

2022 Annual Report

for the

Clearwater River Watershed District

Clearwater River Watershed District

93 Oak Ave S

Annandale, MN 55302

www.crwd.org



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APPENDICES

Appendix A: 2023 Water Quality Monitoring Plan Appendix B: 2023 Plan of Work

| BMP | Best Management Practices |
|------------|--|
| BOD | Biochemical Oxygen Demand |
| BWSR | MN Board of Water & Soil Resources cfs cubic feet per second |
| CFU/100 mL | colony forming units per 100 milliliters |
| Chl-a | Chlorophyll-a |
| CREP | Conservation Reserve Enhancement Program |
| CRWD | Clearwater River Watershed District |
| CWP | Clean Water Partnership District Clearwater River Watershed District |
| DO | Dissolved Oxygen |
| EPA | Environmental Protection Agency |
| lbs | Pounds |
| MDNR | Minnesota Department of Natural Resources |
| MPCA | Minnesota Pollution Control Agency |
| µg/L | micrograms per liter |
| mg/L | milligrams per liter |
| NCHF | North Central Hardwood Forest |
| OP | Ortho-Phosphorus |
| RIM | Reinvest in Minnesota |
| SOD | Sediment Oxygen Demand |
| TMDL | Total Maximum Daily Load |
| TP | Total Phosphorus |
| TSS | Total Suspended Solids |
| WMP | Watershed Management Plan |

This report was prepared for the Clearwater River Watershed District (CRWD) to provide a progress report of Watershed Management Plan (WMP) Implementation activities in the District. The report summarizes 2022 hydrologic, hydraulic and water quality monitoring data and provides an analysis of progress towards goals in the context of the District's watershed management activities.

In 2021, the CRWD's next generation Comprehensive Watershed Plan was accepted by Board of Water and Soil Resources and adopted by the Board of Managers. This Plan encompasses the years 2021-2030.

In 2022 the District accomplished the following:

- Coordinated with Clearwater Lake Property Owner's Association, residents on Grass Lake, the DNR and Stearns and Wright Counties to manage bogs in Clearwater and Grass Lake. Staff coordinated contracting made progress on securing a perpetual easement for the removal of future bogs. Field staff surveyed the Clearwater River channel downstream of Grass Lake for the presence of bogs. Staff and Board Members coordinated with residents to re-write the District's Bog Policy to reflect the current Lake Association member preferences as to Project operation.
- Fielded a high call volume about hydrology, flooding, drought, dam operation, bogs and shoreline erosion during a year where the District went from flood conditions to drought conditions in a matter of a month.
- Coordinated with residents and the DNR to survey the channel between Turtle Bay and Clearwater River and provide alternatives to residents seeking to remove sediment from the channel.
- Began work on the restoration of Clear Lake in Meeker County.
- Continued to monitor water quality, hydrology, and hydraulics to track water quality trends and the effectiveness of existing management strategies. These actions help to improve efficiency of implementation of projects.
- Invested significant staff time participating in the early phases of the Upper Mississippi 1W1P planning effort including staff support for preparation of the RFP for consulting services, the workplan, and a memorandum of agreement between entities.
- Participated in the WRAPS project for the Upper Mississippi River.
- Conducted annual project inspections.
- Began maintenance on existing projects as noted in annual project inspections.
- Continued education and outreach efforts including conducting 5 CAC meetings.

Significant hydrologic, hydraulic and water quality findings in this report include the following:

- 1. The MPCA has delisted Augusta and Union Lakes from the Impaired Waters List.
- 2. Annual precipitation was below average, ranging from 26.55 to 29.99 inches across the watershed in 2022. The 30-year normals for this region are 30.2-31.74 inches. While this

does not seem like a very low total, most of the precipitation happened with flood conditions in May, followed by drought conditions the most of the rest of the summer.

- 3. Of the 12 lakes monitored in 2022, 4 met the State standard for TP, and 3 for Chl-a. All of which being the downstream-most lakes monitored for the year.
- 4. Most lakes were on the low-end of their historical clarity range in comparison to results in recent years. Field staff attributes part of this to sampling during rain events in May and very windy and wavy events in July.
- 5. Swartout Lake exceeded it's historical maximum TP record at 556 ug/L. The previous maximum value recorded was 438 ug/L.

Information on the status of existing CRWD projects and water quality in the District can be found online at http://www.crwd.org/

1.1 MISSION STATEMENT

The District's mission is to promote, preserve and protect water and natural resources within the boundaries of the District in order to maintain property values, recreation opportunities, and quality of life.

1.2 DISTRICT HISTORY

The area encompassed by the CRWD is rich in soil and water resources. The presence of those resources has encouraged the growth of two economic mainstays in this Central Minnesota territory – farming and tourism. Around these basics have grown the communities that support their needs. As population and industry grow, those priceless resources, which we often take for granted, may deteriorate.

In the 1960s and early 1970s, those who fished and enjoyed the waters of the Clearwater River Chain of Lakes began to experience a decrease in the clarity of those waters, an increase in the number of rough fish (bullheads and carp), and an increase in the growth of algae on the surface of the water. Property owners sought new tests from scientists interested in water quality. Those tests revealed that the nutrient content of the water had increased substantially since 1946. In fact, the level of phosphorus coming into the Clearwater Lake was at a rate almost double the rate considered damaging.

The lakes through which the Clearwater River flowed were aging much too quickly. That process, which is a natural phenomenon called "eutrophication," was being helped along at an alarming rate via pollution entering the river system from cities, farmland, private property, and industry.

Further reports concluded that the rate of phosphorus input could be reduced by as much as 50% if the cities of Watkins, Kimball, and Annandale, and the Modern Craftsmen's Milk Association of Watkins installed on-land waste treatment systems instead of discharging sewage and industrial effluents into the Clearwater River and Warner Creek. In addition, if the phosphorus input from all non-point sources (such as septic tanks, agricultural wastes, storm water runoff, and soil erosion) could be significantly reduced, water quality in the watershed could be restored to an acceptable level.

After a lengthy series of meetings and legal research, those concerned concluded that only a watershed district, with its powers of enforcement and its abilities to assess and to obtain federal and state funding, could tackle the pollution problem in the Chain of Lakes. The CRWD was the culmination of years of hard work and the beginning of many more years of work aimed at undoing some of the damage done over a long period of time to one of our most important resources – our lakes and streams.

The CRWD was established as a unit of local government on April 9, 1975, through citizen petition by order of the Minnesota Water Resources Board, acting under authority of Chapter

112, MWA (the Minnesota Watershed Act). Though the original thrust of the CRWD and its fivemember Board of Managers was the improvement of water quality in the Clearwater River Chain of Lakes, its scope has grown into a complete program of water management within its boundaries.

| Physical Address | 93 Oak Ave S, Suite 5 Annandale, MN 55302 |
|------------------------|--|
| Mailing Address | 3235 Fernbrook Ln N Plymouth, MN 55447 |
| Website | www.crwd.org |
| Email, Phone | admin@crwd.org, (320)274-3935 |
| Office Hours | By appointment in office, by phone during business hours |
| Board Meeting Schedule | Regular meetings are held monthly on the 3 rd Wednesday at 6:00pm at the District's office in Annandale, MN. Special meetings are called on an as-needed basis. Due to COVID-19, meetings are also available via Zoom. The link to join meetings is posted on the District website. |

1.3 DISTRICT INFORMATION

The current Board members and staff are listed on the District's website.

1.4 MONITORING & REPORT OBJECTIVES

The Clearwater River Watershed District's (CRWD's) ongoing monitoring program– started in 1980- is critical to track long term water quality and hydrologic trends. This report summarizes data to evaluate progress towards water quality goals through program/ project implementation. This allows the CRWD to optimize costs and benefits of natural resource protection programs within the District. The 2021 monitoring plan is summarized in Appendix A, monitoring locations and impaired waters are summarized in Figure 1-1.

The objectives of the Water Quality Monitoring and Watershed Management Plan Implementation Status program are:

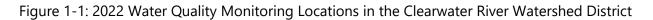
1. Track progress towards water quality goals for impaired waters by:

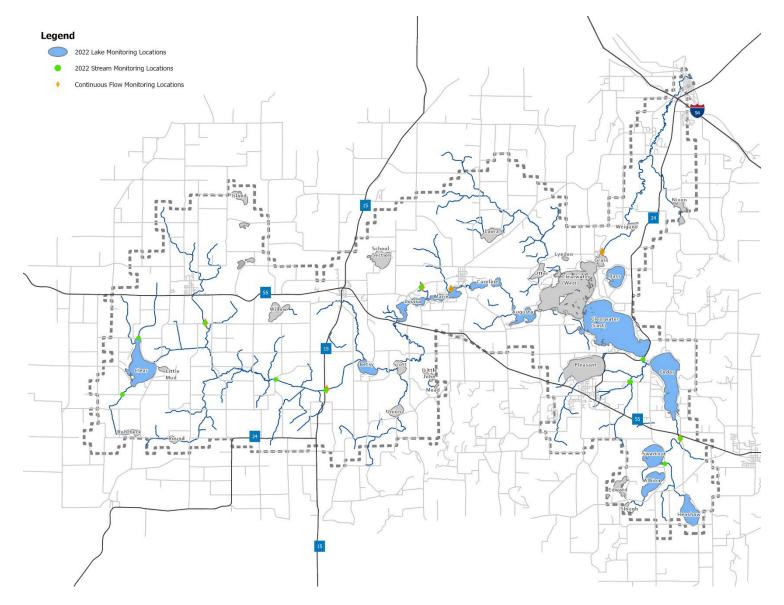
- a) Measuring water quality trends in lakes and streams and pollutant loads.
- b) Tracking programs and projects implemented.
- c) Evaluating water quality in the context of programs/ projects implemented.
- 2. Fill data gaps identified in the TMDLs.

3. Continue to provide baseline water quality data and calibration data sets to refine TMDL load reductions.

4. Track long-term trends in all CRWD waters monitored ensuring early detection of declining trends. The appendices summarize historical lake water quality data.

5. Provide recommendations for ongoing programs, projects and watershed management strategies based on data.

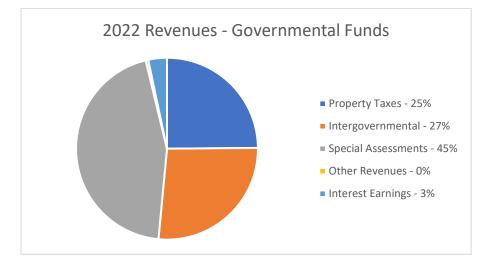




| 2022 Revenues - Governmental Funds | | | | | | | | |
|------------------------------------|-----------|-------------------|---------------------|---------------------------|-----------------|-----------------------------------|-----------|--|
| | General | Chain of Lakes | Data Acquisition | Clear Lake Restoration | Debt Service | Nonmajor Governmental Funds | | |
| Property Taxes - 25% | \$247,507 | | \$388 | | | | \$247,895 | |
| Intergovernmental - 27% | \$3,065 | | | \$180,500 | | \$81,916 | \$265,481 | |
| Special Assessments - 45% | \$7,789 | \$184,322 | | | \$50,189 | \$203,549 | \$445,849 | |
| Other Revenues - 0% | \$192 | \$52 | | \$2,000 | | \$2,265 | \$4,509 | |
| Interest Earnings - 3% | \$11,902 | \$8,172 | \$53 | \$2,309 | \$2,366 | \$8,244 | \$33,046 | |
| TOTALS | \$270,455 | \$192,546 | \$441 | \$184,809 | \$52,555 | \$295,974 | \$996,780 | |

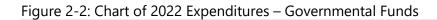
Table 2-1: 2022 Revenues – Governmental Funds

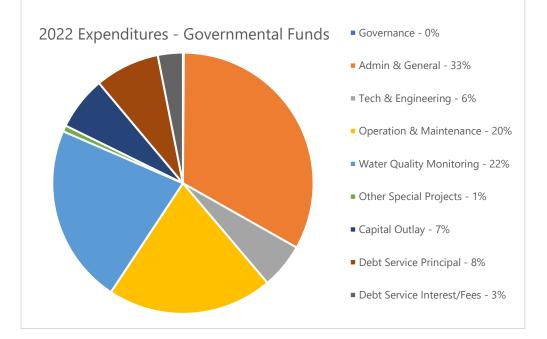
Figure 2-2: Chart of 2022 Revenues - Governmental Funds



| Expenditures - Governmental Funds | | | | | | | | |
|-----------------------------------|-----------|----------|-------------|-------------|----------|--------------|-----------|--|
| | | Chain | | | | Nonmajor | | |
| | | of | Data | Clear Lake | Debt | Governmental | | |
| | General | Lakes | Acquisition | Restoration | Service | Funds | | |
| Governance - 0% | \$623 | | | | | | \$623 | |
| Admin & General - 33% | \$146,194 | \$11,096 | \$1,950 | | | \$24,895 | \$184,135 | |
| Tech & Engineering - 6% | \$2,877 | \$10,161 | | \$14,217 | | \$4,001 | \$31,256 | |
| Operation & Maintenance - | | | | | | | | |
| 20% | \$2,532 | \$5,299 | | \$483 | | \$105,722 | \$114,036 | |
| Water Quality Monitoring - | | | | | | | | |
| 22% | \$730 | \$31,958 | \$83,780 | | | \$7,163 | \$123,631 | |
| Other Special Projects - 1% | \$4,209 | | | | | | \$4,209 | |
| Capital Outlay - 7% | | | \$13,365 | | | \$23,509 | \$36,874 | |
| Debt Service Principal - 8% | | | | | \$44,586 | | \$44,586 | |
| Debt Service Interest/Fees - 3% | | | | | \$17,229 | | \$17,229 | |
| TOTALS | \$157,165 | \$58,514 | \$99,095 | \$14,700 | \$61,815 | \$165,290 | \$556,579 | |

Table 2-2: 2022 Expenditures – Governmental Funds





Status of CRWD Projects and Programs

The CRWD Watershed Management Plan (WMP) identifies the upper watershed (upstream of Lake Betsy) as the highest priority for implementing both capital projects and programmatic BMPs. Because of the flow-through nature of the Clearwater Chain of Lakes, water quality in upper watershed lakes like Clear Lake and Lake Betsy is the primary driver of water quality in downstream lakes like Clearwater Lake. Nutrient loads from upper watershed lakes and their tributary watersheds drive impairments in lakes further downstream. Clear Lake, Lake Betsy, and the tributary watersheds are targeted for intensive BMPs to not only improve water quality in those lakes, but to also reduce the load to downstream water bodies. All lakes will eventually be targeted, but the greatest impact will be achieved for the lowest cost by initially focusing the efforts on improvements in the upstream end of the District and working downstream.

3.1 PROCESS

The CRWD WMP is specific in its focus: implement the identified projects and programs in high priority geographical areas. The District makes annual adjustments to further focus and refine management activities. The Board and staff review this report, compare findings to the WMP, and then prioritize projects and programs. They typically select one-three projects and programs to focus on in the coming year. The annual planning is based on remaining programs and projects identified in the Plan, water quality monitoring findings as well as other opportunistic projects identified during the year. This on-going strategic planning keeps the CRWD focused and efficient.

3.2 YEARLY SUMMARY OF PROGRESS | STATUS OF PROJECTS AND PROGRAMS

The following section summarizes year by year strategy as well as programs and projects undertaken for the past 5 years. 2018-2020 were under the previous Management Plan, 2021 and 2022 are under the current Management Plan:

2018

- Continued to monitor water quality, hydrology, and hydraulics to track water quality trends and the effectiveness of existing management strategies. These actions help to improve efficiencies of implementation of projects.
- Moved implementation of the Nitrogen Mitigation Plan for the Clearwater Harbor, Hidden River Waste Water Treatment System forward.
- Conducted rough fish removal and migration management as necessary.
- Constructed the Watkins Area Stormwater Project.
- Continued enrollment in the alternative tile intake project and recruited project participants to reduce sediment and bacteria load in the upper watershed.
- Completed maintenance on existing projects as noted in annual project inspections.
- Continued education and outreach efforts.

- Conducted the annual strategic planning session in March to evaluate WMP implementation, performed adaptive management and identified additional needs. This includes identifying additional projects and continuing to apply for grant dollars to fund other CRWD projects.
- Continued discussions for update of the 10-year comprehensive plan.

2019

- Secured funding for and constructed the \$2.8 million Nitrogen Mitigation System for the Clearwater Harbor, Hidden River Waste Water Treatment System forward including initiating the Project.
- Worked through staff transitions, changed office locations and Comprehensive Planning for the next 10 years.
- Continued to monitor water quality, hydrology, and hydraulics to track water quality trends and the effectiveness of existing management strategies. These actions help to improve efficiencies of implementation of projects.
- Completed maintenance on existing projects as noted in annual project inspections.
- Continued education and outreach efforts including an update of the Districts Web Site (in progress).
- Conducted the annual strategic planning session in March to evaluate WMP implementation, performed adaptive management and identified additional needs. This includes identifying additional projects and continuing to apply for grant dollars to fund other CRWD projects.
- Provided \$10,000 in cost share and technical services to support a Wright SWCD project to stabilize a ravine and reduce sediment and nutrient loading to Lake Augusta.
- Stabilized the Pleasant Lake Outlet Channel to reduce sediment and nutrient loading to downstream Clearwater Lake.

2020

- Substantial completion and year 1 system commissioning for the \$2.8 million Nitrogen Mitigation System for the Clearwater Harbor, Hidden River Waste Water Treatment System.
- Completed the 2021-2030 Comprehensive Watershed Management Plan update.
- Continued to monitor water quality, hydrology, and hydraulics to track water quality trends and the effectiveness of existing management strategies. These actions help to improve efficiencies of implementation of projects.
- Continued education and outreach efforts including an update of the Districts Web Site (in progress).
- Conducted the annual strategic planning sessions to evaluate WMP implementation, performed adaptive management and identified additional needs. This includes identifying additional projects and continuing to apply for grant dollars to fund other CRWD projects

- Two District lakes, Augusta and Scott, were removed from the impaired waters list.
- Secured Board of Water and Soil approval for a 10 Year Comprehensive Plan update in April 2021 and was the first District in many years invited to present the plan to the full BWSR Board.
- Implemented maintenance on the following projects:
 - Clear Lake South Weir
 - Swartout Iron Enhanced Sand Filter
 - Highway 55 Project
 - Replacement/ repair of 3 of the 5 Cedar Lake Project Fish Migration Barriers a fourth was replaced in 2020.
- Inspected the following projects:
 - Watkins Stormwater Project
 - Kingston Wetland and Clearwater River Restoration
 - Segner Pond
- Conducted vegetation studies on Swartout Lake and Henshaw Lake
- Approved a request from the Lake Association on Cedar Lake to review and report on 15year 06-01 project progress and set direction for next 15 years for lake resilience
- Secured a grant for the Clear Lake Restoration
- Appointed a new CAC member, and reconvened regular CAC meetings following Covid
- Conducted annual monitoring of lakes and streams and publish report cards
- Coordinated with Stearns SWCD on Theil Creek Restoration
- Cost share for county nutrient and sediment load reduction projects
- Established an ag lime cost share to reduce soluble nutrient export
- Expanded the targeted fertilizer application project to include the entire District to reduce nutrient loading to lakes and streams
- Operated lake outlets, and District projects

2022

- Coordinated with Clearwater Lake Property Owner's Association, residents on Grass Lake, the DNR and Stearns and Wright Counties to manage bogs in Clearwater and Grass Lake. Staff coordinated contracting made progress on securing a perpetual easement for the removal of future bogs. Field staff surveyed the Clearwater River channel downstream of Grass Lake for the presence of bogs. Staff and Board Members coordinated with residents to re-write the District's Bog Policy to reflect the current Lake Association member preferences as to Project operation.
- Fielded a high call volume about hydrology, flooding, drought, dam operation, bogs and shoreline erosion during a year where the District went from flood conditions to drought conditions in a matter of a month.

2021

- Coordinated with residents and the DNR to survey the channel between Turtle Bay and Clearwater River and provide alternatives to residents seeking to remove sediment from the channel.
- Began work on the restoration of Clear Lake in Meeker County.
- Continued to monitor water quality, hydrology, and hydraulics to track water quality trends and the effectiveness of existing management strategies. These actions help to improve efficiency of implementation of projects.
- Invested significant staff time participating in the early phases of the Upper Mississippi 1W1P planning effort including staff support for preparation of the RFP for consulting services, the workplan, and a memorandum of agreement between entities.
- Participated in the WRAPS project for the Upper Mississippi River.
- Conducted annual project inspections.
- Began maintenance on existing projects as noted in annual project inspections.
- Continued education and outreach efforts including conducting 5 CAC meetings.

| Table 3-1: 2022 Summary of Progress | Status of Projects and Programs |
|-------------------------------------|---------------------------------|
|-------------------------------------|---------------------------------|

| Activity | Notes |
|------------------|--|
| Advisory | Per MN Statute 103D, the CRWD Board of Managers has appointed an |
| Committee | advisory committee. More information on the committee, include |
| | meeting minutes, can be found at: <u>https://www.crwd.org/advisory-</u> |
| | committee.html. The committee had quarterly meetings which we held in |
| | January, April, July, and November in 2022. |
| Annual Project | On an annual basis, the CRWD conducts a review of the operational |
| Inspections | status of all projects the CRWD owns, operates and/ or maintains on the |
| | landscape. At a minimum visual inspection of individual project's |
| | components are performed, with more in-depth inspections performed as |
| | warranted. From this, actions items needed to maintain operational |
| | effectiveness are determined. The results of these inspections are |
| | summarized annual in a Project Inspection Report, which serves to |
| | provide an annual status update to the CRWD Board of Managers. A copy |
| | of report can be viewed at: <u>https://www.crwd.org/publications-and-</u> |
| | reports.html. Status of projects and programs that do not physically exist |
| | on the landscape are covered below. |
| Aquatic Invasive | The CRWD has been, from time to time, petitioned to established |
| Species (AIS) | programs for the identification, management and treatment of AIS in |
| Treatment | certain CRWD waters. These programs are funded by special assessments, |
| Programs | and the lake associations on each lake undertake the management of the |
| | treatment programs via agreement with the CRWD; the CRWD acts as a |
| | fiscal agent on all projects. |
| Bog Control | In response to high water levels in the mid-1980s that caused severe |
| Projects | floating bog problems on Augusta, Clearwater, and Grass Lakes, the |

| Education and Outreach Program | downstream of Grass Lake for bogs, and secured a perpetual easement for the removal of future bogs. Program is a collection of activities, events, publications, etc. that fall under various projects and programs of the CRWD. Provides means to: Inform citizens on CRWD activities Encourage involvement and ownership of water-resource issues Discover citizen concerns Establish and test methods Activities completed in 2022 under this program include: Maintained the District's web site (ongoing) |
|--------------------------------------|---|
| | Enhanced social media engagement. Mostly resumed in person meetings when Covid-19 limitations allowed, yet added a zoom attendance option for all meetings which has enhanced attendance and stakeholder participation while reducing costs for consultants to attend meetings in person. Commented on variance and permit requests from Corinna Township, Meeker County, Stearns County and Wright County. |
| Incentive Program | Agricultural Incentives Expanded scope and area of incentive program focused on variable rate fertilizer application and alterative tile intake programs. Added an incentive for ag lime application to bind phosphorus to soils Visit: https://www.crwd.org/incentives.html to learn more about these incentive offerings. |
| Partnerships | Mississippi River (St. Cloud) Watershed WRAPS Collaborated with partners on this project where possible. The CRWD |

| | The District continued to work with 1W1P planning group partners on advancing the regional plan, though determined limiting engagement in this process was better suited to meet state requirements of watershed districts. |
|-------------------------|--|
| Project-specific | Clear Lake |
| | Continued to work with Clear Lake residents to advance a lake restoration project and secure a grant. The grant was authorized late in 2021. |
| Rough Fish | The CRWD continues to implement rough fish management strategies |
| Management | (principally removal and migration barriers) in areas of the CRWD where |
| Program | management funding has been established. CRWD continues to struggle |
| | with area contractors approved for fisheries removal. The District opted |
| | to switch approach and pursue working with Carp Solutions. |
| Water Quality | Conducted water quality and hydrologic monitoring in accordance with |
| Monitoring | recommendations of the WMP throughout the District to monitor project |
| Program | performance and better focus implementation efforts. |

3.3 SUMMARY OF PRIORITY PROJECTS

The CRWD has implemented several major projects to achieve water quality goals; status is shown below.

| Table 3-2: Priority | Implementation | Projects |
|---------------------|----------------|----------|
|---------------------|----------------|----------|

| Project | TP Reduction | Expense | Learn More |
|------------------------|---------------------|-------------|--|
| | (lbs/yr) | | |
| | | Projects Co | mpleted |
| Cedar Lake Restoration | 1,500 | \$295,000 | https://www.crwd.org/cedar-albion-swartout- |
| (06-01 Original) | | | henshaw-project-06-1.html |
| City of Kimball | 244 | \$189,550 | https://www.crwd.org/willow-creek-kimball-phase-i- |
| Stormwater | | | stormwater-retentionreuse-project.html |
| Management (Phase I) | | | |
| Clear Lake Notched | 588 | \$80,000 | https://www.crwd.org/clear-lake-south-notch- |
| Weir | | | weir.html |
| Kingston Wetland | 1,955 | \$589,000 | https://www.crwd.org/kingston-wetland-feasibility- |
| Feasibility Study and | | | study-and-restoration-project.html |
| Wetland Restoration | | | |
| Conservation Corps | TP load | \$65,275 | https://www.crwd.org/clearwater-river-channel- |
| Streambank | reduction | | stabilization-ccm-riparian-project.html |
| Restoration | associated with | | |
| | sediment load | | |
| | reduction | | |
| Cedar Lake Watershed | 1,280 | \$583,000 | https://www.crwd.org/cash-project-06-1-segner- |
| Protection and | | | pond.html |
| Improvement | | | |

| Projects (06-01- | | | |
|---|-------|--|---|
| Modified) GPS Fertilizer | 3,200 | \$437,000 | https://www.crwd.org/targeted-fertilizer-application- |
| Application | 3,200 | \$437,000 | reduction-project.html |
| Expand Education Program | N/A | N/A | Incorporated in grant funded scopes of work are efforts to expand the CRWD's Education/ Outreach programs. The CRWD had a strong relationship with Lake Associations and hosts educational events that primarily target adults. The education program was expanded to include social media outreach as well as school age children in the community. |
| Watkins Area Stormwater Treatment | 796 | \$645,882 | Land was acquired for this project in mid-2000s. An initial grant application for \$351,906 scored highly but was not selected in 2009 due to amount requested. Conducted additional feasibility work and completed another grant application which was not awarded. The District received grant award in 2015 and began design and permitting. Construction was substantially completed in 2017, and finalized in 2018. https://www.crwd.org/watkins-areastormwater- treatment-project.html |
| Clearwater River Restoration & Protection Phase II | TBD | \$144,000 | Source inventory update complete. Design and implementation of best management practices at prioritized locations underway. <u>https://www.crwd.org/clearwater-river-restoration</u> protection-phase-ii-project.html |
| Clearwater Harbor/ Hidden River Nitrogen Mitigation Project | N/A | \$2.8 million | The project is a requirement for the two small community sanitary sewer systems to meet new MPCA regulations for nitrogen. The District is pursuing PSIG funding for the project. Construction was complete in December 2019, and system commissioning continued in 2020. <u>https://www.crwd.org/clearwater-harbor</u> <u>hidden-riverproject-18-1-nitrogen-mitigation</u> <u>analysis-planimplementation.html</u> |
| Alternative Tile Intake | TBD | \$88,000 | A 319 grant to promote the use of alternative tile intakes to reduce sediment, nutrient and bacteria concentrations in the upper watershed. The project, started in 2015, wrapped up in the summer of 2018 with some modifications due to low uptake of the practice. However several other projects which promote load reductions were implemented. https://www.crwd.org/alternative-tile- intakeproject.html |
| | 1 | Projects In | |
| Clear Lake Restoration | TBD | \$361,000 (grant amount) + local levy | Secured grant to install an iron enhanced sand filter behind an existing wetland outlet control structure. Remaining project will include operations and maintenance for all District projects supporting improved water quality on Clear Lake. |
| | | Potential Futu | |

| Cedar Lake Subwatershed Improvement Project Additions | TBD | TBD | Managing upper watershed loads, lake restorations and shallow lakes management of 3 shallow lakes. Manage SRP wetland loading. |
|--|-----|-----|--|
| Resilience planning- municipalities in the District | TBD | TBD | Close to 10 years ago, the District offered stormwater evaluations which included delineations and modeling and recommendations on stormwater management. The time to revisit these study is now in the face of changing weather patterns. Reviewing this work and offering some resilience planning to the cities will incorporate nutrient and sediment load reduction, flood reduction. |
| CD 20 Project | TBD | TBD | CD 20 is a major source of bacteria to the Clearwater River. Investigate sources and opportunities to mitigate loads. |
| Watkins soluble phosphorous load reduction project | TBD | TBD | Identify and develop projects to reduce soluble phosphorous loading in the watershed. |
| Other soluble phosphorous load reduction projects | TBD | TBD | Identify and develop projects to reduce soluble phosphorous loading. |
| Theil Creek Restoration and Protection | TBD | TBD | Theil Creek is a trout stream in the District. The Board of Managers authorized formation of and participation in a task force to evaluate opportunities to protect and improve the stream. |
| Fairhaven Creek Restoration and Protection | TBD | TBD | Fairhaven Creek is a trout stream in the District. The Board of Managers authorized formation of and participation in a task force to evaluate opportunities to protect and improve the stream. |
| Clearwater River Restoration upstream of Lake Betsy | TBD | TBD | This section of the river has many areas of high erosive force, destabilizing the toe and increasing sediment loads. Tributaries form deep ravines which also contribute to the load, as well as watershed loading from highly erodible soil areas. Work under a 319 grant identified target areas within the watershed for stabilization to reduce sediment nutrient and bacteria load to the river. In addition, instream stabilization assessment is under consideration. |

The CRWD Board of Managers approved the following plan at February 15, 2023 regular Board meeting. The scope of this plan is limited to a high-level overview, providing a summary of work envision by the CRWD Board of Managers for the year. Throughout the year, new information and opportunities may arise; as such, implementation of the plan may be altered at any time. While focused only on 2023, the plan factors in long-term planning to ensure the District remains on task to accomplish its mission and purposes. The plan is located in this report appendices.

APPENDIX A: 2023 Water Quality Monitoring Plan



 To: CRWD Board of Managers
 From: Rebecca Carlson, P.E. (MN) District Engineer, Administrator
 Date: 4/3/2023

Introduction

The Clearwater River Watershed District has conducted an annual water quality monitoring program at select locations throughout the watershed since 1981 to assess District progress towards water quality goals, track long-term water quality trends, and evaluate effectiveness of existing water quality improvement projects and programs.

Laboratory costs went up significantly in the middle of the 2022 montioring season, and again in the 2023 season. However, staff secured a 20% discount in lab costs over the values quoted when the draft monitoring plan was presented to the Board in February 2023 (table 1).

| | | | | | 2023 | | |
|---|----|-------|-------------|----|---------|----|----------|
| RMB Lab Fees | 2 | 2021 | 2022 | D | iscount | 2 | 023 Full |
| TP (50 lake samples /70 stream samples) | \$ | 14.00 | \$ 15.00 | \$ | 19.20 | \$ | 24.00 |
| OP (70 stream samples) | \$ | 12.00 | \$ 13.00 | \$ | 23.20 | \$ | 29.00 |
| TSS (70 stream samples) | \$ | 11.00 | \$ 23.00 | \$ | 18.40 | \$ | 23.00 |
| Chloride (30 stream samples) | \$ | 11.00 | \$ 12.00 | \$ | 14.40 | \$ | 18.00 |
| Chl-A (50 lake samples) | \$ | 20.00 | \$ 20.00 | \$ | 24.00 | \$ | 30.00 |

Table 1. Lab costs increases, discount

The proposed 2023 program is in line with previous efforts costs assocated with the 2023 and 2022 program are included as tables 2 and 3 (2022 costs are incldued for reference).

Baseline Monitoring:

Lakes

The history and future plans are presented in tables 4, 5 and 6 for context. Monthly surface samples will be collected from thirteen lakes 5 times between May and September. Lab parameters include total and orthphospohrus as well as Chlorophyll-a. Field parembers include temperature, dissolved oxygen, specific conductivity, and pH profiles, secchi depth. IBI sampling and sediment coring are not planned for 2023.

Streams

The recommended 2023 stream monitoring includes the 13 streams shown in Table 7. All streams will be monitored monthly April-October (Parameters include: temperature, dissolved oxygen, pH, specific conductance and flow, ortho-phosphorous, total phosphrous and total suspended solids).

• Continuous whater level monitoring will be recorded using pressure transducers at the following stations;

- CR28.2 (Kingston)
- CR16.7 (Fairhaven Dam)
- CR10.5 (Grass Lake Dam)
- o CD20-1.0
- SSW04 (Illsley Ave)
- TC0.7 (Theil Creek)
- Telemetry for continuous water level monitoring at Grass Lake Dam and Theil Creek
- Visual monitoring at 5 fish migration barrier sites in Cedar Lake subwatersheds

Special Monitoring:

- At the request of the Cedar Conservation Club (CLCC), and funded by 215 :
 - field parameter profiles will be measured at multiple shallow locations on the lake. Residents
 are concerned that algal production and clarity in the shallow spots of in Cedar Lake is
 negatively impacted. Early phoshorus concentrations will be collected, once lab results are
 returned, staff will evaluate and reach out to CLCC with results. Residents also had questions
 about the potentail value of shallow and deep aeration.
 - Bench tests will be conducted on the limestone in Segner Pond with an without periphyton/ macrophytes to ascertain if the material is still adsorbing soluble P. Macrophytes will be speciated, and if lab services are available, periphyton will be as well. This should support lifecycle evaluation for the filter berm.
- Watkins Stormwater limestone filter bed material will also be re-tested to assess changes in the material sorption capacity and to estimate filter lifecycle.
- At the request of Lake Augusta Assocation, some shallow field parameter profiles will be collected near a resident's aeriator, and at a reference location. Data will be collected at the aerator, and then at 5-10 foot increments to find the limit of changes in parameters. These data, along with shallow profiels from Cedar Lake will support lake shore residents wanting additional information about the impact of aeration on lake shore water quality and shallow swimabilty.

| | Sites | Lab fees | Labor | Total |
|---|-------|----------|----------|-------------|
| Lake Monitoring | 13 | \$9,752 | \$17,160 | \$26,912 |
| Stream Monitoring | 11 | \$9,152 | \$11,880 | \$11,880 |
| Transducer Install, Removal, and Maintenance | 7 | | \$1,320 | \$1,320 |
| Lake Gauge Install | 6 | | \$1,716 | \$1,716 |
| Cedar + Augusta Additions | 6 | \$763 | \$990 | \$763 |
| Cedar/ Watkins Efficiency Tests | | \$2,107 | \$1,650 | \$4,577 |
| Rain Gauge Coordination | 5 | | \$245 | \$245 |
| Expenses (mileage, supplies, shipping, rentals) | | | | \$9,800 |
| Reporting, Lab Coordination, | | | | \$15,000 |
| SUBTOTAL | | | | \$72,213 |
| 10% Contingency | | | | \$7,221 |
| TOTAL | | | | \$79,434.39 |

Table 2. 2023 Program Cost

| Funding Source | Allocation |
|-------------------------------------|------------|
| Data Collection [205] | \$18,016 |
| Chain of Lakes [210] | \$49,545 |
| Project #06-1 [215] | \$12,612 |
| Watkins Stormwater Fund [406] | \$2,702 |
| SSL#17-1 [407] (Lake + Thiel Creek) | \$4,504 |
| Clear Lake Fund | \$2,702 |

Table 3: Fund Allocation

| | Sites | Lab fees | Labor | Total |
|---|-------|----------|----------|-------------|
| Lake Monitoring | 13 | \$2,500 | \$10,800 | \$13,300 |
| Stream Monitoring | 11 | \$3,200 | \$10,920 | \$14,120 |
| Transducer Install, Removal, and Maintenance | 7 | | \$3,760 | \$3,760 |
| Lake Gauge Install | 6 | | \$1,880 | \$1,880 |
| Rain Gauge Coordination | 5 | | \$245 | \$245 |
| Expenses (mileage, supplies, shipping, rentals) | | | | \$8,500 |
| Reporting, Lab Coordination, | | | | \$24,000 |
| SUBTOTAL | | | | \$65,805 |
| 10% Contingency | | | | \$6,581 |
| TOTAL | | | | \$72,385.50 |

Table 4. **2022 Table for Reference/Comparison** (lakes take 2 days for 2 people now, we in the past have done lakes in 1 day).

| STATIONS | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Clearwater East^* | х | х | | Х | | х | | х | | х | | Х~ | х | | х | | х |
| Clearwater West^* | | х | х | | х | | х | | х | | х | Х~ | Х~ | х | | х | |
| Augusta^* | | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х~ | Х | Х | Х | Х | Х |
| Caroline* | Х | Х | Х | Х | Х | Х | Х | Х | Х | | Х | | Х | | Х | Х | Х |
| Marie^* | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х~ | | Х | Х | Х | Х |
| Louisa^* | | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х~ | | Х | Х | Х | Х |
| Scott* | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | | Х | Х | | | Х |
| Betsy* | | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х~ | Х | Х | Х | Х | Х |
| Clear | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х~ | Х | Х | Х | Х | Х |
| Cedar^# | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х~ | Х~ | Х | Х | Х | Х |
| Albion# | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | | Х | | Х | Х | Х |
| Swartout# | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | | Х | | Х | Х | Х |
| Henshaw# | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | | Х | | Х | Х | Х |
| Bass | Х | Х | | Х | | Х | | | Х | | | Х | | | Х | | Х |
| Grass* | Х | Х | | Х | | Х | | Х | | | | | | | | | |
| Little Mud | | Х | | | Х | | | Х | | | | | Х | | | | Х |
| Nixon | Х | Х | | Х | | Х | | | Х | | | | | Х | | | Х |
| Otter | | Х | | | Х | | | Х | | | | | Х | | | | |
| Pleasant | Х | Х | Х | | Х | | Х | | Х | | | Х | | | | Х | |
| School Section | | х | | Х | | х | | х | | | | х | | х | | х | |
| Union | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х~ | | Х | | | |
| Wiegand*! | | Х | | | | | | | | | | | | | | | |
| TOTALS | 14 | 22 | 14 | 17 | 16 | 17 | 14 | 17 | 16 | 12 | 13 | 12 | 13 | 11 | 12 | 13 | 15 |

Table 5: Baseline lake monitoring for CRWD lakes

NOTES

^ denotes a lake that has a CRWD AIS Project

* denotes a lake that falls under the 1980 Project

denotes a lake that falls under Project #06-1 ~ SWAG Funding

! Wiegand lake sampling was discontinued in favor of stream sampling at Nordell Bridge downstream; that event will be tracked in separate schedule going forward

Table 6: Lake Sediment Surveying for CRWD Lakes

| STATIONS | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Clearwater East^* | | | | | | | | | | | | | |
| Clearwater West^* | | | | | | | | | | | | | |
| Augusta^* | | | | | | | | | | | | | |
| Caroline* | | | | | | | | | | | | | |
| Marie^*! | | | | | | | Х | | | | | | |
| Louisa^*! | | | | | | | Х | | | | | | |
| Scott* | | | | | | | | | | | | | |
| Betsy* | | | | | | | | | | | | | |
| Clear | | | | | | | | | | | | | х |
| Cedar^# | | | | | | | | | | | | | |
| Albion# | | | | | | | | | | | | | |
| Swartout# | | | | | | Х | | | | | | | |
| Henshaw# | | | | | | | | | | | | | |
| Bass | | | | | | | | | | | | | |
| Grass* | | | | | | | | | | | | | |
| Little Mud | | | | | | | | | | | | | |
| Nixon | | | | | | | | | | | | | |
| Otter | | | | | | | | | | | | | |
| Pleasant | | | | | | | | | | | | | |
| School Section | | | | | | | | | | | | | |
| Union | | | | | | | | | | | | | |
| Wiegand* | | | | | | | | | | | | | |
| TOTALS | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

| STATIONS | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|-------------------|------|-------|------|---------|----------|---------|------|----------|----------|------|----------|----------|------|
| Clearwater East^* | | | F+ | PI+, F! | | PI+,D+~ | D+~ | D+~ | PI+, D+~ | D+~ | D+~ | PI+, D+~ | - |
| Clearwater West^* | | | | PI+ | | PI+,D+~ | D+~ | D+~ | PI+, D+~ | D+~ | D+~ | PI+, D+~ | |
| Augusta^* | | | F+ | | PI+,D+~ | D+~ | D+~ | PI+, D+~ | D+~ | D+~ | PI+, D+~ | D+~ | |
| Caroline* | | | F+ | | | | | | PI | | | | |
| Marie^*! | | | F+ | | | PI+,D+~ | D+~ | D+~ | PI+, D+~ | D+~ | D+~ | PI+, D+~ | |
| Louisa^*! | | | F+ | | | PI+,D+` | D+~ | D+~ | PI+, D+~ | D+~ | D+~ | PI+, D+~ | |
| Scott* | | | | | | | | | PI | | | | |
| Betsy* | F+ | | V | | | PI,F+ | | | PI | | | | |
| Clear | V+ | F+ | | | | PI,F+ | | | PI | | | | |
| Cedar^# | | | F+ | PI+ | PI+,DI+~ | D+~ | D+~ | PI+, D+~ | D+~ | D+~ | PI+, D+~ | D+~ | |
| Albion# | | PI | PI | PI | | | PI | | | PI | | | |
| Swartout# | PI | PI,V+ | PI | PI | | | PI | | | PI | | | |
| Henshaw# | | PI,V+ | PI | | | | PI | | | PI | | | |
| Bass | | | | V+ | | F+ | | | | | | | |
| Grass* | | | F+ | | | | | | | | | | |
| Little Mud | | | | | PI+ | | | | | | | | |
| Nixon | | | V+ | | | | | | | | | | |
| Otter | | | | | | | | | | | | | |
| Pleasant | | | | | | F+ | | | | | | | |
| School Section | | | | | | | | | | | | | |
| Union | F+ | | | V+ | PI | F+ | | | PI | | | | |
| Wiegand* | | | | | | | | | | | | | |
| TOTALS (by CRWD) | 1 | 3 | 3 | 2 | 1 | 2 | 3 | 0 | 2 | 3 | 0 | 0 | 0 |

Table 7: Proposed Long-Term Lake Assessments: Indicies of Biological Integity(Vegetation/Fisheries Surveying)

NOTES

^ denotes a lake that has a CRWD AIS Project

* denotes a lake that falls under the 1980 Project

denotes a lake that falls under Project #06-1

F-standard fisheries survey, PI- point-intercept survey, D-AIS delineation, V- vegetation survey

~will be completed under CRWD AIS Project Policy, +outside entity performed (ex. MNDNR, lake association), !Fish IBI assessment and/or targeted survey performed by MNDNR

Table 8: Baseline stream monitoring

| STATIONS | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|------------|------|------|------|------|------|------|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| SCE01~! | Х | Х | Х | Х | | | | | | | | | |
| SHE01~! | Х | Х | Х | Х | | | | | | | | | |
| SSW01*! | Х | Х | Х | Х | | | | | | | | | |
| SSW02*# | Х | Х | Х | Х | Х | Х | Х | | Х | Х | Х | Х | |
| SSW04* | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х |
| CR7.0 | Х | | | Х | | | | | | | | | |
| CR10.5 | х | х | х | х | х | х | х | Stage + Telemetry |
| CR28.2^ | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х |
| CR29.0^ | Х | Х | Х | Х | Х | Х | Х | | Х | Х | Х | Х | Х |
| CLN | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х |
| CLS# | Х | Х | Х | Х | Х | Х | | | Х | Х | Х | Х | Х |
| CD20-1.0^ | | Х | Х | Х | Х | | | Х | Х | Х | Х | Х | Х |
| CD20-2.2 | | Х | Х | Х | Х | | | Х | | | | Х | |
| TC0.7 | | | | | | | | | | х | Stage + Telemetry | Stage + Telemetry | Stage + Telemetry |
| LAWT | | | | | Х | | | | | | | | Х |
| ULST | | | | | Х | | | | | | | | |
| ULWT | | | | | Х | | | | | | | | |
| WS1# | | | | | | Х | Х | | | Х | Х | | |
| WR1.4-West | | | | | | | | | | | Х | | |
| WR1.4-East | | | | | | | | | | | Х | | |
| WR0.2 | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х |
| TOTALS | 12 | 13 | 13 | 14 | 13 | 9 | 8 | 7 | 7 | 11 | 13 | 11 | 10 |

NOTES

^denotes a site that falls under the 1980 project

*denotes a site that falls under Project #06-01

APPENDIX B: 2023 CRWD PLAN OF WORK



CLEARWATER RIVER WATERSHED DISTRICT

93 Oak Avenue South, Suite 5 Annandale, MN 55302 (320) 274-3935 | www.crwd.org

Promote | Protect | Preserve

OFFICE MEMORANDUM

TO: CRWD BOARD OF MANAGERS

FROM: REBECCA CARLSON, DISTRICT ADMINISTRATOR, ENGINEER

DATE: 02/15/2023, UPDATED APRIL 3, 2023

SUBJECT: 2023 MANAGERS' PLAN OF WORK

Introduction

Per MN Statute 103D.351 (a), the CRWD Board of Managers must provide a discussion of their plans for the upcoming year. The Board has traditionally set its yearly plan of work at its annual strategic planning meeting. The Managers' Plan of Work provides directives to guide and implement various District matters for the following year. While focused on only one year, it factors in long-term plans to ensure the District remains on task to accomplish its mission and purposes.

The Administrator traditionally prepares a draft plan based on the following:

- The current Watershed Management Plan (WMP)
- Activities of the past year
- Recently completed water quality monitoring and WMP implementation portion of the annual report
- Annual project inspection reports
- Board meetings from the previous year
- Other documents

Many items covered in this document are too complex to be completely covered in a single, all-encompassing work plan. These items often have their own stand-alone work plans. Those plans should be referred to for more detailed information.

Implementation around Education and Outreach and hosting of meetings will remain limited until COVID-19 allows everyone to safely participate.

The scope of this document is limited to a high-level overview, providing a summary of work planned for 2023 by the CRWD Board of Managers. A key element of the plan is to actively consider new information and opportunities as they arise and alter the plan as necessary.

The Board's annual plan of work was discussed at a regular Board meetings held: 2/15/2023, the CAC committee met 2/16/2023 to review the draft plans. The draft plan was approved 4/19/2023. Often, the Board holds an extra work session to develop the annual plan of work. However, since the Board had just completed its comprehensive plan, three sessions during regular meetings were held.

The draft plan and an assessment of progress towards the 2021 plan are attached.

In 2022 the District accomplished the following:

- Fielded high call volumes and high need for on-site observation / inspection for high water levels, low water levels, and bog migration. Conditions in the District when from high water levels not seen since the 1980's to drought conditions in one month.
- Removed a massive bog on Clearwater Lake in partnership with the Clearwater Lake Residents and Lake Association
- Updated the bog policy in accordance with residents wishes, based on significant feedback
- Referred many shoreland residents with shore damage from high water, then rapidly receding water to Stearns/ Wright SWCDs for their shoreline projects
- Sponsored a lake shore restoration with Wright County SWCD
- Implemented maintenance on the following projects:
 - Kingston Wetland
 - Watkins Stormwater
- Inspected the following projects:
 - Watkins Stormwater Project
 - Watkins North
 - Watkins South
 - Annandale Treatment Wetland
 - o Swartout IESF
 - Rough Fish Migration Barriers
 - Segner Pond
- Made progress on the Clear Lake Restoration Project
- Conducted annual monitoring of lakes and streams and publish report cards
- Coordinated with Stearns SWCD on Theil Creek Restoration
- Cost share for county nutrient and sediment load reduction projects and ag lime cost share to reduce soluble nutrient export
- Operated lake outlets, and District projects
- Worked with Upper Mississippi River Watershed partners, for both Watershed Restoration and Protection (WRAPS through Minnesota Pollution Control Agency) and One Water One Plan (1W1P, through Board of Water and Soil Resources) in the first ½ of 2022.
- Operated four (4) community sewer projects
- Coordinated and communicated regularly with county and SWCD partners

| Core Activity | Priority Issue | Title | Summary | Priority |
|---|--|---|--|----------|
| Capital Project and Program Implementation | Threatened and Impaired Surface Water Quality and Natural Resources | Clear Lake North subwatershed - soluble P abatement | Publish study. Identify funding mechanism. Initiate filtration project. | High |
| Capital Project and Program Implementation | Threatened and Impaired Surface Water Quality and Natural Resources; Climate Change | Cedar Lake Sub- Watershed Evaluation | Complete 15 Year Project Review, and 10 year forward looking plan. | High |
| Capital Project and Program Implementation | Threatened and Impaired Surface Water Quality and Natural Resources; Climate Change | Ag Incentive Programs | Develop menu of cost share options to build soil health, resilience to climate extremes, reduce sediment and nutrient export, and support landowners. Continue to develop partnerships with locals SWCDs to accelerate practice adoption in priority subwatersheds. | High |
| Capital Project and Program Implementation | Threatened and Impaired Surface Water Quality and Natural Resources | Theil Creek Restoration | Work with stakeholders to secure funding and move to implementation | High |
| Capital Project and Program Implementation | Threatened and Impaired Surface Water Quality and Natural Resources | Clearwater River Assessment/ Restoration | Assess and stabilize the Clearwater River between Clear Lake and Kingston Wetland | High |
| Capital Project and Program Implementation | Threatened and Impaired Surface Water Quality and Natural Resources | • • | Conduct H&H modeling to evaluate resilience to changing precipitation and recommend solutions to be implemented later. | High |

| Core Activity | Priority Issue | Title | Summary | Priority |
|---|---|---|--|----------|
| Capital Project and Program Implementation | Threatened and Impaired Surface Water Quality and Natural Resources | Ongoing rough fish management | Maintain existing fish migration barriers. Trap & sein from lakes/ streams as deemed necessary. Evaluate options to work with lake assocations through AIS projects. | High |
| Capital Project Operation & Maintenance | Threatened and Impaired Surface Water Quality and Natural Resources | Vegetation Management Program | Get quotes for management services at select CRWD projects. Control woody vegetation and noxious species at three sewer systems treatment areas. Control woody vegetation and noxious species at the three wetland treatment systems and the isolation unit. | High |
| Capital Project Operation & Maintenance | Threatened and Impaired Surface Water Quality and Natural Resources | Existing CRWD AIS Projects | Continue to support lake associations as fiscal agent for community driven AIS projects. Consider amending projects, instituting projects based on resident efforts. | High |
| Capital Project Operation & Maintenance | Localized Flooding and Navigation Obstructions | Bog Control Projects | Operation | High |
| Capital Project Operation & Maintenance | Localized Flooding and Navigation Obstructions | Pleasant Lake Outlet Control Project | Operation , Repair wood decking | High |
| Capital Project Operation & Maintenance | Threatened and Impaired Surface Water Quality and Natural Resources | 0&M | Maintenance Projects, Watkins (2), Kingston. Inspections/ secure drone services. | High |
| Capital Project Operation & Maintenance | Threatened and Impaired Surface Water Quality and Natural Resources | O&M Contract | Operations Contract w/ Blackstone for fish migration, lake outlets, Swartout Boards, Kimball Boards | High |

| Core Activity | Priority Issue | Title | Summary | Priority |
|--|--|---|---|----------|
| Capital Project Operation & Maintenance | Threatened and Impaired Surface Water Quality and Natural Resources | Watkins Wetland south of Hwy 55 | Direct engineer to undertake study on potentially retrofitting the system.Implement recommendations. | High |
| Capital Project Operation & Maintenance | Threatened and Impaired Surface Water Quality and Natural Resources | Watkins Wetland Treatment System - Maintenance/ Restoration | Previous project inspections have noted this project needs channel and berm maintenance. In addition, monitoring has indicated this wetland is likely a soluble P source. Direct engineer to undertake study on potentially retrofitting the system. Implement recommendations. | High |
| Capital Project Operation & Maintenance | Operation and Maintenance; Threatened and Impaired Surface Water Quality and Natural Resources | Operate, Maintain and Permit 4 Community Wastewater Systems | Continue commissioning and permitting for the CWH/ HR System and work through commissioning issues. | High |
| Education and Outreach | All | Education + Outreach | CAC | High |
| Education and Outreach | All | Education + Outreach | Meetings with each county/ SWCD. Web site and social media updates. Continue to take high quality photos for posting to engage stakeholders. Press release for NMAP system once control panel issue is addressed. | High |
| Education and Outreach | | Education + Outreach | Adopt a storm drain, re-establish Annandale cost share with SRWD (Adam), Annual Tour. Continue web site updates. | High |

| Core Activity | Priority Issue | Title | Summary | Priority |
|--|---|---|--|----------|
| Monitoring and Studies | All | Annual Project Inspection Program | The CRWD has implemented an annual inspection program of its existing infrastructure as part of its commitment to ensuring all projects are operationally effective. • Perform visual inspections of each CRWD infrastructure during the months of April - June. Summarize inspections in a report to the CRWD Board by July. Prioritization of necessary repairs/ modifications follows. | High |
| Monitoring and Studies | Threatened and Impaired Surface Water Quality and Natural Resources | Fairhaven Creek Monitoring | Monitoring plan | Medium |
| Monitoring and Studies | Threatened and Impaired Surface Water Quality and Natural Resources | Annual Water Quality Monitoring Program | Program to collect water quality data (primarily chemistry and hydrology) to establish trends, assist with setting goals, determine projects, practices, and programs to implement and evaluate effectiveness of completed projects, practices and programs. | High |
| Monitoring and Studies | Threatened and Impaired Surface Water Quality and Natural Resources | Annual Water Quality Monitoring Program | Reach out to Cities on sotmrwater management plans to coordinate updated plans incorporating climate resilience | Medium |
| Sustainable Administration & Financing | Sustainable Administration & Financing | Identify/ Respond to emerging opportunities | evaluate new opportunities for alignment with core activities, priority issues and feasibility | Medium |
| 1W1P/ WRAPS | Sustainable Administration & Financing | MPCA & BWSR Required programs | Continue to particpate in WRAPS, ended active participation in 1W1P | Low |

| Core Activity | Priority Issue | Title | Summary | Priority |
|-------------------------------|----------------------------|---------------------|---|----------|
| Sustainable | Sustainable Administration | Policy Book Review, | Update policy book. | Medium |
| Administration & Financing | & Financing | Update | | |
| Sustainable | Sustainable Administration | Operations | Migrate to fully electronic files. Jenson | Medium |
| Administration & | & Financing | Optimization | continues to make progress on this front. | |
| Financing | | | | |

Capital Project and Threatened and Impaired CR 17 Partnership - Stabilize eroded area, cleanout ditch checks to High Program Implementation Surface Water Quality and Road + Field Corner Natural Resources is a high priority targeted area and partnership with Meeker SWCD.