2018 - 2027

Lower Minnesota River Watershed District

Watershed Management Plan

60-Day Review DRAFT

Watershed Management Plan
for the
Lower Minnesota River Watershed District
2018 - 2027

Approved
Month, Day, Year

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List of Acronyms and Abbreviations

Term	Definition
AC	Acre
BMP	Best Management Practice
BOD	Biochemical oxygen demand
BWSR	Board of Water and Soil Resource
CAC	Citizen Advisory Council
CAMP	Citizen Assisted Monitoring Program
CCP	Minnesota River Valley National Wildlife Refuge Comprehensive Conservation Plan
CFS	Cubic feet per second
CHL-A	Chlorophyll-a
CIP	Capital Improvement Projects
CLP	Closed Landfill Program
CMMP	Channel Maintenance Management Plan
COE	U.S. Army Corps of Engineers
CSMP	Citizen Stream Monitoring Program
CSTS	Community Sewage Treatment System
CSWCD	Carver Soil and Water Conservation District
CWA	Clean Water Act
CWCS	Comprehensive Wildlife Conservation Strategies
DMMP	Dredge Material Maintenance Plan
DNR	Minnesota Department of Natural Resources
DO	Dissolved Oxygen
DOH	Minnesota Department of Health
DOT	Minnesota Department of Transportation
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FIS	Flood Insurance Study
FQA	Floristic Quality Assessment
FT	Feet
ISTS	Individual Sewage Treatment System
ITPHS	Imminent Threat to Public Health and Safety
LGU	Local Government Unit
LID	Low Impact Development
LMRWD	Lower Minnesota River Watershed District (District)
LUST	Leaking Underground Storage Tanks

LWP	Local Water Plan
LWPA	Local Watershed Plan Authority
M	Meter
M.S.	Minnesota Statute
Managers	District Board of Managers
MBS	Minnesota Biological Survey
MCCC	Minnesota Civilian Conservation Corps
MCES	Metropolitan Council Environmental Services
MDA	Minnesota Department of Agriculture
MG/L	Milligram per liter
MLCCS	Minnesota Land Cover Classification System
MN	Minnesota
MnRAM	Minnesota Routine Assessment Methodology
MOU	Memorandum of Understanding
MPCA	Minnesota Pollution Control Agency
MRBJPB	Minnesota River Basin Joint Powers Board
MRCC	Midwestern Regional Climate Center
MS4	Municipal Separate Storm Sewer System
MSP	Minneapolis-St. Paul
MUSA	Metropolitan Urban Services Area
NFIP	National Flood Insurance Program
NGO	Non-Government Organization
NHIS	Natural Heritage Information System
NO3	Nitrate
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NURP	National Urban Runoff Program
NWI	National wetland inventory
OHWL	Ordinary High Water Level
PLP	Permanent List of Priorities
QAPP	Quality Assurance Project Plan
QA/QC	Quality Control Quality Assurance
R.M.	River mile
RCRA	Resource Conservation and Recovery Act
SDS	State Disposal System
SDS	State Disposal System
SFHA	Special Flood Hazard Areas

SLMP	Sustainable Lake Management Plan
SNA	Scientific and Natural Area
SRE	Strategic Resources Evaluation
SSC	Suspended Sediment Concentration
SSL	Suspended Sediment Loads
SSTS	Subsurface Sewage Treatment System
SWCD	Soil and Water Conservation District
SWPPP	Storm Water Pollution Prevention Plan
TAC	Technical Advisory Committee
TDP	Total Dissolved Phosphorus
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TP	Total Phosphorus
TSD	Treatment, Storage and Disposal
TSL	Total Suspended Load
TSS	Total Suspended Solids
UAA	Use Attainability Analyses
USAF	United States Air Force
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
VIC	Voluntary Investigation Cleanup
WCA	Wetland Conservation Act
WD	Watershed District
WMO	Water Management Organization
WOMP	Watershed Outlet Monitoring Program
WWTP	Waste Water Treatment Plant
µG/L	Microgram per liter
MRB	Minnesota River Board

EXECUTIVE SUMMARY

The Lower Minnesota River Watershed District (District) Watershed Management Plan (Plan) describes how the District will address water resources management over the next 10 years as required by M.S. 103B and 103D and Minnesota Rules (MN Rules) 8410. The purpose of this Plan is to protect, preserve, and manage the surface water resources (Minnesota River, lakes, streams, and wetlands) and groundwater within the District.

In 1960, the District was organized by petition from Hennepin, Ramsey, Dakota, Scott, and Carver counties in response to the Minnesota Watershed Act of 1955. The District's first Watershed Management Plan was prepared, approved, and adopted in 1961.

The Metropolitan Surface Water Management Program (M.S. 103B) and Watershed Act requires the District to review and update its Plan every ten years. This Plan will be effective 2018–2027. In addition to complying with the aforementioned laws, this Plan meets the requirements of MN Rules 8410, 8420, and 7050. The Plan includes management standards and procedures for addressing surface water, wetland, and groundwater issues, as well as navigation issues along the Minnesota River.

E1. PLAN ORGANIZATION

This Plan documents the Lower Minnesota River Watershed and its management, and therefore, much of the information is technical. Background information regarding scientific terms and processes is provided where practical. An acronym list is also provided. Readers are encouraged to consult area professionals or professional references for more information.

The Plan contains the following sections as required by MN Rule 8410:

Executive Summary: Provides an overview of the plan.

Introduction: Summarizes State statutes, plan requirements, the organization and its history, and 2010 - present District accomplishments.

Section 1.0: Land and Water Resource Inventory: Presents current and historic background and inventory information regarding the watershed's physical, hydrological, biological, and human environment.

Section 2.0: Issues Identification/Assessment of Problems: Provides an overview of the issues identified during the planning process, assesses the adequacy of existing controls, and identifies potential management gaps.

Section 3.0: **Goals, Policies, and Management Strategies:** Presents the management framework (goals, policies, and strategies) adopted by the District Board of Managers (Managers) to address the priority issues and management gaps.

Section 4.0: Implementation Program: Describes the Plan's implementation elements and impact on local governments and residents. This section provides an implementation program table and preliminary annual budgets.

Section 5.0: Impact on Local Units of Government: Expresses the potential financial impact that the Plan changes will have on local government units (LGU).

Section 6.0: Amendment and Reporting: Describes the procedures for amending the Plan and addressing the annual reporting requirement.

E2. WATERSHED ISSUES

Watershed issues are problems or concerns identified by the Managers, by the Technical Advisory Committee (TAC), and the Citizen Advisory Committee (CAC). These issues need attention and, in some cases, resolution. The TAC and CAC held workshops and partnership work sessions to develop a list of watershed issues. Information generated at those sessions was presented to the Board and is addressed here. The following issues were identified and discussed in detail in Section 2.0 - Issues and Problems Assessments.

1. Unclear role of the District
2. Outside influences
3. Water quality
4. Flooding and floodplain management
5. Erosion and sediment control
6. Groundwater
7. Commercial and recreational navigation
8. Public education and outreach
9. Potential problems

E3. WATERSHED MANAGEMENT FRAMEWORK

Section 3.0 presents the Plan's management framework regarding goals, policies, strategies, and standards. This framework is based on the issues identified by the TAC, CAC, and Manager, given their priority and the adequacy of existing controls. The District's mission and purpose, presented below, were also taken into consideration when developing the framework.

E3.1. MISSION

The District's mission is to manage and protect the Minnesota River, lakes, streams, wetlands, and groundwater, and to assist and facilitate in providing river navigation by:

- Promoting open communication, partnering with citizens, community organizations, and local, state, and federal agencies.
- Improving and protecting the quality of the Minnesota River and all water bodies in the watershed.

- Minimizing the negative effects of floods and droughts on the Minnesota River and all water bodies in the watershed.
- Collecting and distributing information regarding surface water and groundwater in the watershed; establishing priorities; and developing local plans to improve water resources in the watershed.
- Monitoring and understanding the effects of municipal groundwater appropriations and drought on groundwater levels.
- Working with LGUs to enforce the Wetland Conservation Act.
- Assisting and facilitating the efforts of state and federal agencies to maintain the navigation channel.
- Educating stakeholders about the impact they have on the water resources in the watershed and motivating them to change behaviors that have a negative impact.

E3.2. WATERSHED PURPOSE

The Metropolitan Surface Water Management Act states that the District's purposes and other water management programs (quoted from M.S.103B.201) are as follows:

- Protect, preserve, and use natural surface and groundwater storage and retention systems.
- Minimize public capital expenditures needed to correct flooding and water quality problems.
- Identify and plan for means to effectively protect and improve surface and groundwater quality.
- Establish more uniform local policies and official controls for surface and groundwater management.
- Prevent soil erosion into surface water systems.
- Promote groundwater recharge.
- Protect and enhance fish and wildlife habitat and water recreational facilities.
- Secure the other benefits associated with proper surface and groundwater management.

Unlike other water management programs in the state subject to M.S.103B, the District has an additional purpose, as noted in the District's mission, which is to assist and facilitate the efforts of state and federal agencies to maintain the Minnesota River 9-Foot navigation channel.

E3.3. GOALS

The following goals were established by the District. These goals are not presented in any order and do not reflect rank within the District.

- Goal 1: Organizational Management – To manage the different roles of the District
- Goal 2: Surface Water Management – To protect, preserve, and restore surface water quality
- Goal 3: Groundwater Management – To protect and promote groundwater quantity and quality
- Goal 4: Unique Resources Management – To protect and manage unique resources
- Goal 5: Wetland Management – To protect and preserve wetlands
- Goal 6: Floodplain and Flood Management - To manage floodplains and mitigate flooding

- Goal 7: Erosion and Sediment Control – To manage erosion and control sediment discharge
- Goal 8: Commercial and Recreational Navigation – To maintain and improve the Lower Minnesota River's navigation and recreational use
- Goal 9: Public Education and Outreach – To increase public participation and awareness of the Minnesota River and its unique natural resources

E3.4. PLAN IMPLEMENTATION

The three major elements of the implementation program described in Section 4 are highlighted below:

Administrative/Managerial Efforts: This includes staffing, day-to-day operations, and funding for audits, reporting, training, and contingency.

Studies and Programs: The Plan includes the following studies and programs.

- Cost Share Incentive and Water Quality Restoration Program
- Periodic Assessments and Program Reviews
- Detailed Data Assessments
- Monitoring Program
- Vegetation Management Standard/Plan
- Dredge Material Beneficial Use Plan
- 9-Foot Channel Strategic Funding Plan
- Education and Outreach Program
- Sustainable Lake Management Plans
- Geomorphic Assessments
- Paleo-limnology Study
- Fen Stewardship Program
- Water Resources Restoration Fund

Capital Improvements Projects: The Plan includes the projects listed below in Table E-1. Additional projects can be added during the annual meeting before the budgeting process starts.

Table E-1: Lower Minnesota River Watershed District – Capital Improvement Projects*

Project Name	Project Partner	Estimated Cost	Estimated Timeline
Boundary Assessment Project	Carver County WMO and Riley – Purgatory Bluff Creek WD	$10,000	2018
Eagle Creek (East Branch) Project	DNR, MN Trout Unlimited and City of Savage.	$12,000	2018
Dredge Site Restoration Project	BWSR	$480,000	2018 - 2019

Minnesota River Sediment Reduction Strategy	MPCA and BWSR	$50,000	2018 - 2019
Riley Creek Project (Downstream of Flying Cloud Dr.)	Hennepin County	$50,000	2018 - 2019
Riley Creek Sediment Reduction Project	Riley-Purgatory Bluff Creek WD	$75,000	2018 - 2019
East Creek Treatment Wetland Project	City of Chaska and MPCA	$170,000	2018 - 2020
Carver Creek Restoration Project	City of Carver, Carver WMO, Carver County SWCD and USFWS	$93,500	2019
East Creek Bank Stabilization Project	City of Chaska, MPCA and BWSR	$50,000	2019
Spring Creek Project	City of Carver	$45,000	2019
Minnesota River Corridor Management Project	All District LGUs	$100,000	2020 - 2021
Minnesota River Study Area 3 (Bluff Stabilization Project)	City of Eden Prairie	$350,000	2022 - 2023

E3.4.1. LOCAL WATER PLANS

The required content of local water plans, as stipulated by MN 8410, is addressed in Section 5.1.1-4. In general, local water plans shall include:

- Surface Water, Groundwater, Wetlands, Floodplain and Flood Management, Unique Natural Resources, and Erosion and Sediment Control Goals and Policies
- Watershed Management Standards
- Water Conservation Act (WCA) Responsibilities

E3.5. MEASURABLE OUTCOMES

The Plan's success will be measured by successful implementation of policies and strategies to meet the nine identified goals mentioned above. Other success determinations include generated annual review trends and assessment of the program's short and long-term metrics. The short and long-term metrics are provided below in Table E-2.

Table E-2: Lower Minnesota River Watershed District Short-term and Long-term Metrics

Goal	Short-term Metric	Long-term Metric
Goal 1: Organizational Management	• Completion of scheduled activities • Annual LGU Audits • Amount of dollars leveraged for	• Formation of a Minnesota River Basin Commission • Legislative funding support

	projects from other agencies and property owners	
Goal 2: Surface Water Management	• Number and types of projects completed as part of the Cost Share Incentive Program and Water Quality Restoration Programs • Number of targeted studies and projects completed	• Positive trends in water quality parameters identified for monitoring efforts
Goal 3: Groundwater Management	• Number of targeted studies and projects completed	• Positive trends in water quality parameters identified for monitoring efforts
Goal 4: Unique Natural Resources Management	• Number of targeted studies and projects completed • Development and completion of the Fen Stewardship • Development of groundwater model for fen management	• Number and acreage of unique natural resources protected, restored, or enhanced • Acquisition of high-valued easements • Sustained protection of the fens and trout waters
Goal 5: Wetland Management	• Completion of scheduled activities	• Number and acreage of wetlands protected, restored, or enhanced
Goal 6: Floodplain and Flood Management	• Completion of scheduled activities	• Number of structures damaged and value of flood damages • Preservation of floodplain resources
Goal 7: Erosion and Sediment Control	• Completion of scheduled activities • Reduction in streambank, ravine bank, and slope failures	• Positive trends in water quality • Protection and preservation of Minnesota River Bluff
Goal 8: Commercial and Recreational Navigation	• Completion of scheduled activities • Number of targeted studies and projects completed	• Secure regular congressional and state legislative funding for the 9-Foot channel
Goal 9: Public Education and Outreach	• Number and types of sponsored events • Number of participants at events • Number of articles, press releases, and pamphlets developed • Number of articles, press releases, and pamphlets printed • Number of volunteers	• Same as short-term metrics

INTRODUCTION

This section provides introductory information about the Lower Minnesota River Watershed District (District), including the history, location, boundaries, unique characteristics, and management.

I1. HISTORY

In 1955, the Minnesota State Legislature enacted the initial Minnesota Watershed Act, previously called Minnesota Statute (M.S.) Chapter 112. Pursuant to this statutory authority, five counties (Hennepin, Ramsey, Dakota, Scott, and Carver) petitioned for the establishment of a watershed district. On March 23, 1960, the Minnesota Water Resources Board, now the Board of Water and Soil Resources (BWSR), established the Lower Minnesota River Watershed District.

In 1957, the District was part of the first petition in Minnesota. However, the petition was challenged and defeated in the courts. Meanwhile, on the national stage, the U.S. Congress ordered the U.S. Army Corps of Engineers (COE) to deepen the Minnesota River channel from four to nine feet from the confluence with the Mississippi River to river mile (R.M.) 14.7 in Savage, Minnesota. The congressional order required the COE to partner with a local regulatory entity to serve as the local sponsor. The District's original practitioner re-petitioned for the watershed district formation and added the local sponsor role to the petition. The petition was submitted to the COE for the 9-Foot channel. The re-petition was successful, and the District was established in 1960, making it the second watershed district in Minnesota.

Minnesota state statutes and rules affecting watershed districts (WDs) and water management organizations (WMOs) have broadened the role of WDs in water management, especially in the Twin Cities metropolitan area. The statutes affecting WDs and WMOs in the metropolitan area were recodified to M.S.103D and M.S.103B, respectively. One requirement of the statutes is that WDs and WMOs complete watershed management plans and update them every ten years. The District adopted its first Plan in 1961.

I2. LOCATION AND BOUNDARIES

The District is in the southwest part of the Twin Cities metropolitan area along the Minnesota River. The District boundaries 80 square miles of Carver, Hennepin, Dakota, Scott, and Ramsey counties, which includes the Minnesota River valley from Fort Snelling, at the confluence of the Minnesota and Mississippi rivers, upstream to Carver, Minnesota. The District includes the bluffs on both sides of the Minnesota River within this reach of the river. Within the District's boundaries are community portions of Mendota Heights, Mendota, Lilydale, Eagan, Bloomington, Burnsville,

Savage, Shakopee, Eden Prairie, Chanhassen, Chaska, Jackson Township, Louisville Township, and Carver. The legal description is in Appendix A.

I3. DISTRICT CHARACTERISTICS

The goals, policies, strategies, implementation plan, and capital improvements program set forth in this Plan reflect the District's specific characteristics. The features of the District include:

- The District boundary generally follows the Minnesota River watershed up to the bluff line.
- Both quantity and quality of surface water resources are very closely tied to groundwater.
- Unique and rare water resources in the District include floodplain wetlands, calcareous fens, and trout waters.
- The District plays a critical role in commercial navigation, as stated in the original order creating the District.
- The District contains the upper reaches of the navigation pools created by Lock and Dam No. 2 on the Mississippi River at Hastings.

I4. DISTRICT MANAGEMENT

The District's affairs are administered by five Managers appointed by County Commissioners. Presently, two Managers are appointed by Hennepin County and one Manager is appointed by Carver, Dakota, and Scott counties. (Ramsey County is no longer represented on the Board since only a small uninhabited area of the county is within the District's boundaries.) Appointments are in three-year terms, and each Manager is eligible for reappointment. Table I-1 lists every Manager who has served, their term of office, and county of residence.

Since 1960, the Managers have met regularly each month. The Managers currently meet on the third Wednesday evening of each month, unless modified. All l meetings are open to the public, and a notice is provided in advance.

Financial records are provided monthly to the Managers. Annually, the Managers authorize and obtain financial audits of the District's books and records. In addition, the Managers review and propose a budget, initially prepared by the District administrator, for the following year. After a public hearing, the budget is approved for implementation.

Table I-1: Lower Minnesota River Watershed District Board of Managers (1960 - Present)

Manager	Term of Office	County Represented
Kenneth W. Westerberg	1960 – 1966	Scott
Charles H. Bingham	1960 – 1968	Ramsey
Alfred W. Hubbard	1960 – 1972	Hennepin
Casimir A. Lubansky	1960 – 1981	Carver
Jens A. Caspersen	1960 – 1984	Dakota
Merrill M. Madsen, Jr.	1966 – 1978, 1984 – 1994	Scott, Dakota
William J. Jaeger, Jr.	1968 – 1977, 1983 – 1994	Ramsey, Hennepin, Hennepin
Paul G. Fallquist	1972 – 1983	Hennepin
Russell A. Sorenson	1977 – 1992	Hennepin
J. William Kennedy	1978 – 1981	Scott
Russell K. Heltne	1981 – 1987	Scott
Cyril B. Ess	1981 – 1996	Carver
Jim A. Kephart	1988 – 1999	Scott
Edward A. Schlampp	1992 – 2012	Hennepin
Wallace E. Neal	1994 – 2002	Hennepin
Eugene A. DePalma	1995 – 1999	Dakota
Terry L. Schwalbe	1996 – 2002	Carver
Glenda Spiotta	1999 – 2002	Scott
Ronald Kraemer	2001 – 2008	Dakota
Stephen B. Dalsin	2002 – 2003	Hennepin
Lawrence Samstad	2002 – 2011	Scott
Leo Forner	2003 – 2006	Carver
Leonard Kremer	2003 – 2016	Hennepin
Kent Francis	2006 – 2015	Carver
Don McCready	2009 – 2010	Dakota
Carla Shutrop	2011 – 2013	Scott
Yvonne Shirk	2011 – Present	Dakota
Mike Murphy	2015 – 2016	Scott
David Raby	2015 - Present	Hennepin
Jesse Hartman	2016 – Present	Scott

The District expects to have a Citizen's Advisory Committee (CAC) which would serve as an advisory committee to the managers. Once established, the CAC would meet quarterly, at a minimum, to:

- Act as liaison between the District and residents.
- Increase public awareness by educating District residents about actions to protect and improve water resources and habitat within the District.
- Advise the managers and staff on issues important to residents.

The District will consult with some or all its Technical Advisory Committee (TAC), whose current members are listed in the Foreword of this Plan, on an as-needed basis but no less than twice a year to get assistance with the following activities:

- Perform the District's biennial program review.
- Implement Goals 4 and 9 of this Plan, which increase the participation and awareness of unique natural resources and the Minnesota River.
- Implement Goal 9 of this Plan, which increase public participation and awareness of unique natural resources and the Minnesota River.

I5. 2010 – PRESENT ACCOMPLISHMENTS

The District has been invaluable in managing and protecting the Minnesota River, lakes, streams, wetlands, groundwater, and unique resources that respond to the needs of their constituents and partners. Table I-2 presents activities and accomplishments of the District between 2010 - 2016

Table I-2: Lower Minnesota River Watershed District - 2010 – 2016 Activities and Accomplishments.

WATERSHED MANAGEMENT PLAN ACTIVITIES	
Amended the Plan to incorporate the 2012 Governance Study, the 2013 Dredge Material Site Management Plan, and the Strategic Resources Evaluation (SRE).	
Participated in the BWSR-led Performance Review and Assistance Program Level II evaluation	
Adopted a Data Practices Policy and Procedures, as required by Minnesota Statutes Sections 10.03, subdivision 2 and 13.05, subdivision 5 and 8.	
Continued to work on the formation of a Minnesota River Basin Commission at the Minnesota State legislature.	
Commented on the Minnesota Sediment Reduction Strategy for the Minnesota River Basin, South Metro Mississippi River Total Suspended Solids Total Maximum Daily Load (TMDL) Study, Chippewa River & Hawk Creek River TMDL/ Watershed Restoration and Protection (WRAP) Strategy, Yellow Medicine One Watershed One Plan, and Minnesota Department of Transportation Statewide Ports and Waterways Plan	
MONITORING PROGRAM	
Carver County Soil and Water Conservation District (SWCD)	Carver County SWCD monitors East & West Chaska creeks for nutrient occurrence and concentration for the District.

Dakota County SWCD	Dakota County SWCD monitors water levels in observation wells in Savage Fen and Seminary Fen for the District.
Scott County SWCD	Scott County SWCD conducts thermal monitoring and performs continuous stream monitoring for water quality on Eagle Creek.
Metropolitan Council Environmental Services (MCES)	Through the Citizen Assisted Monitoring Program (CAMP), MCES monitors water quality of Courthouse, Firemen's and Brickyard lakes.
United States Geological Survey (USGS)	USGS monitors the stream gage on the Minnesota River at Ft. Snelling and samples bedload, loads, and sediment transport in the Minnesota River through a partnership with the District and the U.S. Army Corps of Engineers.
EDUCATION AND OUTREACH	
Metro Blooms Rainwater Garden Workshops	Contributed $11,800 to Metro Blooms to conduct A & B workshops in the cities of Bloomington (2), Savage, Chanhassen, and Eden Prairie. The District also promoted the workshops on its website and provided in-kind promotional materials to the workshop locations.
Metro Water Festival	2013 – 2016, the District has participated in and sponsored ten (10) classrooms to attend the festival 2013 -2016.
Metro Watershed Partners	Contributed $500 to the Metro Watershed Partners for Clean Water Minnesota advertising program.
Blue Thumb Planting for Clean Water	Maintained Blue Thumb membership, promoted it on the District's website, and volunteered in organized activities such as rain garden workshops.
Carver County Environmental Children's Water Festival	Contributed $500 towards bus transportation from Carver County to the State Fair Grounds.
Barge Tour	Hosted a barge tour on the Minnesota River in September. Tour speakers included representatives from the Minnesota Soybean Growers, U.S. Fish & Wildlife Service, CHS, Upper River Services among others. The Minnesota River Basin legislators were invited to learn about the importance of the navigation channel to the

	Minnesota agricultural economy and the problem upstream sediment poses to navigation.
Magnolia Blossoms Tour	In 2015, the District hosted a tour on the Magnolia Blossom with Riley Purgatory-Bluff Creek Watershed District. Carver County WMO, Nine Mile Creek WD and Nonpoint Education for Municipal Officials (NEMO). Local elected officials were invited and shown a presentation on the problems of urban sediment on the river and what local elected officials could do to manage stormwater runoff and sediment transport and deposition.
Paddle Forward	Sponsored one participant in 2015 Paddle Forward expedition on the Minnesota River by Wild River Academy.
	Hosted a Paddle Forward expedition at the Vernon Ave. dredge site with USGS to explain dredging operations.
The District, with the assistance of its CAC, developed its education plan (2011).	
The District sponsored a raingarden workshop in the City of Shakopee, presented by Scott SWCD.	
Participated in the Minnesota River Congress and became part of the organizing committee; made a presentation at the Fourth River Congress.	
Published educational/informational articles for homeowners on ways to maintain and improve water quality in yard-scapes.	
Funded five projects under Cost Share Incentive and Water Quality Restoration Program (2014).	
9-FOOT CHANNEL AND DREDGE SITE MANAGEMENT	
Unsuccessfully lobbied for $40,000 from the Port Authority Assistance Program and $4 million for the 9-Foot channel.	
Received a $40,000 grant to develop an access road at River Mile 14.7 Dredge Site (2010).	
Investigated two possible sites for the development of an additional dredge material management site below I-35W, as requested by the U.S. Army Corps of Engineers, and prepared a cost estimate for development of a site on Metropolitan Airport Commission property. After unsuccessful attempts to get funding from the State legislature for a second dredge site, the U.S. Army Corps of Engineers was asked to re-evaluate the need for an additional dredge material management site.	
Requested and received an amendment to the Conditional Use Permit (CUP) from the city of Savage. The CUP allows for unlimited truck traffic into and out of the Vernon Avenue facility.	

Secured a commitment from a local contractor to purchase the existing stockpile of dredge material over the course of the next three years and find reuses for it.	
Licensed local industry to place material dredged from private barge slips temporarily at the Vernon Avenue dredge material management site.	
Retained services of LS Marine to manage the dredge materials at 12020 Vernon Avenue in Savage.	
CAPITAL IMPROVEMENT PROJECTS	
Minnesota River Bank and Bluff Stabilization, Eden Prairie	The District participated in an analysis of the Minnesota River bank erosion problem located southwest of the intersection of Riverview Road and Mooer Lane in Eden Prairie.
Brickyard-Clayhole Shoreline Restoration Project	The District partnered with Carver County WMO and the City of Chaska to conduct a shoreline restoration on Brickyard-Clayhole Lake in Chaska. Contributed cost was $1,333.96 (2011).
Carver County Geologic Atlas	The District contributed $2,064.40 towards the completion of the Carver County Geologic Atlas (2011).
Seminary Fen Ravine Stabilization Project	The District partnered with the city of Chaska to secure a $220,000 Clean Water Fund Grant to restore a ravine tributary to Seminary Fen in Chaska.
Dean Lake Paleolimnology Study	Collaborated with Scott WMO and St. Croix Research Station to better understand the trophic and sedimentation history of the lake.
Log Meadow Lake Outfall Project	The District participated in a project with the City of Bloomington to rehabilitate or reconstruct an existing storm sewer outfall to Long Meadow Lake from the Bloomington Central Station area. The project incorporated water quality best management practices needed to provide additional water quality treatment.
Dred Scott Reuse Feasibility Study	The District investigated possibility of capturing and reusing stormwater to irrigate Dred Scott playfields in Bloomington, MN.
Dakota County Fens Project	The District review monitoring data collected on the Dakota County fens (2011 – 2015). The review considered the state of the fens and providing insight on addition monitoring needs.

East Chaska Creek Feasibility Study	The District completed a feasibility study which investigated stabilization and restoration options for East Chaska Creek.
Riley Creek Stream Restoration Feasibility Study	The District participated in the feasibility study, with Riley Purgatory-Bluff Creek WD on Riley Creek. The study investigated the construction of an energy dissipation structure below County State Aid Highway 61 and redirection flows from outside creek's meanders.
Bluff Creek Project	The District participated in a project with Riley Purgatory Bluff Creek WD, the City of Chanhassen, and the Hennepin Rail Authority. The focus of the project was to restore and stabilize an outside bend in the creek, repair undercutting of the tunnel under the Minnesota Bluffs Regional Trail, and to create fish passages into and through the tunnel.