	Stream Reach	Long-Term Average	2023 Score, if applicable
A10	South Branch	Fair	
A12	South Branch	Fair	
A13	Lower Main Stem Vermillion River	Fair	
A14	Lower Main Stem Vermillion River	Fair	Fair
A15	Middle Creek	Fair	Fair
13-1	Upper Main Stem Vermillion River	Fair	Fair
13-2	South Creek	Fair	
13-4	North Creek	Fair	
13-5	Middle Main Stem Vermillion River	Good	
14-1	Middle Creek	Poor	Poor
14-2	North Creek	Fair	

Lake Monitoring

Lake water quality monitoring couples phosphorus levels and Secchi transparency to provide a beneficial water quality indicator. Data is provided by the Citizen-Assisted Monitoring Program (CAMP) at the Metropolitan Council. **Decreasing phosphorus levels and increasing transparency levels are indicators of improvement.** In 2023, CAMP monitored Farquar, Long, Alimagnet, East, Marion, and Rebecca lakes in the Vermillion River Watershed.

Lake Trends Over Time

Lake Name (date range of monitoring)	Total Phosphorus Trends	Secchi Transparency Trends
Alimagnet (2007-present)	Improving	Improving
East (2007-present)	Improving	Improving
Farquar (2007-present)	Improving	Improving
Long (2007-present)	Improving	Improving
Marion (2007-present)	Improving	Improving
Rebecca (2015-present)	Improving	Worsening

Land and Water Treatment

Capital Improvement Projects

Each year, the VRWJPO identifies and develops Capital Improvement Projects (CIPs) with direct and observable benefits to water quality, quantity, and aquatic habitat. VRWJPO publishes fact sheets on its CIPs online each year as required by Minnesota Clean Water Land and Legacy Amendment grants.



Figure 5. Minnesota Clean Water, Land & Legacy Amendment logo.

[Fact sheets](#) and brief descriptions for 2023 projects are below. ***In total, these projects are estimated to reduce:***

- ***TSS pollution by 403 tons/year***
- ***Total phosphorus pollution by 334 pounds/year***
- [East Lake Habitat Improvements \(Lakeville\)](#)

East Lake is a 44-acre, impaired shallow lake in Lakeville. Poor lake clarity and invasive species infestations both in and around the lake need to be addressed to create a high-quality contiguous habitat corridor. The City of Lakeville and VRWJPO are restoring portions of East Lake Community Park by the lake. The restoration includes terrestrial invasive species removal; forest and oak savanna; and shoreline buffer improvements through native plantings, with the support of a Conservation Partners Legacy (CPL) grant from the DNR.

- [East Lake Invasive Fish Barrier \(Lakeville\)](#)

VRWJPO, partnering with the City of Lakeville, received a competitive CWF grant from BWSR in 2023 to install a low-voltage electric fish barrier between East Lake and its connection with North Creek. By blocking their movement, it will allow the VRWJPO and partners to remove invasive fish, such as common carp and goldfish, from the lake to populations acceptable for sustainable management purposes. Partners plan to begin removing fish out of East Lake in 2024.

- [Foxborough Park Total Suspended Solids \(TSS\) Reductions \(Lakeville\)](#)

VRWJPO, Dakota County, and the City of Lakeville constructed a dry pond with a wet sedimentation forebay in Foxborough Park to capture TSS and TP and prevent them from reaching North Creek. The forebay has a permanent pool to trap larger sediments. A rock gabion wall and sand filter bench were constructed to provide additional treatment by trapping smaller sediments and other pollutants. The project is nearly complete and is located alongside the other North Creek Channel at Highview Channel Stabilization Project, which will reduce TSS. The project is funded from a CWF competitive grant.

- [Middle Creek at Dodd Boulevard \(Lakeville\)](#)

An ongoing issue in the Vermillion River's Middle Creek tributary is stream turbidity (water that isn't clear) due to bank and channel erosion. A feasibility study by the City of Lakeville identified several recommendations for improving the creek, including a streambank and channel stabilization project. Lakeville, in partnership with the VRWJPO, was awarded

a WBIF grant from BWSR for this project. Two reaches of Middle Creek were restored, 2,300 linear feet of streambank and channel in total.

- [North Creek at Highview Channel Stabilization \(Lakeville\)](#)

The North Creek Vermillion River subwatershed has undergone a lot of development over several decades, and unfortunately significant erosion of North Creek has come with it. To address the problem, VRWJPO and the City of Lakeville collaborated to repair a particularly eroded reach of the creek between Highview Ave. and Cedar Ave. The project consisted of rock check dams, streambank stabilization grading, and removal of accumulated sediment that had deposited downstream over time. This project was funded in part by a WBIF grant.

SWCD Cost-Share

VRWJPO provides cost-share funding to the Dakota and Scott SWCDs to work with landowners in the watershed undertaking conservation projects. These include projects such as cover crops, grassed waterways, native prairie restorations, and water and sediment control basins.

In 2023, estimated pollutant reductions from SWCD cost-share projects were:

- **TSS: 391.64 tons/year**
- **TP: 440.4 pounds/year**
- **Nitrate: 3,951 pounds/year**

Fact sheets: [Dakota County SWCD – Conservation Initiative Fund/Incentive Payment Practices](#)

Fact sheets: [Scott SWCD – Conservation Cost Share Program](#)

Coordination and Collaboration

Watershed Tour

BWSR selected the Vermillion River Watershed for its 2023 Board Tour in August. VRWJPO, Dakota County SWCD, and BWSR staff collaborated to plan the tour, with support from landowner and city partners. More than 60 people attended, despite record heat and humidity. The group toured eight locations:

- East Lake Habitat Improvements (Lakeville)
- King Park Stormwater Reuse System (Lakeville)
- Erickson Park Stormwater Improvements (Apple Valley)
- Rambling River Park Stream Restoration (Farmington)
- South Branch Vermillion River Nitrate Treatment Wetland (Castle Rock Township)
- Prairie Strips and Climate Resiliency Efforts at Kimber Family Farms (Castle Rock Township)
- Groundwater Protection Strategies at Chuck Louis Farm (Vermillion Township)
- Braun Wetland Bank Easement (Castle Rock Township)



Figure 6. The group who attended the VRWJPO-BWSR collaborative tour, August 2023. More than 60 people attended, including local elected officials, BWSR Board members, and WPC members.

Read descriptions of each tour stop [on the Vermillion River Watershed website](#).

Public Communication and Outreach

Community Outreach

VRWJPO hosted tables at the following events:

- Lakeville Earth Day Celebration, April
- Hastings Party in the Park, July
- Dakota County Fair, August
- Brand Farms Fall Market, October
- Lakeville Water Treatment Plant Tour/Imagine a Day Without Water, October

Staff provided promotional items such as pencils and dog waste pickup bags, and used the Pollute or Protect and Enviroscape displays to demonstrate water resource concerns.

Digital Media

The VRWJPO sends a quarterly email [newsletter](#) to interested parties. VRWJPO also maintains active accounts on Facebook and Instagram and a website (vermillionriverwatershed.org).

2023 Engagement By the Numbers

- Email newsletter: 2,274 emails opened, 36% open rate (up from 13% in 2022)
- Website: 12,886 user engagements, 19,419 page views
- Facebook: 403 followers, 20,044 post reach, 2,386 engagements (likes, comments, shares, link clicks)
- Instagram: 556 followers, 4,777 post reach, 754 engagements (likes, comments, shares, saves)

Interpretive Signs

VRWJPO had six interpretive signs fabricated for capital improvement projects around the watershed. The projects include:

- 21st Street Stormwater Improvements, Hastings
- Aronson Park Stormwater Reuse System, Lakeville
- Dakota County Road 50 Phosphorus Treatment Enhancements, Lakeville
- Erickson Park Stormwater Improvements, Apple Valley
- Middle Creek at Highview Stream Restoration, Lakeville
- Sunset Pond/Alimagnet Iron-Enhanced Sand Filter, Apple Valley

Landscaping for Clean Water

VRWJPO and other watersheds in Dakota County provide funding each year to Dakota County SWCD's Landscaping for Clean Water program. Participants learn from SWCD conservationists how to construct raingardens, native plant gardens, or shoreline restorations, whichever works best on their properties. They then are eligible to apply for grants of up to \$250 to fund their practices. Grant awardees receive direct technical assistance tailored to their needs.

VRWJPO-Funded Landscaping for Clean Water Projects, 2023	
Raingardens	10
Native Gardens	8
Shoreline Restorations	1
Total	19

Adopt-a-Drain

VRWJPO continued participating in the Adopt-a-Drain program in 2023. Volunteers sign up online to adopt storm drains, meaning they commit to keeping them clear from trash, leaves, grass clippings, road salt, and any other debris. Throughout the year, participants receive reminders from both VRWJPO and Adopt-a-Drain to clear their drains and track their impact.

VRWJPO Adopt-a-Drain by the Numbers			
New drains adopted in 2023	Total drains adopted, 2019-2023	Reported debris picked up in 2023	Total reported debris picked up since 2019
76	549	688.5 lbs	3,053.2 lbs

Adopt-a-Drain participation is included in the VRWJPO's membership in Metro Watershed Partners, a coalition of Twin Cities-area watershed organizations, cities, and interest groups providing water stewardship messages to the public.

School of Environmental Studies Earth Day Service Learning

VRWJPO staff partnered with School of Environmental Studies (SES) teachers for their annual Earth Day Service Learning event in April 2023. About 20 students and two teachers planted native dogwood and osier trees at the intersection of Dakota County Road 50 and Jaguar Avenue in Lakeville, the site of a previously-completed [phosphorus treatment enhancement project](#) by VRWJPO and the City of Lakeville with a Clean Water Fund grant. The project contains a bioretention basin and an iron-enhanced sand filter to capture excess phosphorus before it can enter Lake Marion. Planting trees around the project provides soil stabilization and more aesthetic appeal.



Figure 7. SES students dig holes to plant dogwood and osier trees around a bioretention basin and iron-enhanced sand filter project in Lakeville in April 2023.

Metro Children’s Water Festival

Dakota County staff have a leadership role in the Metro Children’s Water Festival planning and implementation. VRWJPO provided financial support for schools to participate in the popular event. The event was in-person in 2023 for 1,770 students, with the virtual option available for everyone. Schools attending from within the watershed included:

- Lakeview Elementary in Lakeville with 3 classes
- Highland Elementary in Farmington with 5 classes

Both in-person and virtual options will be available in 2024 for fourth-grade students.

Minnesota Water Stewards

The Minnesota Water Stewards program, coordinated by the non-profit Freshwater Society, invites people to become community leaders for clean water. The program provides training and opportunities for Stewards to build projects in their neighborhoods, educate their communities, and volunteer their time. Certified Stewards volunteer 50 hours per year to maintain their certification.

In 2023, VRWJPO supported one Steward candidate, Cindi Dayus of Apple Valley. She spent the spring learning about hydrology and stormwater basics, water and environmental policy, community engagement, and best management practice planning, evaluation, and maintenance. She was certified in fall 2023 and is working with a church in Apple Valley to improve the building’s stormwater management for her capstone. Cindi is one of 14 certified Stewards in VRWJPO.

Vermillion River Watch

In 2023, the VRWJPO continued financial support of Dakota County SWCD’s work with educators and students at Rosemount High School to collect macroinvertebrates and habitat data from the Vermillion River, identify macroinvertebrates, and compare species type and abundance to biological metrics. This experience interests students in scientific disciplines and engages them in improving water resources.

Scott Clean Water Education Program

The Scott Clean Water Education Program (SCWEP) started in 2010 to educate Scott County residents consistently and effectively on the topic of clean water. The program’s goal is to make clean water choices second nature for all who live and work in Scott County. SCWEP has incorporated the goal into marketing materials using the theme of “Clean Water Starts with Me!” VRWJPO annually contributes to SCWEP, which hosts educational workshops, provides classroom lessons for third-eighth graders, hosts Outdoor Education Days, and contributes communication pieces to local news publications and partner channels.

Maintenance Workshops

The VRWJPO annually supports trainings for maintenance professionals on Smart Salting and turfgrass maintenance with financial contributions, event promotion, and staff time. In 2023, VRWJPO funded a Turfgrass Maintenance Workshop attended by 34 people.

2023 Financial Statement

Final Treasurer’s Report for year ending December 31, 2023

Expenses				
Category	Budget Amounts	Expenses to Date	Expenses Pending	Account Balance
Administration & Operations	\$240,500	\$136,690.08	\$6,835.74	\$96,974.18
Research & Planning	\$41,600	\$40,195.08	\$7,798.97	(\$6,394.05)
Monitoring & Assessment	\$156,900	\$97,404.47	\$31,861.98	\$27,633.55
Public Communications & Outreach	\$167,900	\$158,504.90	\$8,141.85	\$1,253.25
Irrigation & Audit	\$20,000	\$9,397		\$10,603
Regulation	\$55,900	\$14,874.65	\$3,341.11	\$37,684.24
Coordination & Collaboration	\$50,600	\$14,692.73	\$5,661.97	\$30,245.30
Feasibility/Preliminary Studies	\$220,000	\$99,882.24	\$10,407.76	\$109,710
Capital Improvement Projects	\$480,920	\$117,136.83	\$49,160.11	\$314,623.06
CWF BWSR – Watershed Grant	\$12,000	\$8,783.67	\$934.67	\$2,281.66

Expenses				
Category	Budget Amounts	Expenses to Date	Expenses Pending	Account Balance
WBIF Grant 2020-2023 North Creek Stabilization	\$387,500	\$314,441.77	\$1,614.58	\$71,443.65
WBIF Grant 2020-2023 Farmington Direct Drainage	\$30,030	\$28,740		\$1,290
WBIF Grant 2020-2023 Hastings Direct Drainage	\$30,030	\$29,380.18		\$649.82
WBIF Grant 2020-2023 Ravenna Basins Restoration	-	\$3,511.13		(\$3,511.13)
Lakeville East Lake Restoration	\$93,000	\$40,856.16	\$51,878.69	\$265.15
CWF Grant Foxborough TSS	\$376,500	\$1,993.57	\$355,600.50	\$18,905.93
CWF Grant Ravenna Trail	\$545,000	\$698.65	\$55,146.40	\$489,154.95
WBIF Grant 2022-2023 Middle Creek	\$363,000	\$383.46	\$208,934.82	\$153,681.72
WBIF Grant 2022-2025 Alimagnet Alum	\$45,000	\$32,044.78		\$12,955.22
CWF Grant 2023 East Lake Fish Barrier	\$337,500	\$9,836.45	\$154,982.22	\$172,681.33
Wetland Bank	\$189,800			\$189,800
VRWJPO Revised Budget Expense TOTAL	\$3,843,680	\$1,159,447.80	\$952,301.37	\$1,731,930.83

Budget Funding Sources	
Scott County Levy	\$35,100
Dakota County Levy	\$964,900
Wetland Bank	\$189,800
Fund Balance from Underspending in Previous Year	\$271,810
Grant Carryover	\$12,000
Fees on Permitting Activities	\$1,000
CWF Grant (BWSR) Competitive 2022	\$841,500
CWF Grant Competitive 2023	\$300,000
WBIF Grant 2020-2023	\$487,180

Budget Funding Sources	
WBIF Grant 2022-2025	\$396,000
CPL Grant (DNR) 2022-2025	\$90,000
CIP Reserve	\$226,800
CIP Reserve Grant Match	\$136,660
Investment earnings	\$14,000
Total Revenues	\$3,966,750

2024 Work Plan and Activities

Watershed Plan Category	Budget Items	Budget Amount
Administration and Operations	Dakota County VRW staff	\$170,500
	Scott County VRW staff	\$15,000
	Other Dakota County staff time	\$12,000
	Legal support	\$25,000
	Miscellaneous Expenses (per diems, mileage, postage, etc.)	\$6,000
	Training, conferences, and certifications	\$2,000
	Subtotal Administration	\$230,500
Research and Planning	Dakota County SWCD Incentive Program Policy Assistance	\$1,000
	Scott County Staff	\$7,000
	VRW staff	\$30,000
	Dakota County Staff	\$20,000
	Consulting	\$20,000
	Subtotal Research and Planning	\$78,000
Monitoring and Assessment	Vermillion River Monitoring Network in Dakota County	
	A. Staff time for sample collection, equipment installation, maintenance	\$30,000
	B. Data analysis, database management, data reporting, FLUX modeling	\$15,000
	C. Water Quality Sample Analysis and QA/QC samples	\$19,000
	D. Equipment and Supplies	\$8,000

Watershed Plan Category	Budget Items	Budget Amount
	E. Biological and Habitat Assessments	\$7,000
	Vermillion River Monitoring Network in Scott County	\$10,150
	USGS cost-share for Blaine Ave. Station	\$8,900
	DNR flow-gaging assistance	\$9,700
	Electrofishing	\$25,000
	Monitoring programs review and evaluation	\$15,000
	General GIS support (Dakota SWCD)	\$5,000
	Nitrate treatment practices sampling	\$1,000
	Iron enhanced sand filter performance sampling	\$2,000
	Subtotal Monitoring and Assessment	\$155,750
Public Communications and Outreach	Communication and Outreach staff	\$100,000
	Vermillion River Watch program	\$5,000
	Scott County outreach efforts	\$2,080
	Vermillion River Watershed projects signage and map updates	\$10,000
	Newsletter, mailings, website, general communication materials	\$10,000
	Landscaping for Clean Water Workshop (Dakota SWCD)	\$30,400
	K-12 classroom presentations (Dakota SWCD)	\$3,000
	Low Input Turf Workshops (Dakota SWCD)	\$7,600
	Water Conservation Digital Marketing Support	\$7,500
	Local standards/ordinance and turf/salt workshops	\$3,500
Subtotal Public Communications and Outreach	\$179,080	
Regulation	Scott SWCD assistance with plan review	\$930
	Engineering assistance and review	\$35,000
	VRW staff local program assistance	\$20,000
	Subtotal Regulation	\$55,930
Coordination and Collaboration	Coordination VRW staff	\$40,000
	Metro Children's Water Festival support	\$600

Watershed Plan Category	Budget Items	Budget Amount
	Metro Watershed Partners membership (incl. Adopt-a-Drain)	\$5,000
	Minnesota Water Stewards	\$5,000
	Subtotal Coordination and Collaboration	\$50,600
Land & Water Treatment: Capital Improvement Projects	Cost-share programs in Dakota County (SWCD)	\$80,000
	Cost-share programs in Scott County (SWCD)	\$25,000
	Cost-share	\$575,000
	WBIF Match	\$30,000
	Subtotal Capital Improvement Projects	\$710,000
Land & Water Treatment: Maintenance	Past projects maintenance/repair	\$70,000
	CIP construction oversight, maintenance/repair staff costs	\$35,000
	Subtotal Maintenance	\$105,000
Land & Water Treatment: Feasibility/Preliminary Studies	Preliminary design, technical assistance, and marketing for capital improvements (Dakota County SWCD)	\$40,000
	Preliminary design, technical assistance, and marketing for capital improvements	\$300,000
	Subtotal Feasibility/Preliminary Studies	\$340,000
Land & Water Treatment: Irrigation Audit and Cost Share Program	Irrigation cost-share	\$5,000
	Subtotal Irrigation Audit and Cost-Share	\$5,000
Land & Water Treatment: 2022- 2025 CPL Grant East Lake Habitat	East Lake Habitat Improvement	\$3,200
	VRWJPO in-kind match	\$3,000
	Subtotal 2022-2025 CPL Grant East Lake Habitat	\$6,200
Land & Water Treatment: 2022 Clean Water Fund Competitive Grant (BWSR) Foxborough Park TSS Project	Foxborough Park TSS project	\$25,000
	VRWJPO Cash Match	\$1,500
	Subtotal CWF Competitive Grant Foxborough Park	\$26,500
Land & Water Treatment: 2022 Clean Water Fund Competitive Grant Ravenna	Ravenna Trail Ravine Stabilization	\$25,000
	VRWJPO Cash Match	\$2,500
	Subtotal CWF Competitive Grant Ravenna	\$27,500
	Middle Creek at Dodd Blvd Stream Restoration	\$20,000

Watershed Plan Category	Budget Items	Budget Amount
Land & Water Treatment: 2022-2025 WBIF Grant Middle Creek	VRWJPO in-kind	\$1,000
	Subtotal WBIF Grant Middle Creek	\$21,000
Land & Water Treatment: 2023 CWF Competitive Grant East Lake Fish Barrier	East Lake Fish Barrier & Rough Fish Removal	\$90,000
	VRWJPO Cash Match	\$37,500
	Subtotal CWF Competitive Grant East Lake	\$127,500
Land & Water Treatment: Wetland Bank	Wetland Bank Restoration Funds Reserve	\$189,800
	Subtotal Wetland Bank Restoration Funds	\$189,800
	Subtotal of Expenditures	\$2,308,360
	Cash Reserve	\$406,190
	TOTAL Annual Expenses	\$2,714,550

Appendix A: 2023 Resolutions of the Vermillion River Watershed Joint Powers Board

January 26, 2023

Resolution No. VRW 23-01: Approval of Consent Agenda

- a. Approval of Agenda
- b. Approval of Minutes from the December 1, 2022 Meeting
- c. Acceptance of Treasurer's Report
- d. Authorization to Execute a Joint Powers Agreement with Dakota County Soil and Water Conservation District for Services in 2023
- e. Authorization to Execute a Joint Powers Agreement with Scott Soil and Water Conservation District for Services in 2023

VRW 23-02: Approval of Expenses incurred between Nov. 14 and Dec. 31, 2022, totaling \$193,595.22

VRW 23-03: Authorization to execute a grant agreement with the Minnesota Board of Water & Soil Resources in an amount not to exceed \$300,000 for a Clean Water Fund grant to implement an electric fish barrier near East Lake

VRW 23-04: Authorization to execute a Joint Powers Agreement with the City of Lakeville for the East Lake electric fish barrier and rough fish removals project in an amount not to exceed \$337,500

March 23, 2023

VRW 23-05: Approval of Consent Agenda

- a. Approval of Agenda
- b. Approval of Minutes from the January 26, 2023 Meeting
- c. Acceptance of Treasurer's Report
- d. Delegation of a Limited Authority for Contracts and Purchase Agreements to the Vermillion River Watershed Joint Powers Organization Administrator and Co-administrator

VRW 23-06: Approval of Expenses incurred between Jan. 1 and March 14, totaling \$199,783.29

VRW 23-07: Appointment of Brad Blackett to the Vermillion River Watershed Planning Commission

VRW 23-08: Authorization of VRWJPO staff to begin update process for the 2026-2035 Vermillion River Watershed Management Plan

April 27, 2023

VRW 23-09: Approval of Consent Agenda

- a. Approval of Agenda
- b. Approval of Minutes from the March 23, 2023, Meeting
- c. Acceptance of Treasurer's Report

VRW 23-10: Approval of Expenses incurred between March 14 and April 14 totaling \$39,117.01

VRW 23-11: Approval of Amendments to 2023 VRWJPO Budget to bring budgeted total expenses to \$3,750,680 and total revenue to \$3,966,750, with a cash reserve of \$216,070.

VRW 23-12: Authorization to submit 2022 Annual Activity Report and Financial Statement to BWSR

VRW 23-13: Authorization to execute an amendment to the Joint Powers Agreement with the City of Rosemount for irrigation system audits and improvements

June 8, 2023 – Special Meeting

VRW 23-14: Approval of agenda for the special meeting

June 22, 2023

VRW 23-15: Approval of Consent Agenda as amended

- a. Approval of Agenda (including addition of Business Item 6e)
- b. Approval of Minutes from the April 27, 2023 Meeting and June 8, 2023 Special Meeting
- c. Acceptance of Treasurer’s Report

VRW 23-16: Approval of Expenses incurred from April 14-May 16, totaling \$41,968.78, and from May 17-June 12, totaling \$47,554.26

VRW 23-17: Appointment of Kevin Chamberlain to Vermillion River Watershed Planning Commission

VRW 23-18: Adoption of corrected 2023 VRWJPO budget

VRW 23-19: Recognition of outgoing Administrator Mark Zabel

July 27, 2023

VRW 23-20: Approval of Consent Agenda

- a. Approval of Agenda
- b. Approval of Minutes from the June 22, 2023 Meeting
- c. Acceptance of Treasurer’s Report
- d. Schedule a Public Hearing to Receive Comments on the Draft Vermillion River Watershed Joint Powers Organization 2024 Budget and Watershed Management Tax District Levy

VRW 23-21: Approval of Expenses incurred between June 13-July 14, totaling \$119,366.63

VRW 23-22: Authorization to execute a Joint Powers Agreement with the City of Rosemount for cost-share assistance on Public Works and Police Campus infiltration basins

VRW 23-23: Approval of Service Agreement for the VRWJPO Administrator

VRW 23-24: Schedule and public notice Special Meeting for Watershed Tour

August 24, 2023

VRW 23-25: Approval of Consent Agenda

- a. Approval of Agenda
- b. Approval of Minutes from the July 27, 2023 Meeting
- c. Acceptance of Treasurer’s Reports and Draft Fund Statements
- d. Authorization to Approve Drainage and Ravine Maintenance Easement for Ravenna Trail Ravines Stabilization Project

VRW 23-26: Approval of Expenses incurred from July 15-Aug. 14 totaling \$40,478.86

VRW 23-27: Closing of public hearing on the 2024 VRWJPO Draft Budget and Tax District Levy

VRW 23-28: Adoption of the 2024 VRWJPO Draft Budget and Tax District Levy

VRW 23-29: Schedule and Public Notice Oct. 12 Initial Planning Meeting to develop priorities and issues in the 2026-2035 Watershed Management Plan

VRW 23-30: Authorization to execute a contract with HKGi for VRW Management Plan Update stakeholder engagement and amend the 2023 VRWJPO Budget

October 26, 2023

VRW 23-31: Approval of Consent Agenda

- a. Approval of Agenda
- b. Approval of Minutes from the August 24, 2023, Meeting
- c. Acceptance of Treasurer's Reports and Draft Fund Statements

VRW 23-32: Approval of Expenses incurred between Aug. 15-Sept. 15, totaling \$93,704.87, and Sept. 16-Oct. 16, totaling \$56,839.16

December 7, 2023

VRW 23-33: Approval of Consent Agenda

- a. Approval of Agenda
- b. Approval of Minutes from the October 26, 2023, Meeting
- c. Acceptance of Treasurer's Reports and Draft Fund Statements
- d. Approval of VRWJPB Meeting Dates for 2024
- e. Authorization to Execute a Joint Powers Agreement with Dakota County Soil and Water Conservation District for Services in 2024
- f. Authorization to Execute a Joint Powers Agreement with Scott Soil and Water Conservation District for Services in 2024

VRW 23-34: Approval of Expenses incurred between Oct. 17-Nov. 14, totaling \$123,325.48

VRW 23-35: Adoption of VRWJPO 2024 Budget and Watershed Management Tax District Levy