

2022 Activity Report and Financial Statement



Figure 1. Vermillion River Linear Park, Hastings, June 2022.

The mission of the Vermillion River Watershed Joint Powers Organization is 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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Introduction

The Vermillion River Watershed, the area where the river and other water resources drain, encompasses southeastern Scott County and central Dakota County 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 in Goodhue County. Its main tributaries are the South Branch, North Creek, Middle Creek, and South Creek. Eight subwatersheds comprise the watershed: North Creek, Lower Mainstem, Mississippi Direct, Middle Creek, Middle Mainstem, South Branch, South Creek, and Upper Mainstem.

The name Vermillion River was likely derived from the bright red and orange-colored ocher obtained 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. (*Minnesota Place Names: A Geographical Encyclopedia* by Warren Upham, MN Historical Society Press)

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.

About 49 stream miles of the Vermillion River's main stem and tributaries are designated trout streams, making the river a unique natural resource in a growing metropolitan area. Preserving the river's water quality and cool temperatures are essential for trout sustainability and the recreational opportunities for those who enjoy fishing here. Additionally, the watershed supports several suburban lakes, such as Lake Marion, East Lake, Empire Lake, Long Lake, Farquar Lake, Alimagnet Lake, Lake Rebecca, and Lake Isabelle. Residents enjoy the many city and county parks along these water resources, including (but not limited to) Vermillion Falls Park, Whitetail Woods Regional Park, Rambling River Park, Alimagnet Park, and Vermillion River Linear Park.

The Minnesota Pollution Control Agency (MPCA) lists several reaches of the Vermillion River and its tributaries as impaired (not meeting state and federal water quality standards) due to E. coli bacteria, phosphorus, excess sediment, turbidity, low dissolved oxygen, aluminum, and poor quality or quantity of fish and macroinvertebrates. Some portions of the river and its tributaries, as well as groundwater, have concentrations of nitrate and chloride that are concerning, and the concentrations have increased over time. Downstream of the falls in Hastings, the river shares a floodplain with the Mississippi River and is polluted with excess sediment, polychlorinated biphenyls (PCBs), and mercury. Several of the lakes are listed as impaired for nutrients and mercury in fish tissue. The state updates its impaired waters list every two years and submits it to the U.S. Environmental Protection Agency (EPA).

The Vermillion River Watershed's population has been growing steadily, which brings increased development and residential impact on the Vermillion River's water quality and quantity. The majority

land use in the watershed is agricultural, which will remain so into the foreseeable future, though residential suburban and business development land uses are growing. Land management decisions in the watershed profoundly affect water resources. According the 2020 census, most communities in the watershed are overwhelmingly white and non-Hispanic in racial and ethnic makeup.

This report summarizes the VRWJPO's 2022 activities and its 2023 plans to protect and improve the Vermillion River Watershed.

Governance & Personnel

Dakota and Scott counties signed a Joint Powers Agreement (JPA) to manage the watershed together in 2002 and fulfill the conditions required by the Metropolitan Surface Water Management Act (MN Statute 103B). The two counties jointly fund activities of the VRWJPO and are statutorily responsible for management, with Dakota County as the fiscal agent. The JPA allows for 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 and consists of city partners, state partners, non-governmental organizations, County staff, Soil and Water Conservation District staff, and engineering advisors.

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 2022. Members included:

Commissioner Mike Slavik, Dakota County District 1 (Chair) Commissioner Tom Wolf, Scott County District 2 (Vice Chair) Commissioner Mary Liz Holberg, Dakota County District 6 (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 2022, the WPC met ten times. Members included:

Mark Henry, Castle Rock Township, Chair Chuck Clanton, Hampton Township, Vice Chair Josh Borton, Farmington Steve Hamrick, Lakeville Andrew Riesgraf, Apple Valley James Kotz, Rosemount Linda Larson, Rosemount

Technical Advisory Group

The VRWJPO consults with a Technical Advisory Group (TAG) that consists of local, regional, state, and federal government partners and non-profits with expertise and interest in watershed issues. The group meets to discuss emerging scientific, technical, and policy impacts on the Vermillion River Watershed. The TAG meets occasionally to discuss projects and policies from a scientific and technical perspective. It met once in March 2022. Representatives include but are not limited to:

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

VRWJPO Administrators and Staff

The VRWJPO is housed under Dakota County's Environmental Resources Department at the Dakota County Extension and Conservation Center. The VRWJPO is staffed with an administrator from Dakota County and a co-administrator from Scott County. Other Dakota and Scott County employees provide support for specific projects. Staff in 2022 included:

Mark Zabel, VRWJPO Administrator, Dakota County Melissa Bokman-Ermer, VRWJPO Co-administrator, Scott County Travis Thiel, Senior Watershed Specialist, Dakota County Mark Ryan, Water Resources Engineer, Dakota County Brita Moore-Kutz, Communications & Outreach Specialist, Dakota County Paula Liepold, Environmental Specialist – Education and Outreach, Dakota County

The counties' respective Soil and Water Conservation Districts (SWCDs) provide monitoring and technical assistance services for the VRWJPO. District Managers for the SWCDs in 2022 were:

Brian Watson, Manager, Dakota County SWCD Troy Kuphal, Manager, Scott SWCD

Legal Counsel

The Joint Powers Agreement for the VRWJPO provides that Dakota County and Scott County shall provide legal services 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 2021-22 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
КЦ	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

Company	Address	City	State
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 several contracts because the projects required solicitation in 2022 as noted below:

Stantec – Fish sampling to implement biomonitoring program Water in Motion (sole source) – Irrigation system audits Moore Engineering – East Lake Common Carp water quality assessment

2022 Work Plan Activities

The VRWJPO has successfully implemented the Watershed Management Plan (Plan) through the end of calendar year 2022. The 10-year Plan was adopted in June 2016. The Plan includes 239 implementation initiatives in several categories: Administration and Operations; Regulation; Research and Planning; Monitoring and Assessment; Land and Water Treatment; Coordination and Collaboration; and Public Communications and Outreach. These categories are comparable to those used by the VRWJPO to budget, develop work plans, and classify current activities. Of the 239 initiatives, 199 (83%) are completed or ongoing.

Administration and Operations

Administrative responsibilities include staff training and supervision; coordinating and documenting VRWJPB meetings, decisions, and directions; coordinating and documenting WPC and TAG 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 VRWJPO works with the cities and townships in the Watershed to ensure adoption of the Plan and local implementation. Annual work to verify adoption of the Plan includes the Standards Evaluation program through which the VRWJPO documents community permitting activities and reviews some example projects. This program's current form was started in 2017 and continues to be adapted to fit community and VRWJPO needs.

Communities implementing the Standards through local ordinance are required to update their ordinances in response to Standards amendments (and Comprehensive Plan updates). These updates began in 2021 after delays due to the COVID-19 pandemic as well as the delayed issuance of the State of Minnesota Municipal Separate Storm Sewer System (MS4) General Permit. MS4 communities had until November 2021 (one year from issuance of the updated MS4 General Permit) to revise ordinances, and the VRWJPO worked with local communities to verify ordinances in 2022.

The Watershed includes all or part of 20 separate jurisdictions, 19 of which have land-use planning and zoning authority. These local government units implement the VRWJPO Standards through local ordinance and apply their own permit programs. In 2022, the VRWJPO continued permitting and enforcement in Eureka Township where the township retains planning and zoning authority but does not implement the VRWJPO Standards.

Research and Planning

The VRWJPO develops strategic approaches for managing water resources through monitoring emerging issues, evaluating data, and engaging the public, stakeholders, and partners in planning and policy issues. In 2022, the VRWJPO researched or planned the following:

Dakota County Plans

VRWJPO staff assisted the Dakota County Groundwater Protection Unit with developing its Agricultural Chemical Reduction Effort (ACRE) Plan and the Dakota County Groundwater-Source Water Collaborative. By participating in these efforts, water quality, water quantity, and natural resources of the Vermillion River Watershed were represented and included in planning efforts.

Vermillion River Watershed Management Plan Amendment

VRWJPO staff drafted a minor amendment to the Vermillion River Watershed Management Plan to better align priorities within the Implementation Section of the Plan. The amendment includes:

- projects and activities anticipated in the next few years,
- alignment of activities with those previously identified in the Vermillion River Watershed Restoration and Protection Strategy (WRAPS) report, and
- new information learned since the Plan was originally adopted in 2016.

The draft amendment was distributed to stakeholders for review and comment in July. Comments were received and any necessary changes were made within the draft amendment; the amendment was adopted by the Vermillion River Watershed Joint Powers Board in September. Read the Plan, as amended, on our website, www.vermillionriverwatershed.org.

Monitoring and Assessment

Water quality and quantity monitoring data are essential for effective management of the Vermillion River Watershed. Surface water and groundwater monitoring allow the VRWJPO to determine the current condition of the resource, any trends occurring over time, the highest priorities for protection and restoration, and effectiveness of water-quality improvement projects. The following activities reflect the VRWJPO's commitment to evidence-based watershed management.

Vermillion River Monitoring Network

The Vermillion River Monitoring Network was created to assess water quality and quantity in the Vermillion River Watershed. Monitoring staff with Dakota County Soil and Water Conservation District and Scott Soil and Water Conservation District visit eight locations on a biweekly basis from snowmelt (mid-March) through November 1 (Figure 3). The summer's drought meant that most samples were collected during baseflow (Figure 2) or low water level conditions as rainfall events were limited like in 2021.



Figure 2. Monitoring site VR807 at baseflow.

Monitoring activities include sample collection, continuous temperature and water level monitoring, biological monitoring, and equipment maintenance. The data collected though this effort include a combination of chemical, physical, and biological parameters and assessments. It enables local agencies such as the VRWJPO to better understand the health of the stream and implement appropriate management strategies throughout the watershed.

Analysis shows that many of the water monitoring parameters are meeting state water quality standards and indicate a generally healthy condition in the Vermillion River and its tributaries.



Figure 3. Vermillion River Monitoring Network (VRMN) chemistry and flow monitoring stations.

Chemistry

Nitrate (NO₃; a form of nitrogen) was monitored at the locations shown in Figure 2. NO₃ levels were quite low, except at one station, SB802 (Figure 4), on the South Branch of the Vermillion River.



Figure 4. SB802, a monitoring site on the South Branch of the Vermillion River.

SB802 has a significant nitrate load compared to others in the network. High levels of nitrate in drinking water pose a human health risk and are likely related to the soils, artificial drainage, and agricultural land use that is predominant in the South Branch Vermillion River subwatershed. Monitoring locations downstream of the confluence with South Branch have elevated nitrate levels in comparison to sites higher in the watershed. Figure 5 shows nitrate nitrogen at each monitoring station.



Figure 5. Nitrate nitrogen for each station, categorized by sample type, for 2022. Blue dashed line represents the domestic consumption state standard (\leq 10 mg/L).

The other primary nutrient monitored in the watershed is *phosphorus*, an essential life element for plants. Excess phosphorus can lead to eutrophication and increased algae growth in the river. The median level for all sites is below the state standard during baseflow conditions (Figure 7). Elevated concentrations were recorded during runoff and snowmelt at almost all monitoring events, except at SC806 (South Creek subwatershed outlet, Figure 6). Highest variability during baseflow conditions was at VR24 (most upstream site) and VR0020 (most downstream site in watershed (monitored for Met Council). VR24 and SB802 showed most variability during runoff conditions.



Figure 6. South Creek Vermillion River monitoring site.



Figure 7. Total phosphorus (TP) for each station, categorized by sample type, for 2022. Blue dashed line represents the state standard for total phosphorus, \leq 0.15 mg/L.

Low *dissolved oxygen* concentrations for single event runoff events were common at several sites, but the median stayed above the standard (Figure 8). All median dissolved oxygen levels met the standard for both 2A and 2B stream sites during baseflow conditions, except SC806. NC801 (North Creek and

Middle Creek subwatersheds outlet) and NC808 (North Creek subwatershed outlet) have historically had the lowest recorded levels during baseflow, but SC806 and VR804 (mainstem site in upper watershed) were again lower in 2022. Dissolved oxygen levels during snowmelt conditions were high. VR24 had the highest variability of all monitoring sites during both baseflow and runoff conditions.



Figure 8. Dissolved oxygen for each station, categorized by sample type, for 2022. Blue dashed lines indicate standards with 7.0 mg/L (2A streams) and 5.0 mg/L (2B streams) as acceptable daily minimums.

Higher levels of *total suspended solids* (contributing to turbid, cloudy, water) following runoff events were also common at several sites, though to a much lesser degree than in previous years (most likely due to reduced runoff events and rainfall amounts) (Figure 9). Sample medians were at or below (meeting) the state standard at all stations during baseflow conditions. Standard exceedances occurred during runoff conditions at all monitoring water sites, particularly at SC806, NC801 (North Creek subwatershed outlet), and VR0020. Individual event exceedances occurred during snowmelt.



Figure 9. Total suspended solids categorized by sample type for 2022. Dashed lines represent the state standard for cold 2A (\leq 10 mg/L) and warm 2B (\leq 30 mg/L) waters.

The VRWJPO recently added two monitoring parameters to the suite of analytes – chloride (2020) and chlorophyll *a* (2019 at Dakota County sites; 2021 at VR24). Recent statewide monitoring data has shown that chloride concentrations are increasing in Minnesota's surface waters and groundwater. According to the Minnesota Pollution Control Agency (MPCA), a stream, lake, or wetland is considered impaired for chloride if two or more samples exceed 230 mg/L within a three-year period (chronic); or, one sample exceeds 860 mg/L (acute). While currently not a major concern in the watershed, future urbanization may contribute to increased levels, so it is important to gather baseline data now. Figure 10 shows 2022 chloride levels. All sites had sample medians below the chronic standard, though individual events exceeded the standard at VR24 during baseflow monitoring.



Figure 10. Chloride for each station, categorized by sample type, for 2022. Dashed lines represent the chronic state standard of 230 mg/L (two or more samples must exceed within a three-year period).

Chlorophyll-*a* was added to the VRWJPO monitoring program in 2019 (added to VR24 in 2021). It serves as an indirect indicator of nutrient levels in a lake or river (high chlorophyll = high nutrients) and is now considered a response variable in the MPCA's water quality impairment assessment strategy based. The 2022 sample medians were below the standard during all monitoring conditions, though individual events did exceed the standard at some sites during baseflow monitoring (Figure 11).



Figure 11. Chlorophyll-a, categorized by sample type, for 2022. Blue dashed lines represent the state standard of \leq 35 mg/L.

Temperature

The Vermillion River Watershed includes stream reaches with both coldwater and warmwater use designations meaning that 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). 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 a healthy brown trout fishery.

Continuous temperature data, measured in 15-minute intervals, has been collected annually starting in 2005 for many of the sentinel monitoring stations in the Vermillion River monitoring network. The temperature data for 2022 for NC801 and NC808 shows temperature maximums were measured in the complete mortality range (red; > 25°C) during all summer months with the highest median water temperatures observed in July (Figures 12 & 13).









Figures 12 and 13. Continuous temperature data for NC801 and NC808 (coldwater stream sites) during the summer months from 2005-2022 (when available). Temperature ranges apply to adult brown trout. Optimal <18°C, tolerance 18-20°C, resistance 20-22°C, and complete mortality at 25°C (Coutant (1975), Gardner & Leetham (1914), Bell (2006))

Biological and Habitat Assessments

The MPCA developed biological indices to evaluate the health of the macroinvertebrate community in the Vermillion River. In 2022, six sites were monitored in various parts of the watershed. The macroinvertebrate index of biological integrity (MIBI) scoring data is not currently available.

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 2022, six sites had a "fair" score and one site scored "poor" (Figure 14).



Figure 14. Habitat assessment scores for biomonitoring stations. Habitat scores for 2022 are indicated by grey circles. Dashed blue lines indicate limits for Good (\geq 66), Fair (45-65), and Poor (\leq 44) categories. Number of samples collected from 2009-2022 is shown in parenthesis.

Bacteria Sampling

Some parameters have been measured at undesirable levels. *Escherichia coli (E. coli)* bacteria levels are high in many streams of southeast Minnesota, and the Vermillion River and its tributaries are no exception. Monitoring results in 2022 show numerous low-level exceedances during the season at all

the sites in the network. The geometric mean at each site continues to show less variability than in 2019 and is even closer than in recent years (Figure 15).

E. coli levels at VR24 continue to be higher than samples collected at other monitoring sites within the watershed. In 2022, the geometric mean for *E. coli* samples at VR24 was 5 times more than the standard, drastically lower than the geometric mean in 2021 which was 27 times the standard. One other site was two times higher than the standard (NC801), and all other sites had geometric means in line with the standard or below.



Figure 15. Annual geometric mean of Escherichia coli (E. coli) bacteria for all stations by year. MPN stands for most probable number of organisms. Black dashed line indicates the 30-day geometric mean standard (for data collected April through October) of ≤126 MPN/100 mL. Bars represent total annual precipitation for each year. Gray dotted line indicates the 30 year (1992-2021) total annual average precipitation at the Minneapolis – St. Paul airport weather station of 31.2 inches.

Agency Monitoring

The Minnesota Department of Natural Resources (DNR) continues its monitoring effort in response to potential impacts to the quantity of water within the Vermillion River from groundwater withdrawals via appropriations. The DNR maintains responsibility for twelve stream gaging stations within the watershed as part of this effort. The VRWJPO annually contracts DNR hydrologists for assistance with maintenance, rating-curve development, and data analysis and compilation at these stations.

The VRWJPO provides cost share for the operation of the U.S. Geological Survey (USGS) Blaine Avenue gaging station, which has the longest continuous record of flow in the watershed. Real-time stage and flow data is available from the USGS station. This information can be accessed at https://waterdata.usgs.gov/mn/nwis/uv?site_no=05345000.

Continuous temperature monitoring was conducted at the eight stream gaging stations the Dakota County SWCD, Scott SWCD, and DNR operate, as well as at the Metropolitan Council's Watershed Outlet Monitoring Program (WOMP) station in Hastings.

Conclusion

The Vermillion River Monitoring Network is valuable in that the watershed can be assessed on its physical, chemical, and biological characteristics, and that information is then used to make informed management decisions. Restoring in stream and riparian habitat, reducing nutrients and suspended materials in the stream, and minimizing temperature peaks, among other possible conservation strategies, will have a cascading positive effect on the overall health of the river. It is important to consider physical parameters such as temperature, which plays an essential role particularly in cold water streams. Water quantity and flow patterns have a significant impact on aquatic communities, with too much or too little causing stress. An effective management strategy would be one which integrates both the quality and quantity aspects of the Vermillion River.

Land and Water Treatment

The VRWJPO ensures that Capital Improvement Program (CIP) projects with direct and observable benefits to water quality and quantity and aquatic habitat are identified and developed. The VRWJPO provides financial assistance and incentives through cost-share programs for Local Government Units and other partners seeking effective solutions to local water quality or quantity problems. To find out more about cost-share programs, review the VRWJPO's project funding policy posted on the website. Projects constructed and planned in 2022 included:

Sediment Basin Cleanout at Almquist family farm

The Almquist family farm in Ravenna Township has sediment control basins on their property designed to keep sediment out of the lower Vermillion River. These basins were designed and constructed in the late 1960s and had filled with sediment to a level where they had limited function. VRWJPO and Dakota County SWCD staff agreed that a cleanout of both basins would be beneficial to their overall efforts, as some capacity in the basins can be restored to capture sediment and slow higher runoff flows that could cause erosion of the channels downstream.

The repair project consisted of some tree removal to access the sites, excavating the basin pools, repairing an emergency spillway to the downstream channel, and seeding native vegetation for continued erosion control. This complements VRWJPO's other efforts in Ravenna Township to decrease turbidity in the lower Vermillion River. A Watershed-Based Implementation Fund (WBIF) grant from BWSR contributed to this project, which is estimated to reduce total suspended solids (TSS) pollution by 5.5 tons/year and reduce volume by 6.2 acre-feet/year.

North Creek at Highview Channel Stabilization

The North Creek Vermillion River subwatershed has seen lots of development over several decades, and unfortunately significant erosion of North Creek has come with it. The erosion has resulted in the formation of cut banks along the creek that are six to eight feet high. This section of the channel runs through a wetland where dark organic soils are present, which is different than many areas of Lakeville that often have sandy loam or sandy clay loam soils. The organic wetland soils are easily erodible from the channel. Erosion is delivering sediment downstream along with excess associated nutrients.

To address the problem, the VRWJPO, the City of Lakeville, and Dakota County will repair an eroded reach of North Creek between Highview Ave. and Cedar Ave., located entirely on City of Lakeville property. The project will consist of riprap check dams, streambank stabilization, and removal of accumulated sediment that has excessively deposited downstream over time. This results in a healthier North Creek and Vermillion River, a regionally significant resource for recreation and public use, as well as decreasing high-water levels and flood risk to community members. The channel improvements are estimated to reduce TSS pollution by 147 tons/year and total phosphorus (TP) by 89 lbs/year. A WBIF grant makes this project possible.

Direct Drainage Assessment in Farmington

A WBIF grant tasks the Vermillion River Watershed Joint Powers Organization (VRWJPO) and its partners with reviewing Farmington's storm sewer systems and identifying opportunities for storage and/or treatment of untreated/under-treated stormwater flows to the Vermillion River. Core downtowns and surrounding areas of many cities within the region were primarily developed before stormwater management's evolution into modern best management practices.

The City of Farmington is collaborating with VRWJPO to produce feasibility study reports on this subject. Reports like this help us develop projects that have truer timelines for implementation, better cost estimates, and refined water quality improvement estimates, which ultimately can lead to more effective capital improvement projects and greater environmental benefits.

East Lake Habitat Improvements

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 good-quality, contiguous

habitat corridor. The City of Lakeville and the VRWJPO have been monitoring East Lake and its surroundings to inform habitat improvement projects.

In 2021, the City completed a habitat assessment and identified needs to continue restoring portions of East Lake Community Park. The restoration will include forest and oak savanna habitat and shoreline buffer improvements. The VRWJPO and the City plan to remove terrestrial invasive species and restore the shoreline through native plantings, with the support of a Conservation Partners Legacy (CPL) grant from the DNR. As part of an existing Greenway hub, East Lake is connected to downstream habitat along North Creek. A component of Dakota County's Greenway initiative is to provide hubs of critical habitat within the county and connect them via corridors of trails and protected areas. Improvements to East Lake leverage this corridor and will have direct positive impacts on habitat and wildlife within the hub, as well as improving recreational experiences for people visiting.

Conservation Corps projects

Over the summer, VRWJPO and Dakota County SWCD collaborated with the Conservation Corps of Minnesota and Iowa (CCMI) to plant trees along North Creek in Farmington and remove tree and branch snags from the Vermillion River in Empire.

The North Creek planting included swamp white oak, red maple, silver maple, and river birch trees along the channel near 195th St. and Deerbrooke Path.

The snag clearing took place in Empire Park, over a 3,000-foot stretch to restore river flow and improve dissolved oxygen. Crews also installed cedar tree revetments to stabilize eroded banks.

Dakota County SWCD Cost-Share Programs

VRWJPO provided funding to the Dakota County SWCD for their Conservation Initiative Funding and Incentive Payment Practice Programs. The projects from 2022 are listed below.

*May include other funding besides from VRWJPO. Technical Assistance costs are not included.

Project	Practice Installed	Location	Cost-Share Amount*	Landowner Contribution	Pollutant Reduction/Year
Rosemount Jaycee Park	Bioretention Basin	Rosemount	\$32,734.35	\$5,776.65	1.43 lbs phosphorus (P) 0.22 tons soil saved

Project	Practice Installed	Location	Cost-Share Amount*	Landowner Contribution	Pollutant Reduction/Year
Tom Bergum	Streambank Stabilization	Lakeville	\$4,371.72	\$771.48	1.5 lbs P 1.5 tons soil saved
Sarah Bridges	Grassed Waterway	Eureka Township	\$19,440	\$6,560	126.94 lbs P 110.38 tons soil saved
Pat Maher	Cover Crops	Marshan Township	\$2,500	\$0	11.21 lbs P 294.8 lbs nitrogen (N) 40.2 tons soil saved
Greg Fox	Cover Crops	Rosemount	\$625	\$0	11.83 lbs P 55 lbs N 57.5 tons soil saved
Don Peterson	Cover Crops	Marshan Township	\$2,500	\$0	3.59 lbs P 2,428.8 lbs N 12.65 tons soil saved
Greg Fox	Cover Crops	Rosemount	\$1,000	\$0	6.12 lbs P 384 lbs N 80 tons soil saved

Project	Practice Installed	Location	Cost-Share Amount*	Landowner Contribution	Pollutant Reduction/Year
Dana Groh	Native Prairie Restoration	Ravenna Township	\$12,000	\$3,600	0.09 lb P 0.09 tons soil saved
Al Storlie	Water & Sediment Control Basins	Eureka Township	\$20,404	\$3,601	111.88 lbs P 223.76 tons soil saved
Jim Perry	Water & Sediment Control Basin	Castle Rock Township	\$15,880.55	\$2,802.45	9.12 lbs P 18.23 tons soil saved

Coordination and Collaboration

In cooperation with groups, the VRWJPO works to amplify mutual efforts, leverage resources, instill consistency, share knowledge and expertise, and make each public dollar go further in achieving water quality, quantity, and safety goals.

We Are Water Minnesota

Dakota County hosted the We Are Water Minnesota exhibit (Figure 16) from October-December 2022 at the Pleasant Hill Library in Hastings and Lebanon Hills Regional Park Visitor Center in Eagan. VRWJPO staff Brita Moore-Kutz and Paula Liepold, along with Dakota County Environmental Resources, Soil and Water Conservation District, Parks, Libraries, and Communications staff, spent many hours planning for the exhibit, with support from the Minnesota Humanities Center, Minnesota Pollution Control Agency, and other state agencies.



Figure 16. Part of the We Are Water MN Exhibit at Pleasant Hill Library, Hastings.

The traveling exhibit consists of several components discussing the meaning of water in our state and county and the difficulties it's facing, like impaired waterbodies and drinking water safety. It also highlights personal stories about water from people in the local area hosting the exhibit. We recruited docents, or volunteer guides, to help support the exhibit at the library. Guests could take home water-themed coloring booklets (art by Indigenous artist Robert DesJarlait) and We Are Water pins.

In addition to setting up the physical exhibits, we hosted numerous educational and stewardship events and activities:

- May 24: The Ways Water Moves workshop for students at Pilot Knob STEM School
- May 25: Smart Salting for Local Leaders workshop, virtual
- Aug. 3: Water Story Sharing workshop, virtual
- Aug. 9: Writing with Water workshop, virtual
- Aug. 8-14: Dakota County Fair Water Bar Exhibit
- October: Story Trail We Are Water Protectors, parks around Dakota County
- Oct. 13 Dec. 5: Exhibit hosted at Pleasant Hill Library and Lebanon Hills Regional Park Visitor Center
- Oct. 13: Opening ceremony at Pleasant Hill, featuring remarks from JPB Chair Mike Slavik and the Water Bar
- Oct. 15: Protecting the Waters Indigenous Panel, Galaxie Library, Apple Valley
- Oct. 20 and Nov. 17: City of Hastings Drinking Water Treatment Plant Tour
- Oct. 21: City of Lakeville Drinking Water Treatment Plant Tour

- Oct. 25, Nov. 2, Nov. 3: Water Storytelling and Collage Workshop, at Pleasant Hill, Wescott, and Burnhaven libraries
- Oct. 27: Nitrate Testing Clinic for private well owners, with the Water Bar, Pleasant Hill Library
- Nov. 25: Opt Outside Day, Lebanon Hills Regional Park

Dakota County was allowed to keep the parts of the exhibits customized to our location. Look for future appearances at local events.

Adopt-a-Drain

In 2022, VRWJPO continued its membership in the Metro Watershed Partners, a coalition of Twin Citiesarea watershed organizations, cities, and interest groups providing water stewardship messages to the public. It is based out of Hamline University's Center for Global Environmental Education. Its well-known Adopt-a-Drain program encourages people to "adopt" storm drains in their area by keeping them clear of leaves, grass, trash, and other things that don't belong in our waterways. 10,361 participants have adopted more than 19,000 storm drains in Minnesota. This has resulted in nearly 460,000 pounds of debris collected and reported on the Adopt-a-Drain website. In the Vermillion River Watershed in 2022, 99 new drains were adopted by 53 new participants, who kept a reported 744.5 pounds of debris out of our waterbodies. A total of 239 participants have adopted 458 drains.



Figure 17. WHEP volunteers.

Wetland Health Evaluation Program (WHEP)

The Wetland Health Evaluation Program (WHEP), engages citizen volunteers to monitor wetlands in their communities. While VRWJPO did not provide direct financial support to the program in 2022, we continue to encourage residents to participate. The program turns volunteers into citizen scientists and is an excellent opportunity for environmental education and natural resource information gathering. Five teams with 61 WHEP volunteers monitored 17 different wetlands in the Vermillion River Watershed.

Apple Valley

• Hidden Valley (AV-1)

- Alimagnet Park Ridgeview Drive Parking Lot Wetland (AV-10)
- Everest Pond (AV-12)
- Sunset Park Pond (AV-18) (pictured)

Farmington

- Kral Pond (F-3)
- Autumn Glen (F-7)
- Cambodia Ave (F-9)

Hastings

- Stonegate Treated (H-4)
- Lake Rebecca (H-6)
- 180th Street Marsh
- Cari Park Pond (H-57)

Lakeville

• DNR #393 (L-8)

Rosemount

- Kelly Marsh (R-1)
- CR-38 Mitigation Site 1 (R-21)
- CR-38 Mitigation Site 2 (R-23)
- Erickson Pond (R-26)

Number of volunteers on each team: Apple Valley (16), Farmington (8), Hastings (12), Lakeville (12), and Rosemount (13). Annual reports are posted on the WHEP website, <u>www.mnwhep.org</u>.

Minnesota Water Stewards

The Minnesota Water Stewards (MWS) program invites residents to become leaders protecting local waterways from pollution and educating their neighbors on clean water issues. The MWS program provides training and opportunities for stewards to build projects in their neighborhoods to prevent polluted stormwater from entering lakes or streams.

In 2022, we supported one Steward, Kayla Boettcher of Eagan. VRWJPO accepted Kayla because the City of Eagan is no longer funding new Stewards. 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 2022 and will construct a raingarden in Farmington as her Capstone. Stewards volunteer 50 hours per year to maintain their certification. MWS is coordinated by the non-profit Freshwater.

Metro Children's Water Festival

Dakota County staff took 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 successfully back in-person in 2022 for a limited number of schools, with the virtual option still available for everyone. Both in-person and virtual options will be available in 2023 as well for fourth-grade students.

Fiscal Year 2022-23 Watershed-Based Implementation Funding

The Minnesota Board of Water and Soil Resources (BWSR) had \$673,000 in Watershed-Based Implementation Funding (WBIF) allocated for activities within the Vermillion River Watershed. Staff from the VRWJPO facilitated meetings with local government units to discuss activities to allocate funding to and how to prioritize projects if funding requests exceeded the available amount. The resulting facilitation resulted in the compilation, evaluation, and submittal of funding requests for the following activities in the watershed:

- City of Lakeville: Middle Creek at Dodd Boulevard Stream Channel Improvement
- Dakota County Soil and Water Conservation District (DCSWCD): Lower Mainstem Vermillion River Subwatershed Assessment
- DCSWCD: Agricultural BMPs in Subwatersheds with Completed Subwatershed Assessments
- DCSWCD: Targeted Nitrate Reduction Practices
- DCSWCD: Irrigation Water Management Efforts
- DCSWCD: Targeted Outreach on Groundwater Practices
- Apple Valley: Stormwater Pond EVR-P11 Enhancements
- VRWJPO: Alimagnet Lake Alum Treatment Feasibility Study

Low-Input Turfgrass Program

VRWJPO staff had discussions with the BWSR, the University of Minnesota turf experts, and other local partners about the possibility of a local program that would work to convert traditional turfgrass to low-input turfgrass that requires less water, inputs, and maintenance. The focus of program would be to provide options to landowners who wish to convert their traditional turf grass yard to a low-input turf grass with the end goal being lower use of groundwater and other benefits. Discussions occurred between stakeholders regarding seed/sod availability, consistent seed mixes, state-approved seed mixes, environmental benefits, outside funding sources, and other details. The VRWJPO desires to eventually roll out a program for implementation, perhaps as a pilot project to gauge interest from residents.

Public Communications and Outreach

Communicating the value of water is an essential part of the VRWJPO's mission, and in recent years, civic engagement has taken on greater importance in watershed processes. Among the outreach and communication programs wholly or partially funded by the VRWJPO in 2022 were:

Landscaping for Clean Water Workshops

Once again, VRWJPO helped fund and promote the Landscaping for Clean Water workshops hosted by the Dakota County SWCD. They continued being held virtually in 2022. Note that these numbers reflect the total participation in LCW unless noted specifically for the Vermillion River Watershed.

- 355 Individuals participated in Introduction Classes (on Zoom or pre-recorded video)
- 93 Individuals participated in Maintenance Workshops (on Zoom or pre-recorded video)
- 176 participants in virtual Design Workshops, including 73 from VRW
- 3 grant rounds with 12-week installation timelines
- 10 raingardens, native gardens & native shoreline plantings installed by VRW residents (39 projects total out of all participants)
- 52 participants received one-on-one assistance virtually

Vermillion River Watch Program

In 2022, the VRWJPO continued support of Dakota County SWCD's work with educators and students at Rosemount and Hastings High Schools to collect macroinvertebrates and habitat data, identify macroinvertebrates, and compare species type and abundance to biological metrics. This is a successful way to interest students in scientific disciplines and engage them in protecting and 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!" It is funded collaboratively by watershed organizations in Scott County, including VRWJPO.

In 2022, SCWEP offered a Lawns to Legumes, native prairie, and two soil health workshops both on the online Zoom platform and in-person. This marked the third year SCWEP hosted an online education platform, which allowed SCWEP to deliver educational tools to Scott County citizens quickly and efficiently.

The workshops were promoted through social media, online blogs, and submissions to local papers and community calendars. Registration for the workshops was made simple by linking an online registration tool, Eventbrite.com, with the SCWEP webinar account.

2022 Workshop attendance:

- 66 participants at the "Growing Healthy Soils Part 1" workshop
- 63 participants at the "Growing Healthy Soils Part 2" workshop
- 29 participants at the "Planting for Pollinators" webinar
- 19 participants at the "Plant Native Prairie" workshop

SCWEP continues to promote information, activities, and relevant news through various print publications available to Scott County citizens. This year SCWEP published 19 water-related articles to the county-wide Scott County SCENE newspaper. In addition, events, informational articles, and workshops continued to be promoted on partner's social media platforms, websites, and other local papers including those a part of SWNewsmedia.

Maintenance Workshops

The VRWJPO annually supports trainings for maintenance professionals on Smart Salting and turfgrass management with financial contributions, event promotion, and staff time. In 2022, trainings included the following:

- March 15 Turfgrass Maintenance, 42 participants
- Sept. 13 Smart Salting Level 1 Roads, 44 participants
- Oct. 20 Smart Salting Level 1 Parking Lots/Sidewalks, 37 participants

Community Events and Outreach (other than We Are Water MN)

The "return to normalcy" after the worst of COVID-19 continued in 2022, with more community events returning. VRWJPO hosted tables at the following:

- Lakeville Friends of the Environment Environmental Resources Fair, March
- Lakeville Earth Day Celebration, April
- Hastings Party in the Park, July
- Dakota County Fair, August
- Lakeville Water Treatment Plant Tour/Imagine a Day Without Water, October

While it's hard to quantify exactly how many people visited the tables, the engagement with VRWJPO was overall quite strong. Staff provided "swag" such as pencils and dog waste pickup bags and used the Pollute or Protect and Enviroscape displays to demonstrate water resource concerns. People also signed up for the VRWJPO e-newsletter at these events.

In addition to community tabling, VRWJPO gave a presentation to the Rosemount Environmental Sustainability Commission in August at the request of City staff and spoke with students in the AP Environmental Science class at Lakeville North High School in November. These presentations highlighted the characteristics of the Vermillion River Watershed environment, the JPO's role in protecting it, and what individuals can do.

Social Media

The VRWJPO continues to maintain its presence on social media. The watershed has been generating original content and sharing news from partners on Instagram, Facebook, and Twitter. Each platform has grown its follower count over the past year. (Figures 18-20)

Top Facebook post:



Performance

Reach (i) Total 2,685 Worst Best	Reactions, commentiTotal44 WorstBest	Results i Total Best
This post reached more Accounts Center accounts than 100% of your 50 most recent Facebook posts and stories.	This post received more reactions, comments and shares than 100% of your 50 most recent Facebook posts and stories.	This post received more link clicks than 92% of your 50 most recent Facebook posts and stories.
Reach 2,685	Reactions 32 Comments 7 Shares 5	Link clicks 1

Figure 18. Top Facebook post of 2022, sharing about the planned opening of We Are Water MN in Dakota County.

Top Instagram post:



Figure 19. Top Instagram post of 2022, a "reel" (short video clip) of the Vermillion Falls in Hastings.

Top Tweet:



Figure 20. The top VRWJPO tweet from 2022 about how the Irrigation Audit program helps save water and money.



Social media account audiences (as of April 2023):

Figure 21. A breakdown of VRWJPO's Facebook and Instagram followers by age, gender, and location.

Twitter does not have the analytical breakdown of follower demographics that Facebook and Instagram do. The account currently has 257 followers. From the data we do have, we can see that VRWJPO gained 33 new followers in 2022.

Publications

The VRWJPO provided an electronic newsletter to interested residents in the watershed twice (Spring and Fall 2022 issues can be found at <u>https://www.vermillionriverwatershed.org/news-</u><u>events/newsletter/</u>) as required by Minn. Rules Part 8410.0100, Subpart 4. Beginning in 2023, the newsletter will be sent quarterly in an effort to shorten the newsletter.

Additionally, VRWJPO publishes fact sheets on its capital improvement projects (<u>https://www.vermillionriverwatershed.org/watershed-management/capital-improvement-projects/</u>) as required by the Clean Water Fund.

2022 Financial Statement

Final Treasurer's Report for year ending December 31, 2022

Expenses				
Category	Budget Amounts	Expenses to Date	Account Balance	
Administration & Operations	\$240,500	\$162,822.85	\$77,677.15	
Research & Planning	\$18,600	\$21,294.88	(\$2,694.88)	
Monitoring & Assessment	\$157,400	\$91,208.42	\$66,191.58	
Public Communications & Outreach	\$166,150	\$161,316.31	\$4,833.69	
Irrigation & Audit	\$20,000	\$40,302.36	(\$20,302.36)	
Regulation	\$55,900	\$31,237.85	\$24,662.15	
Coordination & Collaboration	\$42,600	\$18,839.08	\$23,760.92	
Feasibility/Preliminary Studies	\$220,000	\$98,556.59	\$121,443.41	
Capital Improvement Projects	\$491,850	\$128,390.12	\$363,459.88	
FY2019 – Watershed Funding Grants	\$17,700	\$7,508.10	\$10,191.90	
CWF Grant – Middle Creek Restoration		\$81.06	(\$81.06)	

Expenses				
Category	Budget Amounts	Expenses to Date	Account Balance	
WBIF Grant 2020-2023 North Creek Stabilization	\$387,500		\$387,500	
WBIF Grant 2020-2023 Farmington Direct Drainage	\$30,030		\$30,030	
WBIF Grant 2020-2023 Hastings Direct Drainage	\$30,030		\$30,030	
WBIF Grant 2020-2023 Ravenna Basins Restoration	\$85,000	\$64,005.30	\$20,994.70	
CWF Grant Foxborough TSS	\$203,250	\$284.61	\$202,965.39	
CWF Grant Ravenna Trail	\$297,500	\$121.82	\$297,378.18	
Wetland Bank	\$117,216	\$500	\$116,716	
VRWJPO Revised Budget Expense TOTAL	\$2,581,226	\$826,469.35	\$1,754,756.65	

Budget Funding Sources		
Scott County Levy	\$32,500	
Dakota County Levy	\$967,500	

Budget Funding Sources			
Expected 2019 Carryover (Fund Balance)	\$686,000		
Special Use Permit	\$1,000		
CWF Grant (BWSR)	\$420,750		
2020-2023 CWF Grant WBIF (BWSR)	\$243,600		
CIP Reserve	\$246,000		
CIP Reserve Grant Match	\$84,000		
Investment earnings	\$12,000		
Total Revenues	\$2,693,350		

2023 Work Plan and Activities

Watershed Plan Category	Budget Items	Budget Amount
	Dakota County VRW staff	\$180,500
	Scott County VRW staff	\$15,000
	Other Dakota County staff time	\$12,000
Administration and Operations	Legal support	\$25,000
Administration and Operations	Miscellaneous Expenses (per diems, mileage, postage, etc.)	\$6,000
	Training, conferences, and certifications	\$2,000
	Subtotal Administration	\$240,500

Watershed Plan Category	Budget Items	Budget Amount
Research and Planning	Dakota County SWCD Incentive Program Policy Assistance	\$1,600
	Scott County Staff	\$5,000
	VRW staff	\$35,000
	Subtotal Research and Planning	\$41,600
Monitoring and Assessment	Vermillion River Monitoring Network in Dakota County	
	A. Staff time for sample collection, equipment installation, maintenance	\$39,000
	 B. Data analysis, database management, data reporting, FLUX modeling 	\$17,000
	C. Water Quality Sample Analysis and QA/QC samples	\$19,000
	D. Equipment and Supplies	\$8,000
	Vermillion River Monitoring Network in Scott County	\$9,300
	USGS cost-share for Blaine Ave. Station	\$8,900
	DNR flow-gaging assistance	\$9,700

Watershed Plan Category	Budget Items	Budget Amount
	Biological and Habitat Assessments	\$7,000
	Electrofishing	\$16,000
	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	\$156,900
	Communication and Outreach staff	\$100,000
	Vermillion River Watch program	\$6,000
	Scott County outreach efforts	\$2,000
Public Communications and Outreach	Vermillion River Watershed projects signage and map updates	\$5,000
	Newsletter, mailings, website, general communication materials	\$10,000
	Landscaping for Clean Water Workshop (Dakota SWCD)	\$30,400

Watershed Plan Category	Budget Items	Budget Amount
	K-12 classroom presentations (Dakota SWCD)	\$4,000
	Watershed Tours	\$2,000
	Local standards/ordinance and turf/salt workshops	\$3,500
	Subtotal Public Communications and Outreach	\$167,900
Regulation	Scott SWCD assistance with plan review	\$900
	Engineering assistance and review	\$35,000
	VRW staff local program assistance	\$20,000
	Subtotal Regulation	\$55,900
Coordination and Collaboration	Coordination VRW staff	\$40,000
	Metro Children's Water Festival support	\$600
	Metro Watershed Partners membership (incl. Adopt-a- Drain)	\$5,000
	Minnesota Water Stewards	\$5,000
	Subtotal Coordination and Collaboration	\$50,600

Watershed Plan Category	Budget Items	Budget Amount
Land & Water Treatment: Capital Improvement Projects	Cost-share programs in Dakota County (SWCD)	\$80,000
	Cost-share programs in Scott County (SWCD)	\$30,750
	WBIF Match	\$15,170
	Cost-share	\$250,000
	Subtotal Capital Improvement Projects	\$375,920
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
	Improvements	\$180,000
	Subtotal Feasibility/Preliminary Studies	\$220,000
Land & Water Treatment: Irrigation Audit and Cost Share Program	Irrigation audits	\$10,000
	Irrigation cost-share	\$10,000
	Subtotal Irrigation Audit and Cost-Share	\$20,000

Watershed Plan Category	Budget Items	Budget Amount
Land & Water Treatment: 2020- 2023 Watershed-Based Implementation Fund (WBIF) Grant (BWSR) North Creek	North Creek stabilization	\$337,500
	VRWJPO cash match	\$50,000
	Subtotal 2020-2023 WBIF Grant North Creek Stabilization	\$387,500
Land & Water Treatment: 2020- 2023 WBIF Grant Farmington	Farmington Direct Drainage Assessment	\$26,700
	VRWJPO cash match	\$3,330
	Subtotal 2020-2023 WBIF Grant Farmington	\$30,030
	Hastings Direct Drainage Assessment	\$26,700
Land & Water Treatment: 2020- 2023 WBIF Grant Hastings Direct	VRWJPO cash match	\$3,330
Direct	Subtotal 2020-2023 WBIF Grant Hastings Direct	\$30,030
Land & Water Treatment: 2022- 2025 CPL Grant East Lake Habitat	East Lake Habitat Improvement	\$90,000
	VRWJPO in-kind match	\$3,000
	Subtotal 2022-2025 CPL Grant East Lake Habitat	\$93,000
Land & Water Treatment: 2022 Clean Water Fund Competitive Grant	Foxborough Park TSS project	\$346,500
	VRWJPO Cash Match	\$30,000
	Subtotal Clean Water Fund Competitive Grant	\$376,500

Watershed Plan Category	Budget Items	Budget Amount
Land & Water Treatment: 2022 Clean Water Fund Competitive Grant Ravenna	Ravenna Trail Ravine Stabilization	\$495,000
	VRWJPO Cash Match	\$50,000
	Subtotal CWF Competitive Grant Ravenna	\$545,000
Land & Water Treatment: 2022- 2023 WBIF Grant Middle Creek	Middle Creek at Dodd Blvd Stream Restoration	\$360,000
	VRWJPO in-kind	\$3,000
	Subtotal WBIF Grant Middle Creek	\$363,000
Land & Water Treatment: 2022- 2025 WBIF Grant Alimagnet	Alimagnet Lake Alum Treatment Feasibility Study	\$36,000
	VRWJPO Cash Match	\$9,000
	Subtotal 2022-2025 WBIF Grant Alimagnet	\$45,000
Land & Water Treatment: 2023 CWF Competitive Grant East Lake	East Lake Fish Barrier & Rough Fish Removal	\$300,000
	VRWJPO Cash Match	\$37,500
	Subtotal CWF Competitive Grant East Lake	\$337,500
Land & Water Treatment: CWF WBIF Grant	WBIF Grant Admin	\$12,000
	Subtotal WBIF Grant Admin	\$12,000

Watershed Plan Category	Budget Items	Budget Amount
Land & Water Treatment: Wetland Bank	Wetland Bank Restoration Funds Reserve	\$189,800
	Subtotal Wetland Bank Restoration Funds	\$189,800
	Subtotal of Expenditures	\$3,750,680
	Cash Reserve	\$216,070
	TOTAL Annual Expenses	\$3,966,750

Appendix A: 2022 Resolutions of the Joint Powers Board

January 27, 2022

Resolution Number VRW 22-00: Election of Officers

VRW 22-01: Approval of Consent Agenda

VRW 22-02: Approval of Expenses

February 24, 2022

VRW 22-03: Approval of Consent Agenda

VRW 22-04: Approval of Expenses

April 28, 2022

VRW 22-05: Approval of Consent Agenda

VRW 22-06: Approval of Expenses

VRW 22-07: Approval of proposed amendments to the VRWJPO 2022 Budget

VRW 22-08: Authorization to submit 2021 VRWJPO Annual Activity Report and Financial Statement to BWSR

VRW 22-09: Delegation of a Limited Authority for Contracts and Purchase Agreements to the VRWJPO Administrator and Co-administrator

June 23, 2022

VRW 22-10: Approval of Consent Agenda

VRW 22-11: Approval of Expenses

VRW 22-12: Approval to Award Contract to Minnesota Dirt Works for Almquist Sediment Basin

July 28, 2022

VRW 22-13: Approval of Consent Agenda

VRW 22-14: Approval of Expenses

VRW 22-15: Authorization to Release VRWJPO Watershed Management Plan Amendment to Plan Review Authorities for 30-day review and comment period

August 25, 2022

VRW 22-16: Approval of Consent Agenda

VRW 22-17: Approval of Expenses

VRW 22-18: Close of public hearing on draft VRWJPO 2023 Budget and Watershed Management Tax District Levy

VRW 22-19: Adoption of draft VRWJPO 2023 Budget and Watershed Management Tax District Levy

September 22, 2022

VRW 22-20: Approval of Consent Agenda

VRW 22-21: Approval of Expenses

VRW 22-22: Close of public hearing to receive comments on Amendment to the Vermillion River Watershed Management Plan Implementation Section

VRW 22-23: Adoption of the Amendment to the Vermillion River Watershed Management Plan Implementation Section

VRW 22-24: Candidate consideration and appointment to the WPC

October 27, 2022

VRW 22-: Approval of Consent Agenda

December 1, 2022

VRW 22-25: Approval of Consent Agenda

VRW 22-26: Approval of Expenses

VRW 22-27: Adoption of VRWJPO 2023 Budget and Watershed Management Tax District Levy