

1 **TABLE OF CONTENTS**

2 **4 IMPLEMENTATION PROGRAM ..... 4-2**

3 4.1 Administrative and managerial.....4-2

4 4.2 Coordination with local, state, and federal governments and non-government

5 organizations.....4-5

6 4.3 Studies and Programs .....4-5

7 4.3.1 Cost-Share Incentive and Water Quality Restoration Program ..... 4-6

8 4.3.2 Dredge Management ..... 4-6

9 4.3.3 Eagle Creek Bank Restoration at Town & Country RV Park Feasibility Study ..... 4-6

10 4.3.4 Education and Outreach Program ..... 4-6

11 4.3.5 Fen Private Land Acquisition Study ..... 4-6

12 4.3.6 Fen Stewardship and Management Program..... 4-7

13 4.3.7 Gully Inventory and Assessment Program ..... 4-7

14 4.3.8 Implementation of the Sustainable Lake Management Plans ..... 4-7

15 4.3.9 Monitoring Program and Detailed Data Assessments..... 4-7

16 4.3.10 Project and Permit Reviews ..... 4-8

17 4.3.11 Seminary Fen Restoration Site C-2 Study ..... 4-8

18 4.3.12 Spring Creek Site 3 Design Feasibility Study..... 4-8

19 4.3.13 Trout Streams Geomorphic Assessments ..... 4-8

20 4.3.14 Watershed Management Plan..... 4-9

21 4.3.15 Water Resources Restoration Fund ..... 4-9

22 4.4 Capital Improvement Projects .....4-9

23 4.5 Funding Mechanisms ..... 4-14

24 4.5.1 Funding Statutes Available to Watershed District..... 4-14

25 4.5.2 Emergency Projects ..... 4-16

26 4.5.3 Proposed Funding Mechanisms ..... 4-16

27 4.5.4 Petitioned Projects ..... 4-17

28

29

30

31 **4 IMPLEMENTATION PROGRAM**

32 This section presents the Implementation Program (Program) for the Plan. The District’s Program  
33 addresses water resources and programmatic issues discussed in Section 2 and applies the goals,  
34 policies, and strategies addressed in Section 3. The District’s Program consists of administrative and  
35 managerial efforts, coordination, studies, programs, capital improvement projects (CIPs), and  
36 funding mechanisms to successfully execute the Plan. Each element is described below. The  
37 Program schedule and budget are presented in Table 4-1. This Program was updated in 2022 after  
38 several studies and CIPs were completed, and the amended Program comprises the years 2023  
39 through 2027. The Program’s estimated impacts on residents and local government are presented in  
40 the next section. The District will review the implementation program every two years, at minimum.

41 **4.1 ADMINISTRATIVE AND MANAGERIAL**

42 Administrative and managerial efforts will be carried out by the District’s administrator. The  
43 administrator, and consultants will perform the District’s day-to-day operations and implement  
44 other elements of the Program, as discussed below. Administrative services also include legal, audit,  
45 and bookkeeping services, office space, office equipment, office rental, information management  
46 systems (e.g., computers, copiers, website, etc.), training, and general engineering services. The  
47 District’s general levy finances these efforts.

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**Table 4-1: Lower Minnesota River Watershed District - Implementation Program Budget for 2023 - 2027**

ACTION	Year				
	2023	2024	2025	2026	2027
<b>EXPENDITURE</b>					
<b>Administrative and Managerial</b>					
General Administrative Services, Conferences, Coordination with LGUs, Stakeholders and other Project Partners, LGU Program Reviews, 9-Foot Channel, and Advisory Committees (Technical and Citizen)	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
<b>Administrative/Managerial Budget Total</b>	<b>\$250,000</b>	<b>\$250,000</b>	<b>\$250,000</b>	<b>\$250,000</b>	<b>\$250,000</b>
<b>Studies and Programs</b>					
Cost Share Incentive and Water Quality Restoration Program	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Dredge Management	\$240,000	\$240,000	\$240,000	\$126,000	\$240,000
Eagle Creek Bank Restoration at Town & Country RV Park Feasibility Study		\$30,000			
Education and Outreach Program	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Fen Private Land Acquisition Study		\$50,000	\$25,000		
Fen Stewardship and Management Program	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Gully Inventory and Assessment Program	\$90,500	\$150,000	\$150,000	\$150,000	\$150,000
Trout Streams Geomorphic Assessments		\$100,000			\$100,000
Monitoring Program and Detailed Data Assessments	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Project and Permit Reviews	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Implementation of the Sustainable Lake Management Plans		\$50,000	\$50,000		\$50,000
Seminary Fen Ravines Site C-2 Feasibility Study	\$20,000	\$40,000			
Spring Creek Site 3 Design Feasibility Study	\$50,000				
Watershed Management Plan				\$50,000	\$100,000
Water Resources Restoration Fund	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
<b>Studies and Programs Budget Total</b>	<b>\$795,500</b>	<b>\$1,055,000</b>	<b>\$860,000</b>	<b>\$721,000</b>	<b>\$1,035,000</b>
<b>Capital Improvements</b>					
Minnesota River Study Area 3 – Bluff Stabilization Project		\$100,000	\$100,000		
Seminary Fen Restoration Site B		\$50,000	\$25,000		
Seminary Fen Ravines Site C-2 and C-3 Design and Construction			\$55,000	\$50,000	\$65,000
Dredge Site Culvert Replacement				\$51,500	
Eagle Creek Bank Restoration at Town & Country RV Park Project			\$69,800	\$90,200	
Eagle Creek Brown Trout Habitat Improvements Project					\$70,000
Minnesota River Floodplain Modeling	\$75,000				
Shakopee Riverbank Stabilization Project		\$50,000	\$50,000		
Spring Creek Sites 1 and 2 Design and Construction Stabilization Project	47,100	\$100,000	\$100,000	\$70,000	
Spring Creek Vegetation Management Project	\$40,000				
Stormwater BMP at Parking Lot near Lewis Street West and Second Avenue West Project	\$50,000	\$50,000			
Vernon Avenue Upgrade at the Dredge Site				\$62,500	
<b>Capital Improvements Budget Total</b>	<b>\$212,100</b>	<b>\$350,000</b>	<b>\$399,800</b>	<b>\$324,200</b>	<b>\$135,000</b>
<b>TOTAL EXPENDITURES</b>	<b>\$1,257,600</b>	<b>\$1,655,000</b>	<b>\$1,509,800</b>	<b>\$1,295,200</b>	<b>\$1,420,000</b>
<b>Revenue</b>					
General Levy	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Planning and Implementation Levy	\$525,000	\$625,000	\$650,000	\$675,000	\$700,000
Metropolitan Council Grant	\$5,500	\$5,500	\$5,500	\$5,500	\$5,500
Dredge Material Management Grant	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000
Grants	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Closed or Unrealized Projects	\$137,100	\$434,500	\$264,300	\$24,700	\$124,500
<b>TOTAL REVENUE</b>	<b>\$1,257,600</b>	<b>\$1,655,000</b>	<b>\$1,509,800</b>	<b>\$1,295,200</b>	<b>\$1,420,000</b>

52 **4.2 COORDINATION WITH LOCAL, STATE, AND FEDERAL GOVERNMENTS AND**  
 53 **NON-GOVERNMENT ORGANIZATIONS**

54 This sub section implements the District’s role as a facilitator. It involves staff coordination with  
 55 local, state, and federal government and non-government organizations, participation in issues  
 56 discussed during the State of Minnesota Legislative session, and collaboration with the COE to  
 57 secure federal funds for the Minnesota River 9-Foot Channel.

58 **Table 4-2: Coordination Strategies with District Partners**

Strategy	Coordination Partner(s)	Schedule
Strategy 1.1.1, 1.2.1, 2.3.1, 2.3.4	LGUs, BWSR, MPCA, Metropolitan Council, SWCDs and neighboring WDs and WMOs	Quarterly at a minimum
Strategy 1.3.3, 2.2.1, 6.1.1-2	LGUs	Annually
Strategy 2.2.3, 2.2.4	LGUs and SWCDs	Annually
Strategy 2.3.1-3, 3.2.1, 4.2.1-3	LGUs, BWSR, MPCA, Metropolitan Council, SWCDs, and neighboring WDs and WMOs	Annually
Strategy 3.3.1	DOH	Annually
Strategy 5.1.2 - 3	LGUs and BWSR	Annually
Strategy 7.1.1	MPCA, LGUs	Annually
Strategy 7.4.1	LGUs, SWCDs and shoreland property owners	Annually
Strategies 8.2.1, 8.2.2, 8.3.1	COE, LGUs	On-going
Strategies 9.1.1-4 and 9.2.1-3	LGUs, TAC, CAC, and SWCDs	On-going, Quarterly

- 59
- 60 **4.3 STUDIES AND PROGRAMS**
- 61 Studies and programs for the 2023-2027 Implementation Program include the following:
- 62 ● Cost Share Incentive and Water Quality Restoration Program (All strategies)
  - 63 ● Dredge Management (Strategies 1.1.1, 8.1.2, 8.2.2, and 8.3.1)
  - 64 ● Eagle Creek Bank Restoration at Town & Country RV Park Feasibility Study (Strategies 4.2.1 and  
65 7.4.1)
  - 66 ● Education and Outreach Program (Strategies 1.2.1, 4.2.3, 8.1.1, 9.1.1-4 and 9.2.1-3)
  - 67 ● Fen Private Land Acquisition Study (Strategy 4.3.1)
  - 68 ● Fen Stewardship Program (Strategies 1.1.1 and 2.3.3)
  - 69 ● Gully Inventory and Assessment Program (Strategy 7.3.1)
  - 70 ● Implementation of the Sustainable Lake Management Plans (Strategies 3.2.1-2 and 3.3.1)
  - 71 ● Monitoring Program and Detailed Data Assessments (Strategies 2.3.1-2 and 3.3.1)
  - 72 ● Project and Permit Reviews (Strategies 1.1.1, 1.3.1., 3.2.2, 4.2.2, and 5.1.3)
  - 73 ● Seminary Fen Restoration Site C-2 Study (Strategies 4.1.1 and 7.4.1)

- 74 ● Spring Creek Site 3 Design Feasibility Study (Strategy 7.4.1)
- 75 ● Trout Streams Geomorphic Assessments (Strategies 4.2.1)
- 76 ● Watershed Management Plan (All Strategies)
- 77 ● Water Resources Restoration Fund (Strategies 1.1.1, 3.2.1-2, and 3.3.1)

78 Budgets for each study and program, with expenses beyond staff time, are shown in Table 4-1.  
 79 These preliminary budgets are reviewed and approved annually. Revenue for the operation and  
 80 management of the District is primarily through the District’s planning and implementation levy.

81 **4.3.1 Cost-Share Incentive and Water Quality Restoration Program**

82 The District values and supports efforts made by residents to help achieve its goals. Through  
 83 the Cost Share Incentive and Water Quality Restoration Program, the District hopes to  
 84 engage citizens in community actions that protect local lakes, rivers, streams, wetlands, and  
 85 fens. Eligible applicants must meet eligibility criteria and apply to and be approved by the  
 86 Board of Managers. The cost share and incentives will be reviewed annually. Program  
 87 effectiveness will be measured in two ways: 1) by comparing water quality trends before and  
 88 after projects are implemented, and 2) by how many projects are funded through the  
 89 program.

90 **4.3.2 Dredge Management**

91 The District will continue its role as the local sponsor responsible for providing placement sites for  
 92 the Army Corps of Engineers. The purpose is to place dredge material from the Minnesota River  
 93 and maintain a 9-foot-deep river channel. This program includes the identification of locations to  
 94 temporarily store dredge material from the river, private dredge spoil disposal and transfer, and  
 95 other beneficial uses of the dredge material.

96 **4.3.3 Eagle Creek Bank Restoration at Town & Country RV Park Feasibility Study**

97 Signs of hillslope failure have been observed near the campground on Main Branch of Eagle Creek  
 98 which is an added environmental stressor on the stream. The District will assess the eroding banks  
 99 at the campground and determine the urgency for stabilization on Eagle Creek.

100 **4.3.4 Education and Outreach Program**

101 The District’s education and outreach program consists of maintaining a Citizen Advisory  
 102 Committee, various social media accounts, and outreach to schools, partners, and non-governmental  
 103 organizations. Editing and updating the District’s website is an on-going function.

104 **4.3.5 Fen Private Land Acquisition Study**

105 To preserve and protect fens in the District in perpetuity, the District will map and assess the values  
 106 of adjacent private properties to each fen and work with corresponding municipalities, to consider  
 107 opportunities to purchase private fen land for conservation. If land acquisition is not feasible, the

108 District will consider opportunities to develop agreements with private property owners to ensure  
109 management of each fen is consistent and comprehensive.

#### 110 **4.3.6 Fen Stewardship and Management Program**

111 The District, in partnership with the DNR and Metropolitan Council, will develop a fen stewardship  
112 program for the District's fens. The effort will review historical data, assess current conditions, and  
113 develop a road map for restoration, preservation, and protection of the District's fens. Management  
114 plans or sustainability reports will be developed for all fens (starting with Seminary Fen and Savage  
115 Fen) to effectively manage and protect these groundwater-dependent resources.

#### 116 **4.3.7 Gully Inventory and Assessment Program**

117 The District performs routine gully inventories to provide information to municipalities within the  
118 watershed district on the current conditions of gullies and pipe outfalls; it also identifies new  
119 locations that may be contributing sediment into the Minnesota River. Once each gully inventory is  
120 complete, the District will coordinate collaboration sessions with city partners and other potential  
121 stakeholders to review findings, discuss high-priority sites, and strategize ways to stabilize gullies,  
122 repair outfalls, and prevent sediment from entering the Minnesota River.

#### 123 **4.3.8 Implementation of the Sustainable Lake Management Plans**

124 In 2019, the District developed Sustainable Lake Management Plans (SLMPs) for trout lakes  
125 within its boundary. Going forward, the District plans to implement the recommended  
126 management strategies from the SLMPs, such as routine vegetation surveys and temperature  
127 profiling.

#### 128 **4.3.9 Monitoring Program and Detailed Data Assessments**

129 The District will continue to perform water quantity and quality monitoring of resources  
130 within the boundaries of the District. The District's Monitoring Plan will be updated to  
131 include the geochemistry recommendations from the Fens Sustainability Gaps Analysis  
132 report and the monitoring parameter recommendations from the Quarry Lake Sustainable  
133 Lake Management Plan report.

134 Over the past few years, the District has collected a large quantity of water quality data. The  
135 Plan includes a preliminary assessment of lake water quality data. However, the last  
136 comprehensive data evaluation was completed in 2000. Periodic data evaluations are  
137 necessary to convert data into information that decision makers can use. Data collected for  
138 each water resource will be evaluated on a 3-year or 5-year cycle. As part of Strategy 1.3.1, all  
139 water resources within the watershed will be evaluated. An outcome of Strategy 1.3.1 will be

140 groupings of water resources into High, Medium, and Low categories for detailed data  
141 assessments and timetables formulated for each category.

#### 142 **4.3.10 Project and Permit Reviews**

143 Through this permitting process, the District works with property owners and local governments to  
144 manage and regulate activities related to soil erosion and sediment control, floodplain and drainage  
145 alteration, stormwater management, and development on steep slopes within the boundaries of the  
146 District. Project and permit reviews will be performed to determine compliance with the District's  
147 rules and to protect the public's health and welfare, as well as the natural resources of the District.

#### 148 **4.3.11 Seminary Fen Restoration Site C-2 Study**

149 Seminary Fen Ravine Site C-2 is actively discharging sediment into the Seminary Fen Wetland  
150 Complex. This project will conduct a ravine study to estimate the sediment contribution to the  
151 Seminary Fen from the C-2 site and provide approaches and cost estimates for correcting the  
152 erosion problems.

#### 153 **4.3.12 Spring Creek Site 3 Design Feasibility Study**

154 Site 3 at Spring Creek is prioritized as a top at-risk site for erosion; however, a stabilization design  
155 has not been developed. The District will work with the landowner and the Carver Soil and Water  
156 Conservation District to conduct a feasibility study to determine the best approach to stabilize the  
157 area.

#### 158 **4.3.13 Trout Streams Geomorphic Assessments**

159 The trout streams geomorphic assessments will consider changes in trout stream alignment,  
160 baseflow, geometry, and selected stream reaches. Stream width-to-depth ratios, stream bed slope,  
161 meander pattern, and other bed features shall be modeled according to a stable reference reach.  
162 Reference reaches are nearby, hydrologically, and geomorphically stable stream segments. A  
163 reference reach could be upstream or downstream, or in a nearby watershed. This assessment is  
164 generally considered twice during the Plan cycle.



165 **4.3.14 Watershed Management Plan**

166 The District’s Watershed Management Plan describes how the District will address water resources  
167 management over a period of 10 years. The District’s current plan will expire in 2027 and will  
168 require updates to plan the next 10 years of water resources management within the watershed  
169 district’s boundaries.

170 **4.3.15 Water Resources Restoration Fund**

171 This broad-based fund implements Goals 2 and 3, which are to protect, improve, and restore surface  
172 water and groundwater quality within the District. This program will fund projects sponsored by  
173 LGUs that reduce urban nonpoint source pollution, improve, and protect groundwater quality, and  
174 promote surveys and studies of wetland (fen) health and management. Program effectiveness will be  
175 measured in two ways: 1) by comparing water quality trends before and after projects are  
176 implemented, and 2) by how many projects are funded through the program.

177 **4.4 CAPITAL IMPROVEMENT PROJECTS**

178 Water management organizations that have adopted a watershed management plan, in accordance  
179 with M.S. 103B.231, may certify for payment by the counties all or any part of the cost of capital  
180 improvement projects (CIPs) contained in the capital improvement program of the Plan. A copy of  
181 the Plan shall be forwarded to the county boards.

182 The District is required to hold a public hearing on the proposed CIP. The public hearing details  
183 must be published in a legal newspaper once a week for two successive weeks in counties that have  
184 affected waters and lands. The last publication shall occur not more than 30 days, or less than 10  
185 days before the hearing. The notice shall state the hearing’s time and place, the general nature of the  
186 proposed improvement, the estimated cost, and the cost improvement’s payment method, including  
187 the cost allocated to each county. At least 10 days before the hearing, the District shall send notices  
188 by mail to the counties, to each home rule charter, or to each statutory city or town located wholly  
189 or partly within the District’s territory. The District recognizes that failure to mail a notice (or failure  
190 to provide a notice without defects) shall not invalidate the proceedings. After the proceedings and  
191 assessment statements have been filed with the auditor, each affected county shall pay its  
192 apportioned share of the project’s total cost based on the engineer’s reports or managers’ order.

193 Table 4-3 contains descriptions and planning level cost estimates for the CIP identified for the  
194 period between the Plan amendment completed in 2022 and the biennial Plan review.

Table 4-3: Lower Minnesota River Watershed District – Capital Improvement Projects

Project Name	Project Descriptions	Project Partner	Estimated Cost	Estimated Timeline
<i>Capital Improvement Projects</i>				
Minnesota River Study Area 3 – Bluff Stabilization Project	To address riverbank erosion, we will analyze the design and construction of the Minnesota River at Study Area 3 project in Eden Prairie. A study was completed in October 2008 for the City of Eden Prairie in cooperation with the district. Our project will expand the 2008 study by collecting and analyzing additional data that will extend to the final design, permitting, and construction.	City of Eden Prairie	\$200,000	2022 - 2025
Minnesota River Floodplain Modeling	The Lower Minnesota River Floodplain Model Feasibility Study determined that the hydrologic and hydraulic modeling commonly used to regulate development in the floodplain and evaluate Rule C permits are out of date. The hydrologic statistical analysis, based on the USGS streamgage at Jordan, has not been updated in 20 years, missed four of the top ten recorded floods on the Minnesota River and must be re-evaluated to determine the flood flows within the LMRWD reach. Following the hydrologic update, the hydraulic model of the Lower Minnesota River should be comprehensively updated to incorporate recent developments in the floodplain, the revised flow data, and better data were available to evaluate the flood risk within the Lower Minnesota River floodplain. The initial capital investment of updating the hydrology and hydraulic model will be followed by annual updates to maintain the hydraulic model and incorporate the most recent data from municipalities and LMRWD permits.	Army Corps of Engineers	\$75,000	2023
Spring Creek Vegetation Management Project	The creek will be prone to further erosion without the added protection of adequate vegetation. Vegetation management (e.g., removal of invasives, native plantings, etc.), particularly in the floodplain and channel banks, will be explored with the property owners.	Carver SWCD	\$40,000	2023
Stormwater BMP at Parking Lot near Lewis Street West and Second Avenue West Project	This stormwater best management practice project will be coordinated with the parking lot rehabilitation near Lewis Street West and Second Avenue West near Pablo's restaurant in Shakopee. The project focuses on providing water quality treatment to untreated stormwater runoff that is routed directly to the Minnesota River.	City of Shakopee	\$750,000 (District's Contribution: \$50,000)	2023 - 2024
Seminary Fen Restoration Site B	A partially drained 17-acre wetland from Falls Curve Road to Old Highway 12, which is predominantly growing reed canary grass, will be restored. The restoration involves disabling the drainage system and restoring vegetation.	City of Chaska and MNDNR	\$75,000	2024 - 2025
Shakopee Riverbank Stabilization Project	This project will include stabilizing sections of the Minnesota River riverbank that are eroding along the City of Shakopee's parallel trunk sanitary sewer line that flows to L-16 and other storm sewer outlets.	City of Shakopee	\$5,280,000 (District's contribution: \$100,000)	2024 – 2025
Spring Creek Site 1 and 2 Stabilization Project	After the vegetation management project is complete, Site 1 and Site 2 along Spring Creek will be stabilized using the Carver SWCD's designs (increased riprap size and standard gradation recommended).	Carver SWCD	\$270,000	2024 - 2026
Eagle Creek Bank Restoration at Town & Country RV Park Project	The District will develop a design and stabilize the hillslope failure near the campground on Main Branch of Eagle Creek to reduce sedimentation to the creek.	MNDNR, City of Savage	\$160,000	2025 - 2026
Seminary Fen Ravines Site C-2 and C-3 Design and Construction	The final design and construction will be done for the Ravine Sites C-2 and C-3, which are discharging sediment into the Seminary Fen Wetland Complex.	City of Chaska and DNR	\$170,000	2025 - 2027

Project Name	Project Descriptions	Project Partner	Estimated Cost	Estimated Timeline
Dredge Site Culvert Replacement	A culvert near the site entrance needs to be removed and replaced. The District will work with the Army Corps of Engineers to perform the culvert replacement.	Army Corps of Engineers	\$51,500	2026
Vernon Avenue Upgrade at the Dredge Site	Approximately two-thirds of a mile of Vernon Avenue (from Hwy 13 to the site entrance) requires upgrading to allow for increased truck traffic. The District will coordinate with the Army Corps of Engineers to upgrade Vernon Avenue.	Army Corps of Engineers	\$62,500	2026
Eagle Creek Brown Trout Habitat Improvements Project	Background research indicates the East Branch historically has been able to support a more reliable brown trout population despite having some of the worst habitat conditions in the watershed. The District will complete habitat improvements in the East Branch to support brown trout populations.	MNDNR, USFWS	\$70,000	2027
<b>Potential Projects - Unfunded</b>				
Courthouse Lake Native Restoration	Multiple projects are underway around Courthouse Lake to restore both the shoreline and turfed areas to a native setting.	Carver SWCD, CCWMO	\$75,000	2023 - 2027
Big Woods and Hazeltine Lake Goldfish Management Program	A feasibility study is currently underway to produce a management plan for goldfish control on Big Woods and Hazeltine Lakes. Depending on the outcomes of the study, long term management will follow the outline provided in this study.	MNDNR, CCWMO	\$100,000	2023 - 2027
Chaska Creek Bank Stabilization	Streambank erosion is present along Chaska Creek between Hwy 212 and Creek Road in Chaska contributing TSS and TP to Chaska Creek, especially during period of high flow. Potential project areas will be identified and implemented in coordination with City of Chaska's Creek Rd redevelopment projects.	City of Chaska, CCWMO	\$332,000	2023 - 2027
Stormwater Pollutant Reduction in Untreated and Undertreated Urban Areas - East Chaska Creek Chain of Lakes	The District and Carver WMO will work with City of Chaska to identify areas where additional stormwater treat will provide additional nutrient removal within the East Chaska Creek Chain of Lakes Watershed. Priority will be given to project that provide TP reductions to help meet TMDL goals for impaired waters of Hazeltine, Jonathon, and McKnight Lakes.	City of Chaska, CCWMO	\$100,000	2023 - 2027
East Chaska Creek Chain of Lakes Ravine Stabilizations	Ravines draining to the Chain of Lakes are contributing both sediment and phosphorus to the lake. These projects will stabilize slopes and manage stormwater discharge to reduce the amount of sediment reaching adjacent lakes.	City of Chaska, CCWMO	\$150,000	2023 - 2027
SW Chaska Ravine Stabilizations	Ravines ultimately draining to the Minnesota River are contributing both sediment and phosphorus to the river. These projects will stabilize slopes and manage stormwater discharge to reduce the amount of sediment discharging downstream.	City of Chaska, CCWMO	\$200,000	2023 - 2027
SW Chaska Wetland Preservation and Enhancements	Future development of this area of Chaska may provide opportunities for wetland preservation or enhancements. Priority for project locations will be based upon the Wetland Restoration Assessment of the 2020 Water Plan.	City of Chaska, CCWMO	\$100,000	2023 - 2027
Big Woods Lake Gully Restoration	One ravine has been identified as a potential project site to restore. Restoration will reduce the amount of sediment and phosphorus that will reach Big Woods Lake.	City of Chaska, CCWMO	\$150,000	2023 - 2027
Lower Minnesota River Sediment Analysis	Previous analysis of how sedimentation has changed in the floodplain of the Lower Minnesota River has involved using pollen assemblages to date horizons. However, further analysis is required to confirm that the interpreted horizons are correct. The District will use dating of the stored	Freshwater Society, U of M	\$12,500	2024

Project Name	Project Descriptions	Project Partner	Estimated Cost	Estimated Timeline
	core material to date the sediment to provide a more accurate understanding of sedimentation in the floodplain.			
Minnesota River Assessment of Ecological and Economic Impacts of Sedimentation	<p>This project will examine sedimentation in the Lower Minnesota River Watershed by monitoring, modeling, and analyzing sediment sources, sinks, and pathways in the watershed; summarizing how sources, sinks, and pathways may have changed; and estimating the economic and ecological effects of sedimentation. The project team will look at how sedimentation (1) changes the stage-discharge relationships that may cause flooding, (2) generates costs to maintain a commercial navigation channel on the Minnesota River, and (3) affects the ecological conditions of the watershed. Through these analyses, a new baseline could be established, and an understanding created of how changes in land use alter the watershed baseline and create a new condition.</p> <p>In addition, the District will pursue upstream flow management that is consistent with recommendations of the NCED group using the Management Option Simulation Tool (MOSM) in the Le Sueur watershed and similar approaches in other watersheds to mitigate this issue.</p>	Army Corps of Engineers	\$162,500	2024 - 2027
Minnesota River Assessment of Water Storage Benefits and Opportunities	Using the Agricultural Conservation Planning Framework (ACPF) and the Prioritize, Target, and Measure Application (PTM app), we will determine whether a flow reduction would benefit from the placement of storage measures in key locations throughout the basin. This analysis will help us understand if the threshold for meaningful change can be realized to recommend specific levels of storage in the basin. The analysis is needed to accomplish the desired outcomes: (1) hydrocorrect DEMs for the lower watershed where storage impacts are desired, (2) run ACPF on priority sub-basins to determine where storage opportunities exist, (3) develop a detailed hydrologic model if one does not exist, (4) run existing and storage scenarios to determine whether the amount of the discharges could be lowered for hypothetical rainfall events ranging from 10-year to 100-year events, and (5) summarize the saturation of storage and the maximum change anticipated in the specific agro-ecoregion.	Army Corps of Engineers	\$150,000	2024 - 2027
East Chaska Creek Chain of Lakes SWA Implementation	The District will collaborate with the City of Chaska to implement strategies identified in the East Chaska Creek Chain of Lakes Subwatershed Analysis Feasibility Study. Projects would reduce impervious surfaces and add stormwater treatment for currently untreated areas and improve the quality of stormwater runoff reaching the East Chaska Creek Chain of Lakes. Projects will be completed as time and funding allow.	City of Chaska, Carver County Watershed Management Organization (CCWMO)	\$200,000	2024 - 2027
Schroeder's Acre Park Water Reuse	This project consists of providing irrigation to three baseball diamonds and soccer fields with water supplied by the stormwater pond in the park.	City of Savage	\$370,000	2024 - 2027
Schroeder's Acres Park Alum Treatment	The City of Savage proposes to conduct an alum treatment at Schroeder's Acres. This would prevent 12 to 24 pounds of total phosphorus (TP) from entering Eagle Creek each year.	City of Savage	\$35,600	2024 - 2027
BF Nelson Pond Alum Treatment	The City of Savage proposes to conduct an alum treatment at the BF Nelson Pond. This would prevent 22 to 44 pounds of TP from entering Eagle Creek each year. Each dose is expected to cost \$39,900. Doses need to be applied every five years. Alum treatment here has a total cost of \$199,500 over 25 years.	City of Savage	\$39,900	2024 - 2027

Project Name	Project Descriptions	Project Partner	Estimated Cost	Estimated Timeline
Wyoming Avenue Stormwater Structure	The Wyoming Avenue Stormwater Structure includes the installation of a water quality treatment structure in an untreated industrial land use that discharges directly to Eagle Creek at TH 101.	City of Savage	\$668,600	2024 - 2027
TH 13 Stormwater Structure	This proposed project consists of installing an underground stormwater treatment structure in the right-of-way south of Trunk Highway 13. The structure would work in conjunction with the previously mentioned structure along Wyoming Avenue South to provide treatment to over 13 acres of industrial runoff currently flowing directly into Eagle Creek.	City of Savage	\$240,100	2024 - 2027
Zinran Avenue Stormwater Structure	This proposed project would consist of installing an underground stormwater treatment structure along Zinran Ave. The structure would provide treatment to over 18 acres of commercial runoff currently not being treated by the City of Savage.	City of Savage	\$168,800	2024 - 2027
Eagle Creek Parkway Bank Stabilization	This proposed project would stabilize banks underneath the Eagle Creek Parkway bridge crossing the East Branch of Eagle Creek. The creek is currently estimated to be eroding an average of 2 inches per year, which could deposit approximately 8,600 lbs. of sediment into the creek annually.	City of Savage	\$106,00	2024 - 2027
Covington Pond Filtration Bench	This proposed project consists of an intensive pond restoration plan for the basins on the City-owned parcel at Ensign Ave and 125th St W. A filtration bench would be placed between the existing ponds to provide additional treatment to a large portion of residential and upstream drainage areas.	City of Savage	\$315,200	2024 - 2027
Preserve Trail Stormwater Structure	This proposed project would install an underground stormwater treatment structure on the western portion of a parcel owned by the Savage Economic Development Authority. The structure would provide treatment to over 17 acres of residential runoff prior to it entering the large storm basin in the business park.	City of Savage	\$558,300	2024 - 2027
Carver Creek Gully Stabilization	The District will collaborate with the Carver WMO to stabilize a large gully on Carver Creek in Dahlgren Township (Section 26).	Carver SWCD, NRCS, CCWMO	\$40,000	2025
Dahlgren Road Stormwater Retrofit	The District will collaborate with the Carver WMO to address stormwater issues along Dahlgren Road west of County Road 11. Stormwater from the road surface currently drains untreated to Timber Creek, a tributary of Carver Creek.	Dahlgren Township, City of Carver, CCWMO	\$40,000	2025
Grace Lake Ravine Stabilizations	Ravines on the northwest side of Lake Grace are contributing both sediment and phosphorus to the lake. These projects will stabilize and reduce the amount of sediment reaching Lake Grace.	City of Chaska, CCWMO	\$300,000	2025 - 2027
East Chaska Creek Chain of Lakes Reclamation - Phase 2	The District will collaborate with the Carver WMO to implement methods to control carp populations and improve water quality in the East Creek Chain of Lakes as identified in the Drawdown Feasibility Study. This phase would focus on Big Woods, McKnight, Jonathan and Grace Lakes.	City of Chaska, CCWMO	\$225,000	2027

197 **4.5 FUNDING MECHANISMS**

198 Laws regarding project funding are different between metropolitan WDs and WMOs, and out-  
199 state watershed districts. M.S. Chapter 103D applies to all watershed districts, while Chapter  
200 103B applies only to the Minneapolis/St. Paul metropolitan area watershed districts and WMOs.  
201 Because the District is both a watershed district and in the metropolitan area, both sets of  
202 statutes apply. This section provides a summary of the funding sources available to the District,  
203 followed by a discussion of the District’s proposed funding method(s).

204 **4.5.1 Funding Statutes Available to Watershed District**

205 **4.5.1.1 Special Assessments**

206 **M.S. 103D.601** allows a project to be instituted by resolution by a majority of the watershed  
207 district managers. The project must be financed by grants totaling at least 50 percent of the  
208 estimated cost, and the engineer's estimate of costs to parties (including assessments against  
209 benefited properties but excluding state, federal, or other grants) must not be more than  
210 \$750,000. Initiated projects using this procedure must be paid for by special assessments against  
211 benefitting properties. Benefitted properties are defined in M.S. 103D.725.

212 **M.S. 103D.701** requires that to initiate projects, watershed districts must first have a BWSR-  
213 approved watershed management plan. Projects that are to be paid for by assessment of  
214 benefited property must be initiated by a petition, by unanimous resolution of the managers, or  
215 by some other method prescribed in statute.

216 **M.S. 103D.705** provides for cities or residents to petition a watershed district for a project that  
217 generally conforms to the watershed management plan. The petitioners must guarantee the  
218 funds used to pay for the project’s preliminary feasibility studies.

219 **4.5.1.2 Ad Valorem Taxes**

220 **M.S. 103D.905** allows watershed district managers to use a portion of their administrative fund  
221 for project construction and maintenance beneficial to the watershed district. The upper limit of  
222 this fund is \$250,000 per year for the District. This also authorizes watershed district managers  
223 to levy a tax over the entire watershed district (an ad valorem tax) to pay the cost attributable to  
224 the basic water management features of projects initiated by petition of a municipality or  
225 political subdivision, or at least 50 resident owners whose property lies within the watershed.  
226 The levy may not exceed 0.00798 percent of the taxable market value for a period not to exceed  
227 15 consecutive years.

228 *Procedure for Projects to be Funded Using M.S. 103D.905, Subd. 3*  
229 *(Basic Water Management Features Projects)*

230 Formal minor plan amendments are not required for projects funded using the additional levy  
231 allowed under M.S. 103D.905, Subd. 3. Therefore, the District will follow an informal proposed

232 project information process to inform the LGUs about these proposed projects. The District  
233 will distribute the proposed project information to the affected LGUs for review and comment,  
234 but not to the state review agencies or the Metropolitan Council. The BWSR will not take formal  
235 action, because it is not a formal amendment.

236 **M.S. 103B.231** requires watershed districts within the Twin Cities metropolitan area to prepare a  
237 water management plan. The statute requires that a capital improvement project be part of the  
238 Plan. For those improvements included in the plan M.S. 103B.231, Subd.10 and M.S. 103D.605,  
239 allow watershed districts to implement projects without a petition. According to these statutes,  
240 watershed districts may levy ad valorem taxes to pay for capital improvements (including  
241 maintenance of improvements) either over the entire watershed district (M.S. 103B.241), or over  
242 all property within a portion or subwatershed of the watershed district (M.S. 103B.251). M.S.  
243 103B.241, like M.S. 103D.729, also allows watershed districts to accumulate funds to finance  
244 improvements as an alternative to issuing bonds. For the District to use either funding  
245 mechanism, the District must adequately describe the projects, studies, and project maintenance  
246 in the Plan. The Plan must also specify that the source of funding will be in accordance with  
247 these statutes. Currently there is no levy limit.

248 The advantage of using M.S. 103B.231 (Subd. 10) and 103B.241 is that a hearing is not required  
249 for each project. If the capital improvement project is specified in the Plan, the watershed  
250 district need only conduct an annual hearing on the entire capital improvement program, in  
251 accordance with M.S. 103B.241. Under M.S. 103B.241, projects are paid for by an ad valorem  
252 tax over the entire watershed district.

253 **M.S. 103B.251**, on the other hand, allows the watershed district to set up a special taxing district  
254 or subwatershed over which funds are raised by an ad valorem tax. M.S. 103B.251 requires that  
255 (a) a copy of the Plan be filed with the county, (b) a special improvement hearing be held for the  
256 capital improvement projects, and (c) the county raises the funds by selling bonds paid for by an  
257 ad valorem tax over the subwatershed/special tax district.*4.5.1.2.1 Procedure for Projects to be*  
258 *Funded Using M.S. 103B.241 or M.S. 103B.251*

259 Formal minor plan amendments will be required for projects funded under M.S. 103B.241 or  
260 M.S. 103B.251 that are not described in sufficient detail in the Plan. The District will follow the  
261 formal minor plan amendment process of MN Rules 8410.0140 for these types of projects. The  
262 formal process requires that the District distribute the plan amendment to the affected local  
263 units of government, the Metropolitan Council, and the state review agencies (including BWSR)  
264 for review and comment. The counties will have 90 days from receipt of the minor plan  
265 amendment to either approve or disapprove the amendment, and to hold any public hearings  
266 regarding the amendment. Unless the District agrees to an extension, if a county fails to  
267 complete its review within the prescribed period, the amendment will be deemed approved by  
268 that county. The proposed amendment will be deemed as a minor amendment if either BWSR

269 agrees that the amendment is a minor amendment, or BWSR fails to act within 45 days of  
270 receipt of the minor plan amendment.

#### 271 *4.5.1.2.2 Procedure Following Approval of Proposed Project Information or Minor Amendment*

272 Following approval of the proposed project information or minor amendment, and prior to  
273 advertising for project bids, the District will hold at least one additional public hearing to review  
274 the final design of the proposed project. At this point, the District shall have completed the final  
275 design plans and specifications necessary for the contract bidding process and construction.  
276 Although this last stage of public hearings is not required by statute, the public and other  
277 interested parties will have an additional opportunity to review and comment on the details of  
278 the proposed project.

#### 279 **4.5.1.3 Utilities and Fees**

280 Like stormwater utilities for cities, M.S. 103D.729 allows watershed districts to establish a water  
281 management district, or a subwatershed within the District, for collecting revenues and paying  
282 project costs initiated under M.S. 103B.231, M.S. 103D.601, 605, 611, or 730. For the District to  
283 use this funding mechanism, it must be included in its Plan, or the Plan must be amended to  
284 include this funding mechanism in accordance with 103D.411 or 103D.231 and in compliance  
285 with subdivisions 3 and 4.

#### 286 **4.5.2 Emergency Projects**

287 **M.S. 103D.615** allows watershed district managers to declare an emergency and order work to  
288 be done without a contract. The cost of work can be paid for either by special assessment  
289 against benefitted properties or an ad valorem tax levy, if the cost is not more than 25 percent of  
290 the most recent administrative ad valorem levy.

291 **M.S. 103B.252** allows watershed districts to declare an emergency and order work to be done  
292 without a contract. M.S. 103B.252 is like M.S. 103D.615, except it does not contain levy limits.  
293 In addition to the abovementioned funding sources, the District could receive funding from  
294 various state, federal, and private sources, such as grant and loan programs. This affords the  
295 District the opportunity to use grants and loans for projects instead of county-issued bonds.

#### 296 **4.5.3 Proposed Funding Mechanisms**

297 The District has financed its past administrative, program, and project costs through its annual  
298 administrative fund ad valorem tax levies under the authority of the Watershed Act (M.S.  
299 103D.905). The District's administrative fund levy limit is \$250,000. The District's administrative  
300 fund is used only for initiatives that benefit the water resources of the District; it is not used for  
301 projects that benefit commercial navigation. Many of the District's efforts and funding have  
302 been put toward activities that address water quality, runoff management, or flood control  
303 problems and issues. In the past, the District has maintained a capital reserve fund consisting of  
304 any unused portions of previous administrative levies.



305 Both the Watershed Act, referenced above, and the Metropolitan Surface Water Management  
306 Act (M.S. 103B.201 *et seq.*) provide additional revenue generating authority to the District. For  
307 projects creating a unique benefit to individual properties, the District may adopt and levy  
308 benefits assessments against project-benefitted properties. For projects and programs of  
309 District-wide benefit, that are included in the District’s CIP, the District may impose an  
310 additional ad valorem tax levy to generate the revenue necessary to implement programs and  
311 projects on its CIP. For special water or resource management projects, the District may  
312 establish a water management district within which it may impose a water management charge to  
313 pay for basic water management activities made necessary by land uses with in the Water  
314 Management District.

315 Other than the administrative fund, all revenue generating authorities of the District require  
316 strict compliance with administrative proceeding requirements found in the Watershed Act and  
317 Metropolitan Surface Water Management Act.

#### 318 **4.5.4 Petitioned Projects**

319 The District will place a priority on petitioned projects that are identified as implementation  
320 projects in future resource plans. The advantages of a petition process are: 1) the statute sets  
321 forth a definite process for the petition and subsequent actions; 2) the managers are required to  
322 decide whether to order the project; and 3) if additional funding is needed, the statute allows for  
323 ad valorem funding of these petitioned projects. The disadvantage of the petition process is that  
324 it may require more lead time to approve a project than the current District process.

325 M.S.103D.905, subd.3 allows the District to levy an additional ad valorem tax over the entire  
326 District to pay for the basic water management features of projects that have been initiated by a  
327 petition of a municipality within the watershed. The managers anticipate funding projects using  
328 this authority, except projects that benefit navigation. If no city petitions the District for a  
329 project which the District believes is a priority, the District may consider initiating the project  
330 under the provisions of Chapter 103.