Lower Minnesota River Corridor Management Plan

LOWER MINNESOTA RIVER
WATERSHED DISTRICT

Lower Minnesota River Watershed District

Revision 0
2022

Lower Minnesota River Corridor Management Plan

prepared for

Lower Minnesota River Watershed District
Chaska, Minnesota

Revision 0
2022

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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
ADA	American Disabilities Act
BMP	Best Management Practice
BWSR	Board of Water and Soil Resources
CIP	Capital Improvement Plan
LMRWD	Lower Minnesota River Watershed District
MDH	Minnesota Department of Health
MNDNR	Minnesota Department of Natural Resources
MPCA	Minnesota Pollution Control Agency
PCBs	Polychlorinated Biphenyls
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WD	Watershed District
WMO	Watershed Management Organization

ACKNOWLEDGEMENTS

This plan would not have been possible without the support and partnership of agencies, organizations, and other stakeholders who are vested in the future of the Lower Minnesota River. We extend sincere appreciation to the following organizations (in alphabetical order) for their contributions to this plan.

- Board of Soil and Water Resources
- Carver Soil and Water Conservation District
- City of Bloomington
- City of Carver
- City of Chanhassen
- City of Eagan
- City of Eden Prairie
- City of Mendota Heights
- City of Savage
- City of Shakopee
- Dakota County
- Isaac Walton League of America, Minnesota Valley Chapter
- Lower Minnesota River Watershed District Board of Managers, Citizen Advisory Committee, and staff
- Metropolitan Council
- Minnesota Pollution Control Agency
- Scott County
- Shakopee Mdewakanton Sioux Community
- Riley-Purgatory Bluff Creek Watershed District
- Three Rivers Park District

1.0 PLAN INTRODUCTION, PURPOSE, AND SCOPE

The Lower Minnesota River and its watershed are unlike any other. The Lower Minnesota River corridor is dynamic, offering a vital ecosystem for many species both in the river and on land while also supplying water for recreation, growing crops, manufacturing, energy, and transport. From recreation to agriculture and development, the corridor and the way it is managed have a direct impact on people's lives and the overall integrity of the river system.

Upstream pressures result in many impacts seen in the Lower Minnesota River watershed. These pressures result in a decrease in water quality, an increase in flooding, the loss of wetlands, and continuous change in the landscape. The Lower Minnesota River Watershed District is situated downstream of the Minnesota River and therefore has been experiencing a significant impact on water quality at the watershed caused by the negative effects of the upstream pressures.

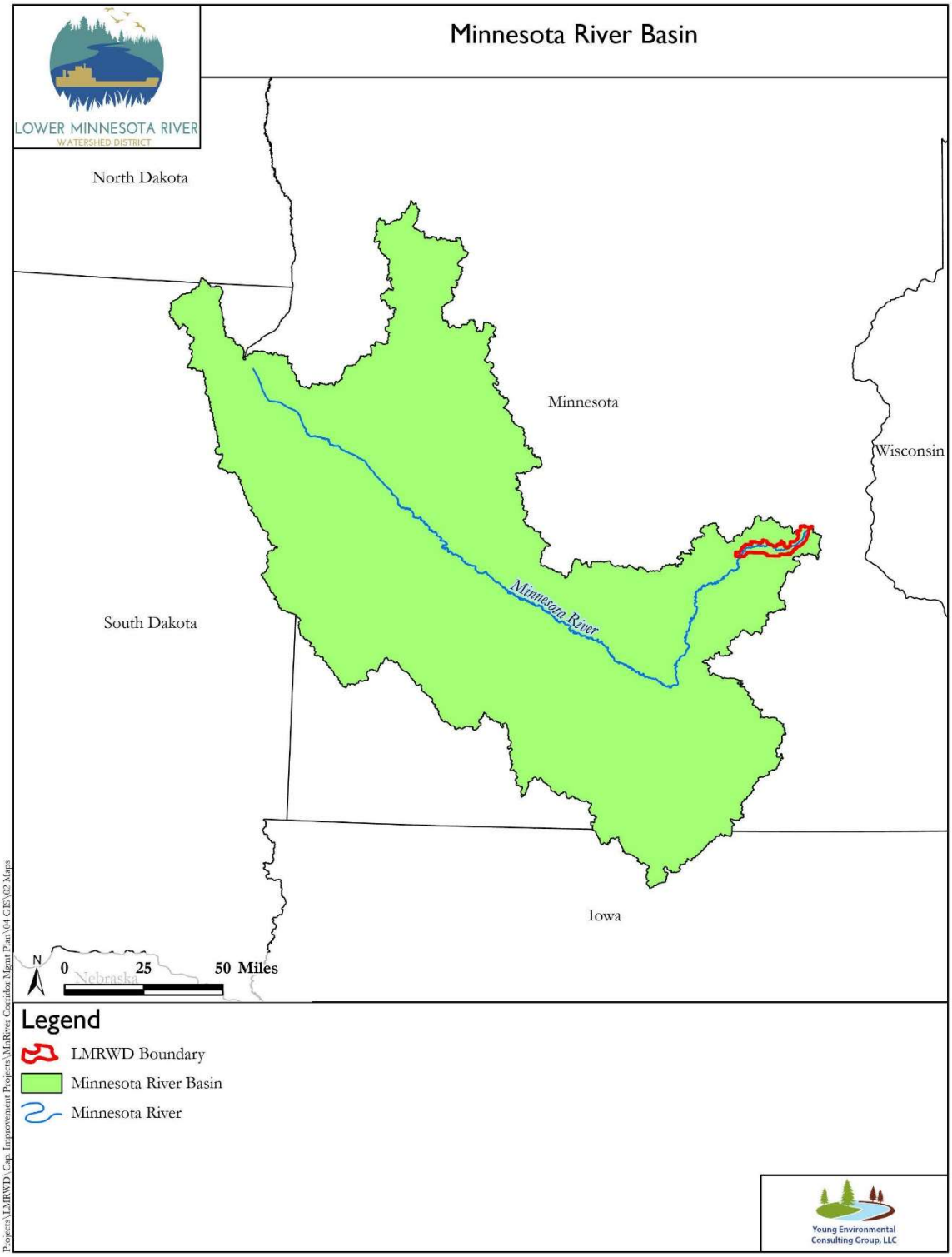
As threats to the future of the river and its water quality continue, the district is working to develop coordinated efforts with its partners to reduce the negative impacts and search for opportunities inside and outside its boundaries to mitigate those effects. The district and its partners are committed to developing a vision to be implemented through this plan to recover aquatic biodiversity, restore the natural river system and floodplain, and clean up polluted waters for people and nature to thrive.

1.1 Purpose, Scope, and Organization

Minnesota's history and environmental policies, as well as several programs designed to improve fishability and swimming activities, have led to the development of the Lower Minnesota River Corridor Management Plan. Furthermore, when actions are taken by the district or its partners, they should be informed by existing conditions and plans. This plan ensures that these actions are coordinated with others' activities to minimize conflicts and promote efficiencies of time and costs.

Our purpose in building this management plan is to create a shared vision and framework with stakeholders and describe how to achieve this vision. The Lower Minnesota River Corridor Management Plan focuses on the Lower Minnesota River within the Lower Minnesota River Watershed District from the confluence of the Minnesota and Mississippi Rivers upstream to Carver, Minnesota, and the adjoining lands to the river as shown in Figure 1-1.

Figure 1-1: LMRWD Corridor Management Plan Scope of the Lower Minnesota River Corridor Management Plan



Although the plan concentrates on the Lower Minnesota River Watershed, it is important to recognize that substantial water quality improvements depend on complete and integrated watershed approaches. Therefore, the scope of this plan extends beyond the district's boundary to include the Lower Minnesota River Watershed and the Minnesota River in its entirety. The district recognizes that legislative action may be required to support the initiatives defined in this plan that are outside the watershed district boundary. Regardless of boundary lines, the district seeks to build this vision through cooperation and collaboration with those directly and indirectly affected by the river.

The river is a complex natural system and a shared resource where varied interests such as recreation and commerce converge. The intended outcome of the plan is the development of a shared vision between the district and state, regional, and local public entities for maximizing public benefits, including the following:

- Identification of shared public values that form the basis of the project.
- Engagement and support from the stakeholders about the opportunities the development of the corridor management plan can provide.
- Creation of a greater understanding of the Lower Minnesota River Corridor and its landscape.
- Description of a desired future for the river and discussion of how change in the surrounding landscape can help attain this future.
- A structure or framework for implementing the vision.
- Methods to resolve conflicts between human investments and river dynamics in the most economically and ecologically sustainable manner.

The result of this work will be a multipurpose plan that will serve as a guiding document among political jurisdictions and agencies. The plan will help stakeholders to create a new foundation for cooperation and strategic financial investments that can provide multiple benefits.

1.2 Relationships to Other Plans

One of the first steps in identifying the common issues among stakeholders within the Lower Minnesota River Corridor was to develop an understanding of the relationships among the current planning documents. We compiled and reviewed comprehensive, natural resources, and local surface water management plans, as well as any other plans that reference water resources from the cities, counties, watershed districts, and watershed management organizations along the corridor. We identified the information from relevant data sources within the Lower Minnesota River Corridor. We did not review any data sources from before 2010 unless they were still relevant. Once we reviewed the relevant data, we

extracted all issues, goals, strategies, policies, projects, and capital improvement plans (CIPs) related to the Lower Minnesota River or waterbodies and areas that could impact the river. The extracted data were then reviewed and synthesized into a data synthesis matrix (Appendix A).

Throughout the review of this information, common themes began to emerge, and we prioritized them in every source we researched. These common themes include people, water, funding, infrastructure, and threats, and they are defined below:

People

People refers to how humans can influence the management, placement, and displacement of water resources, funding, infrastructure construction and maintenance, and response to threats on the corridor.

Water

Water refers to all natural water resources and involves the management of water quality and quantity, erosion control, resource protection, smart land use decisions, stormwater reuse, and the protection and restoration of natural water systems that affect the Minnesota River Corridor.

Funding

Funding refers to local financial resources that can be leveraged to undertake projects that have the potential to preserve, protect, and restore water and natural resources within the lower Minnesota River Corridor. Without appropriate funding, many of the projects and initiatives needed to make noticeable differences will not be feasible.

Infrastructure

Infrastructure refers to anything municipalities do to support the sustainable functionality of their communities. This can be carried out through proper land use management, incorporating best management practices for new and redevelopment projects, looking for opportunities to prevent new and correct past drainage issues, and ensuring that storm sewer systems are properly operated and maintained.

Threats

Threats refer to the natural and anthropogenic effects on infrastructure, property, and water and natural resources throughout the lower Minnesota River Corridor. As weather patterns change, the need to address threats becomes more urgent.

Recognizing these significant shared themes among stakeholders, as presented in planning documents, and the district, Lower Minnesota River stakeholders began building the vision and framework for the plan. The five themes and the initial process of building the vision and framework are explored further in *Section 3. Stakeholder Engagement.*

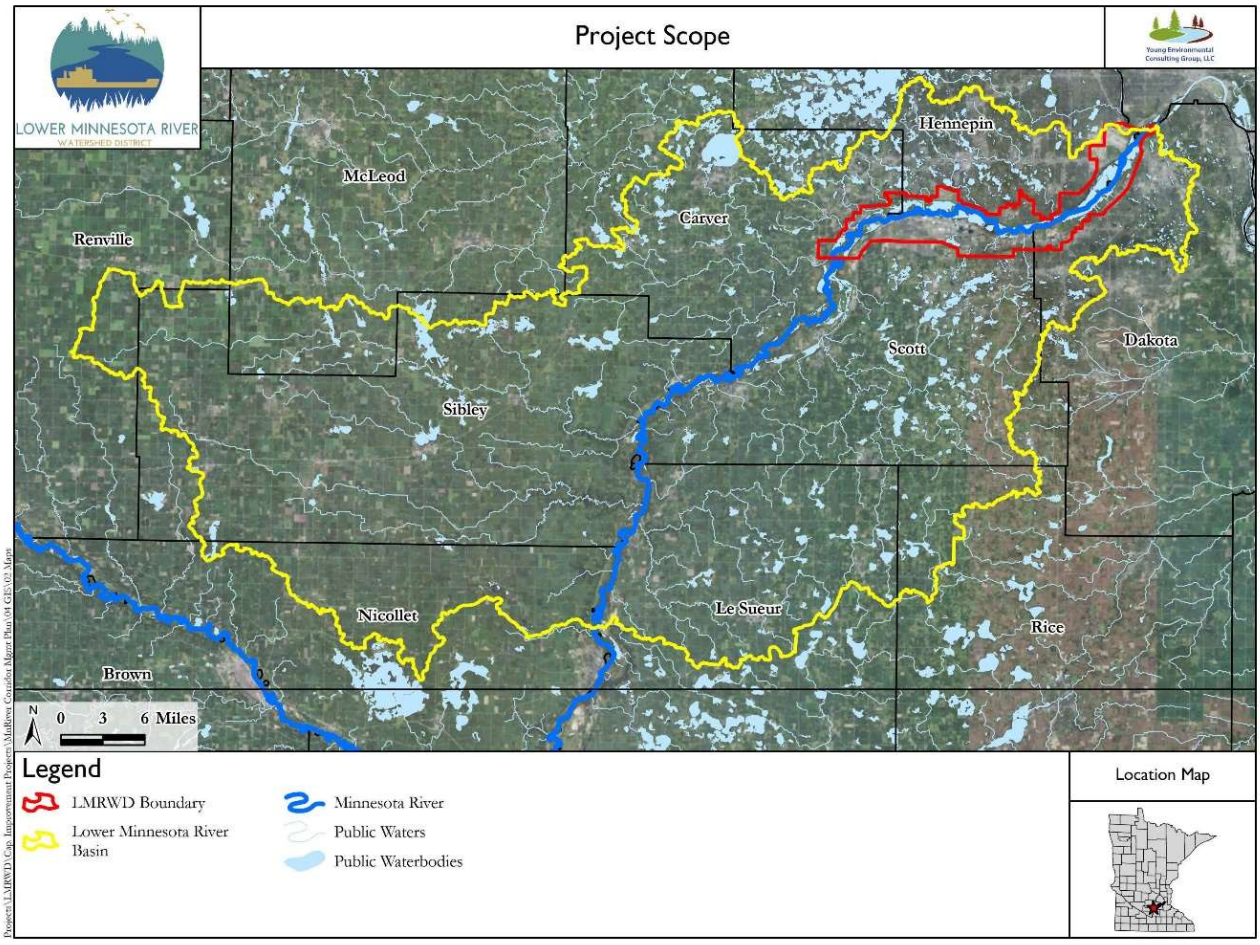
2.0 CORRIDOR CONDITIONS

The Lower Minnesota River Corridor has a unique past that weaves together geology, ecology, biology, and human history and has shaped the culture and society around the river that we know today. The following section will characterize the Lower Minnesota River's history and provide an overview of the key issues that prompted the creation of this plan.

2.1 Characterizing the Lower Minnesota River Watershed

The Lower Minnesota River Watershed entails 1,835 square miles of Southeast Central Minnesota, making it the twelfth largest Hydrologic Unit Codes-8 (HUC-8) watershed within the state (Minnesota Pollution Control Agency, 2017a). The segment of river within the watershed extends 87 miles from East Central Renville County to Southwestern Ramsey County area, where the Lower Minnesota River intersects with the Mississippi River in the city of St. Paul. The watershed includes roughly 120 square miles of lakes and approximately 2,482 miles of water flowing from tributaries, including agricultural ditches, streams, and rivers (Minnesota Pollution Control Agency, 2017a). Within the Lower Minnesota River Watershed, the district encompasses the most downstream 80 square miles of the river basin (Lower Minnesota River Watershed District, 2018) as shown in Figure 2-1.

Figure 2-1: LMRWD Corridor Management Plan Lower Minnesota River Watershed



The watershed encompasses a diverse cross-section of land use, public values, local funding, and active local government units. The Western portion of the watershed is predominantly row crop agriculture transitioning to urban residential sprawl and industrial development, with most of this property being privately owned. Population densities vary drastically from West to East. Populations are projected to grow in the metro counties, requiring both additional housing to be built and land to be transitioned from agriculture (Minnesota Pollution Control Agency, 2017a).

2.2 Water Quality

According to the Metropolitan Council, the overall water quality of the Minnesota River is poor in comparison to other rivers in the region (Metropolitan Council, 2018). The following sections outline the history of the river and the origin of some of the current challenges the Lower Minnesota River faces.

2.2.1 Historic Land Use Patterns and Water Quality Conditions

The Minnesota River Watershed was formed during several periods of glaciation. During these glaciation periods, glacial till, the material scraped and carried by the ice, was deposited in distinct layers. As the glaciers receded, a large portion of northwestern Minnesota and other parts of the continent were covered by Lake Agassiz, which was larger than all the Great Lakes combined. As Lake Agassiz drained, it created multiple outlets. One of these outlets is named Glacial River Warren, and it carved out and created the very wide and deep channel of the Minnesota River valley (Minnesota River Basin Data Center, 2004).

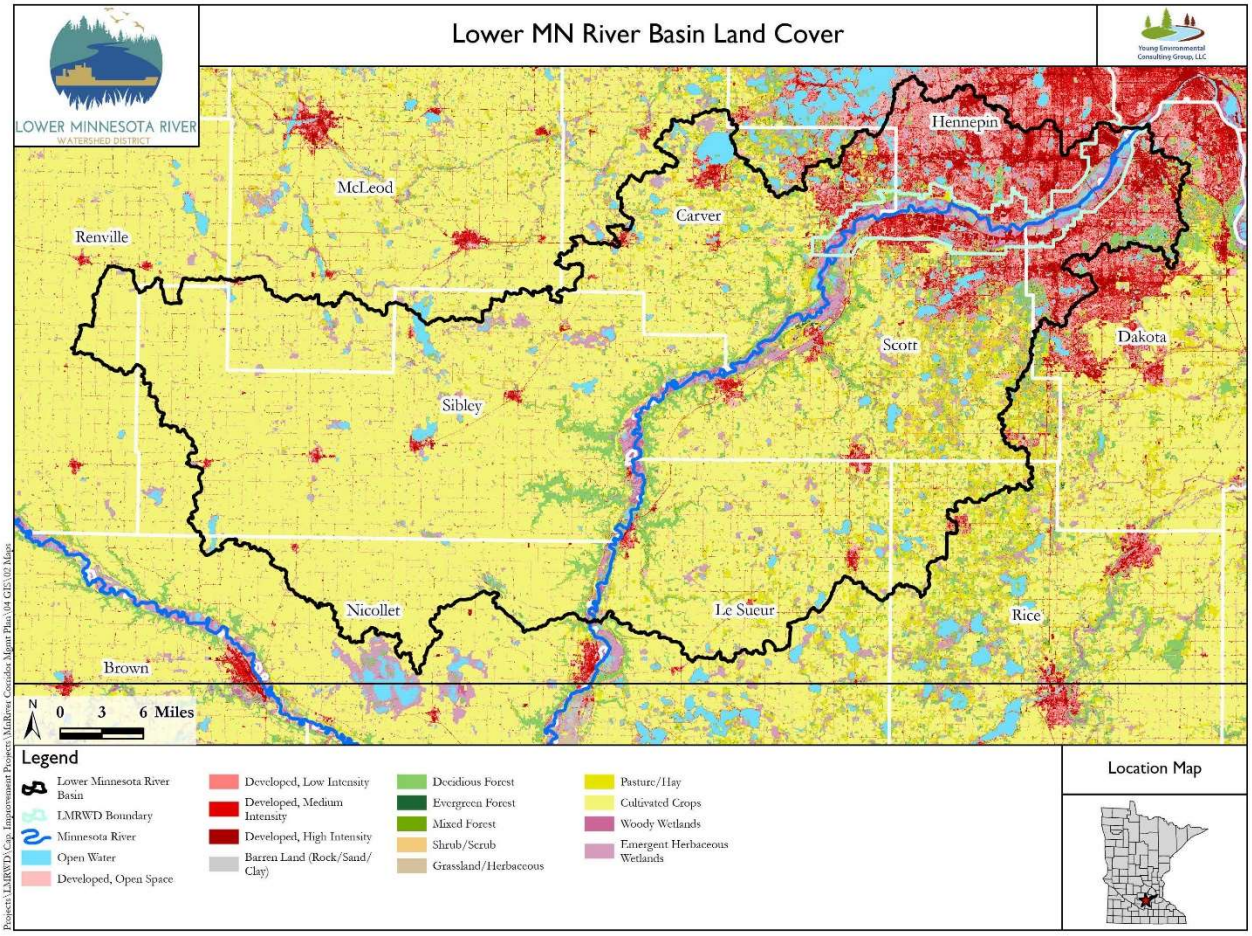
After Lake Agassiz stopped flowing into Glacial River Warren, the headwaters of the Minnesota River became the Little Minnesota River with its headwaters near Veblen, South Dakota, on the border between Minnesota and South Dakota. The Minnesota River then flows into Big Stone Lake where it outlets continue flowing southeasterly through rich wetlands, prairies, granite outcroppings, wooded hills, farm fields, and various cities to Mankato. From Mankato it flows northeast toward its confluence with the Mississippi River in St. Paul, Minnesota (Minnesota River Basin Data Center, 2004). As the river meanders across the Minnesota River valley, it creates a large floodplain that is bordered by terraces of rock, sand, and gravel. Over the thousands of years since Lake Agassiz drained, the high terraces have been rounded off and affected by erosion. The subsequent evolution of the river created the existing floodplains, forests, and wetlands that exist today (Minnesota River Basin Data Center, 2004)

2.2.2 Agricultural Impacts

The rich prairie soils deposited in the Minnesota River watershed provided ideal soils for crop production on lands that were traditionally grasslands and wetlands. For this reason, agriculture has historically been and remains one of Minnesota's major industries. Agriculture is an integral part of modern society, providing raw materials that are needed in manufacturing and a food system that can remain with the local economy because the produce is locally produced. Minnesota achieved its peak in cultivated farmland in 1945. Increased demand for food after World War II resulted in massive agricultural drainage projects to create more cropland, and commercial fertilizers and pesticides were introduced to boost yields (Minnesota River Basin Data Center, 2011). From about 1951–1961, the Minnesota River experienced tremendous flooding caused by the changing landscape (Minnesota River Basin Data Center, 2011).

Today, the Lower Minnesota River basin includes a dramatic transition from row-crop agriculture in the west to sprawling suburban residential communities and urban industry in the east (Figure 2-2; Minnesota Pollution Control Agency, 2017a).

Figure 2-2: LMRWD Corridor Management Plan Land Cover



Over 80% of the Minnesota River basin is used for agriculture (Minnesota Pollution Control Agency, 2017b). Some agricultural lands remain within the district, but they are amid the growing Twin Cities Metropolitan Area.

Rural agriculture has impacted the Minnesota River by carrying fertilizer, eroded soil particles, pesticides, nutrients, and bacteria from treated fields and animal feedlots. The drain tile and ditches have rapidly conveyed water and field runoff to the river (Metropolitan Council, 2018). Groundwater use for irrigation can also influence the river because the river and its tributary streams are supplied by groundwater discharge.

2.2.3 Development Impacts

The western portion of the watershed originally contained tail grass and wet prairies, and the eastern portion comprised the “Big Woods” of oak, maple, basswood, and hickory (Minnesota Pollution Control

Agency, 2017a). However, in 1852, the Treaty of Traverse de Sioux introduced Minnesota to settlement by Europeans, displacing the indigenous Dakota tribe (Minnesota Pollution Control Agency, 2017a).

The Minnesota River experienced steamboat travel during the 1860s, followed by the construction of bridges (Minnesota River Data Center, 2011). During this time, the Minnesota River experienced historic flooding, destroying bridges and making steamboat travel difficult (Minnesota River Data Center, 2011). At about the same time, the Minnesota River was starting to see impacts on its natural waters.

Industrial prosperity began in the 1930s. Some of the businesses included what is now known as *Green Giant*, a vegetable-canning industry (Minnesota River Data Center, 2011). Another business included taking the mussels from the river to make buttons and cement (Minnesota River Data Center, 2011). The Minnesota River saw increased pollution from these industrial uses, and significant damage was caused by land and water practices occurring along the river system.

There are few elements in the current landscape of the corridor that have not been altered by agriculture and urban development. Within the current urban areas of the corridor, previously vegetated areas are being converted into impervious surfaces (e.g., roads, roofs, parking lots, etc.), resulting in increased runoff rates (Lower Minnesota River Watershed District, 2018). Potential issues resulting from the impact of stormwater runoff on water quality include the introduction of toxic pollutants, reductions in water quality and clarity, negative impacts on wildlife habitat, and wildlife injury or death (Lower Minnesota River Watershed District, 2018).

2.2.4 Pollution and Impairments

The earliest known pollution in the river stems back to the 1860s (Minnesota River Basin Data Center, 2011). During this time, when water-borne traffic was increasing along with changes in land use and dumping activities, pollution in the river was notable (Minnesota River Basin Data Center, 2011). A number of federal regulations were enacted and implemented to regulate dumping and point sources into navigable waters because of the amount of pollution in public waters caused by these practices

As industry and development expanded in the years following these regulations, the water quality of the Minnesota River continued to decline. Routine water quality monitoring within the Minnesota River began in the 1970s (Minnesota River Basin Data Center, 2011). By 1975, a fish consumption advisory was in place for the Minnesota River because of elevated PCBs (Minnesota River Basin Data Center, 2011). In 1985, the river's low dissolved oxygen was identified as a problem because of elevated sediment and nutrient loading (Minnesota River Basin Data Center, 2011). Presently, the river is impaired

by fecal coliform, dissolved oxygen, mercury in fish tissue and the water column, nutrients, PCB in fish tissue, and turbidity (Minnesota Pollution Control Agency, 2017a).

The Minnesota River is not the only impaired waterbody within the corridor. According to the Minnesota Pollution Control Agency's (MPCA) monitoring assessment report (2017a), violations of state water quality standards are common. Several waterbodies within the district are currently on the MPCA's list of impaired waters. Lakes and streams on the list do not meet federal water quality standards for designated uses. For each waterbody on the list, the MPCA is required to conduct a study to determine the allowable total maximum daily load (TMDL) for each pollutant that exceeds the standards. Impaired waters within the district are summarized in Table 2-1.

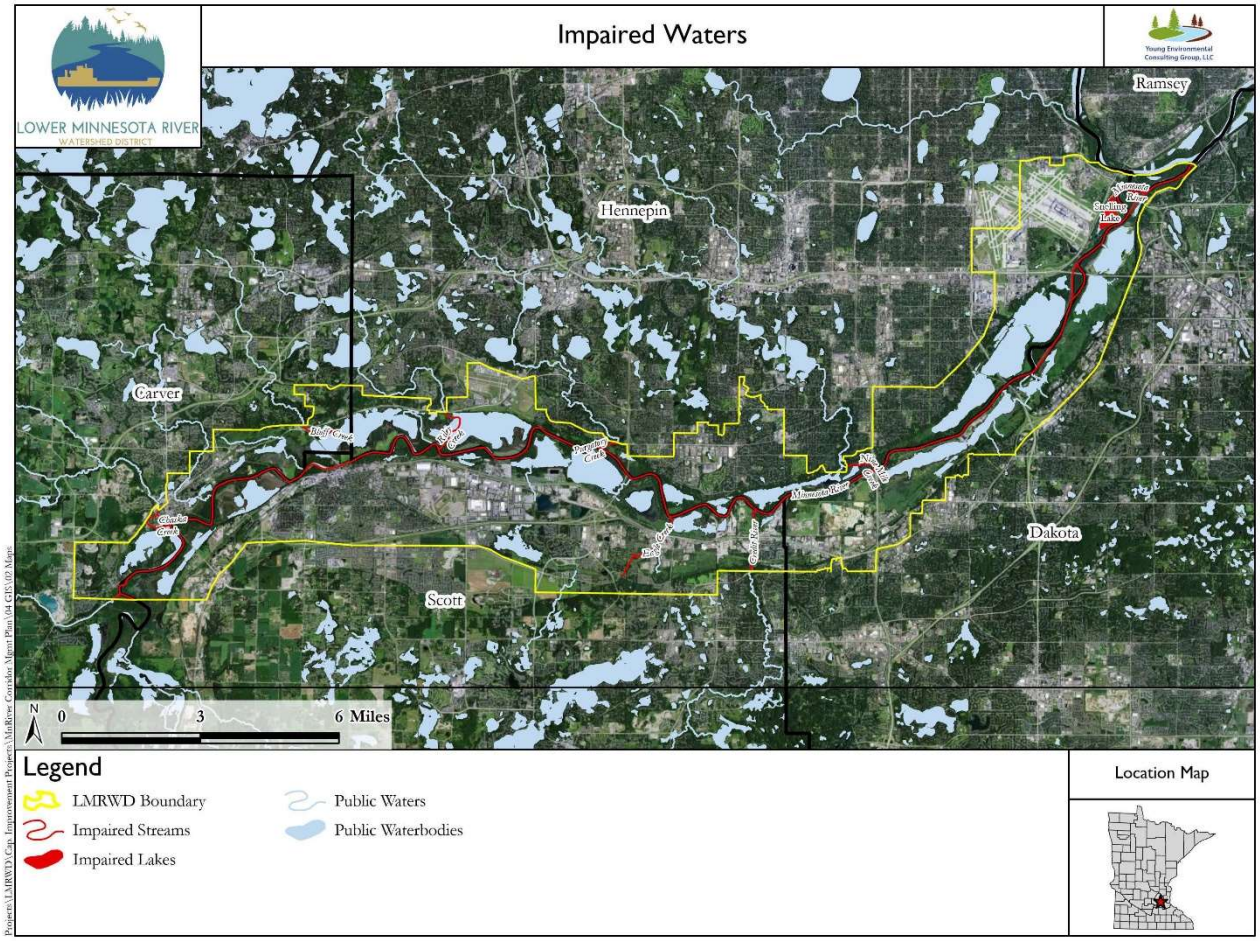
Table 2-1: Impaired Waters in the Lower Minnesota River Watershed District

Impaired Water	Affected Use	Pollutant or Stressor
Minnesota River	Aquatic Recreation	Fecal Coliform
Minnesota River	Aquatic Life	Dissolved oxygen
Minnesota River	Aquatic Consumption	Mercury in Fish Tissue
Minnesota River	Aquatic Consumption	Mercury in the Water Column
Minnesota River	Aquatic Recreation	Nutrients
Minnesota River	Aquatic Consumption	PCB in Fish Tissue
Minnesota River	Aquatic Life	Turbidity
Dean Lake	Aquatic Recreation	Nutrients
Snelling Lake	Aquatic Consumption	Mercury in Fish Tissue
Bluff Creek	Aquatic Life	Fish and Biological Assessments
Bluff Creek	Aquatic Life	Turbidity
Nine Mile Creek	Aquatic Life	Chloride
Nine Mile Creek	Aquatic Life	Fish and Biological Assessments
Nine Mile Creek	Aquatic Recreation	E. Coli
Riley Creek	Aquatic Life	Turbidity
Riley Creek	Aquatic Recreation	E. Coli
Riley Creek	Aquatic Life	Fish and Biological Assessments
Purgatory Creek	Aquatic Recreation	Escherichia coli
Purgatory Creek	Aquatic Life	Fish and Biological Assessments
Credit River	Aquatic Life	Chloride
Credit River	Aquatic Recreation	Escherichia coli
Credit River	Aquatic Life	Fish and Biological Assessments
Unnamed Creek	Aquatic Recreation	Fecal Coliform
Carver Creek	Aquatic Recreation	Fecal Coliform

Impaired Water	Affected Use	Pollutant or Stressor
Carver Creek	Aquatic Life	Turbidity
Carver Creek	Aquatic Life	Fish and Biological Assessments
Carver Creek	Aquatic Life	Nutrients
Chaska Creek	Aquatic Recreation	Fecal Coliform
East Creek	Aquatic Life	Turbidity
East Creek	Aquatic Recreation	Fecal Coliform
East Creek	Aquatic Life	Chloride
East Creek	Aquatic Life	Fish and Biological Assessments
Sand Creek	Aquatic Life	Turbidity
Sand Creek	Aquatic Life	Fish and Biological Assessments
Sand Creek	Aquatic Life	Nutrients
Assumption Creek	Aquatic Life	Fishes Bioassessments

Impaired waters are also represented in Figure 2-3.

Figure 2-3: LMRWD Corridor Management Plan Impaired Waters



In the heavily agricultural setting of the Minnesota River Watershed, the tilled soils are more susceptible to erosion, which likely contributes to the higher evels of pollutants in the river (Metropolitan Council, 2018). Closer to the urbanized cities of Minneapolis and St. Paul, bacteria and chloride levels have been notably higher at Fort Snelling, and these contaminants are typically linked to pollution from developed areas (Metropolitan Council, 2018).

2.2.5 Decision Making on Individual Properties and Water Quality

The actions taken by decision-makers, whether they reduce or compound pollution concerns, make up another factor that affects the Lower Minnesota River's water quality. Approximately 65 percent of the corridor land is privately owned. It is important to recognize that private land ownership and the complex set of issues that can meld on a single property may ultimately contribute pollution to the Lower Minnesota River. For example, invasive plant species like buckthorn can crowd out native or desirable vegetation, degrade wildlife habitat, and contribute to erosion (Minnesota Department of Natural

Resources, n.d.). Buckthorn does not have a natural control to curb its growth, so it spreads easily and can increase erosion and sedimentation to waterbodies, thus negatively impacting water quality (Minnesota Department of Natural Resources, n.d.).

2.3 Natural Areas and Habitat

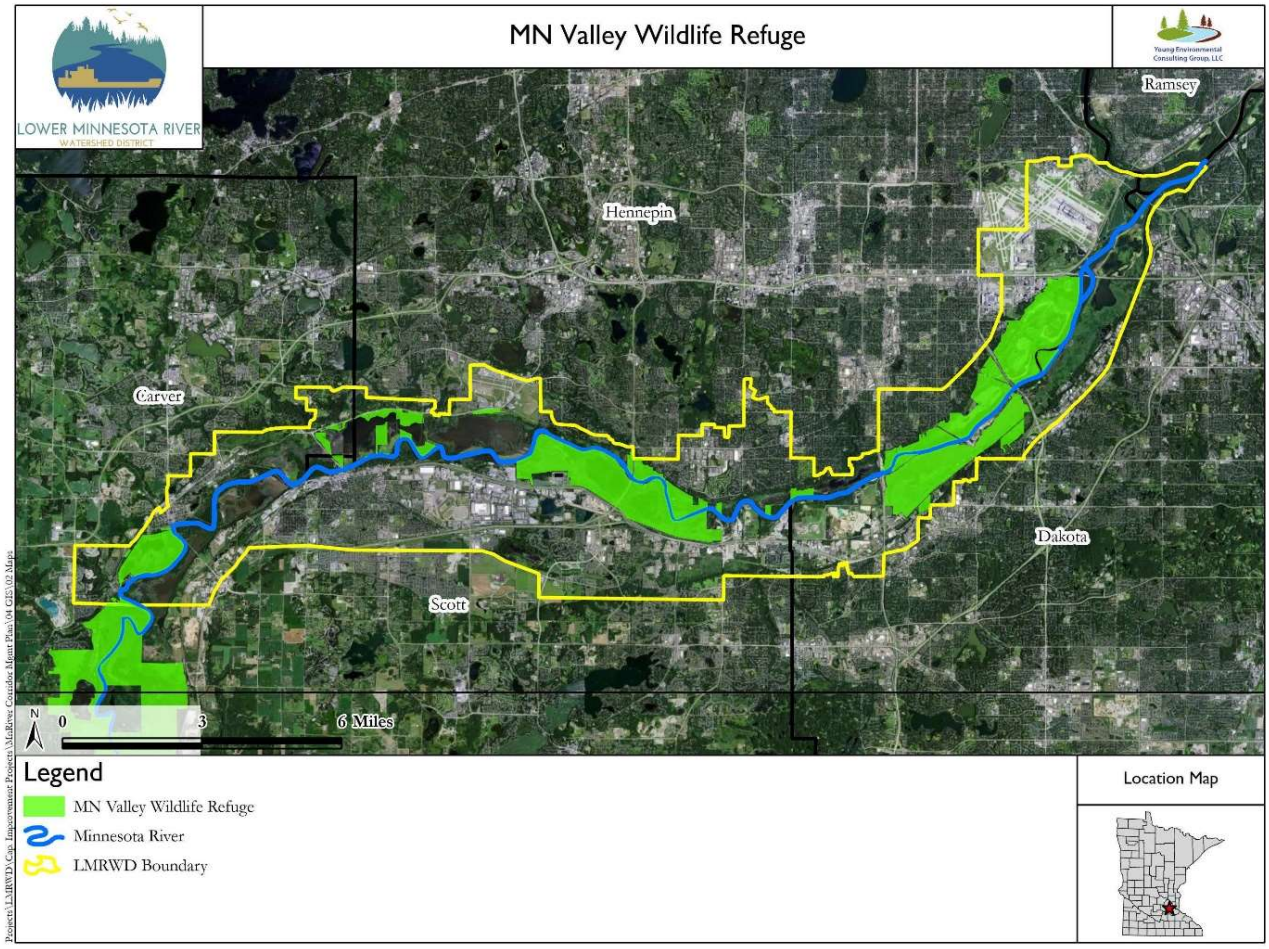
Natural resources in the LMRWD serve many purposes, and the resources that remain in their natural condition are protected mostly within the corridor along the Minnesota River Valley.

2.3.1 Corridor Habitat Conditions

There are approximately 14,000 acres of existing wildlife refuges, parks, trails, and open space along the Minnesota River corridor that are managed by the Minnesota Valley National Wildlife Refuge (NWR; Lower Minnesota River Watershed District, 2018). The Minnesota Valley NWR was established through the efforts of local citizen groups to protect the Lower Minnesota River valley (Lower Minnesota River Watershed District, 2018).

The Minnesota Valley NWR covers 70 miles along the Minnesota River from Henderson to Bloomington, bordering the Minnesota River and providing critical habitat to migratory waterfowl and wildlife, as well as recreational opportunities for outdoor enthusiasts (Figures 2-4).

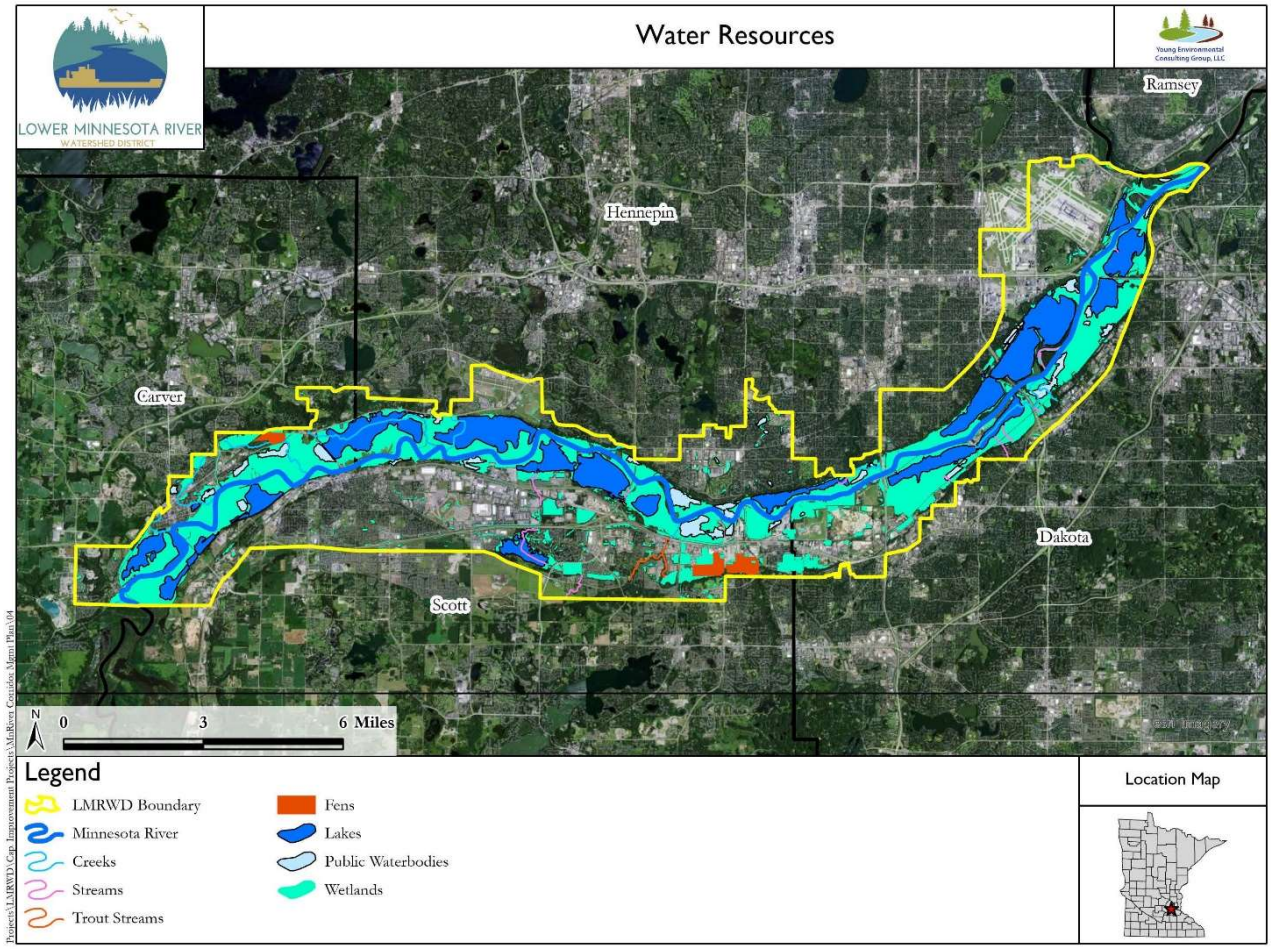
Figure 2-4: LMRWD Corridor Management Plan Minnesota River Valley National Wildlife Refuge



2.3.2 Adjoining Habitat

Beyond the Lower Minnesota River, the adjoining habitat contains several tributary streams, lakes, and wetlands (Figure 2-5). The Minnesota Department of Natural Resources (MNDNR) has designated some of the lake and stream resources as trout habitats because they provide a consistent supply of cold, oxygenated water, shade, and adequate nutrient inputs (Lower Minnesota River Watershed District, 2018).

Figure 2-5: LMRWD Corridor Management Plan Water Resources within the LMRWD



Many of the tributary streams enter the corridor from outside the LMRWD boundary. However, both urbanization and agricultural practices have caused water quality issues, such as erosion and sedimentation, in these streams (Lower Minnesota River Watershed District, 2018).

Many of the wetlands within the corridor are in the Minnesota River floodplain. As flooding occurs along the river, the floodwater may introduce river-associated pollutants to these natural ponding areas (Lower Minnesota River Watershed District, 2018). The wetlands also face development pressures, which could result in further degradation (Lower Minnesota River Watershed District, 2018).

Some of the wetlands within the district are calcareous fens, which require specific hydrologic and chemical conditions. The MNDNR designated the Seminary and Savage Fens as scientific and natural areas because of the uniqueness of the native plants and animals that thrive in these features. Many factors threaten the health of calcareous fens, including changing groundwater conditions, stormwater runoff,

sedimentation, and invasive plants (Lower Minnesota River Watershed District, 2018). These fens are highly dependent on the quantity, quality, and management of the groundwater that feeds them and on the control of invasive species. Because they are so dependent on groundwater discharge, it is important to understand the subsurface hydrology and demarcation of recharge areas in the calcareous fens. (Lower Minnesota River Watershed District, 2018).

2.3.3 Aquatic Habitat

Because of its threatened status, the Minnesota River does not support healthy aquatic habitat (Minnesota Pollution Control Agency, 2017b). The influx of sediment and nutrients has threatened populations of fish, insects, and mussels. Monitoring the numbers and types of aquatic insects and other organisms shows that the river cannot support healthy populations (Minnesota Pollution Control Agency, 2017b). The variable flows and unstable channel create conditions that are unfavorable for more immobile organisms, like aquatic insects and mussels (Minnesota Pollution Control Agency, 2017b).

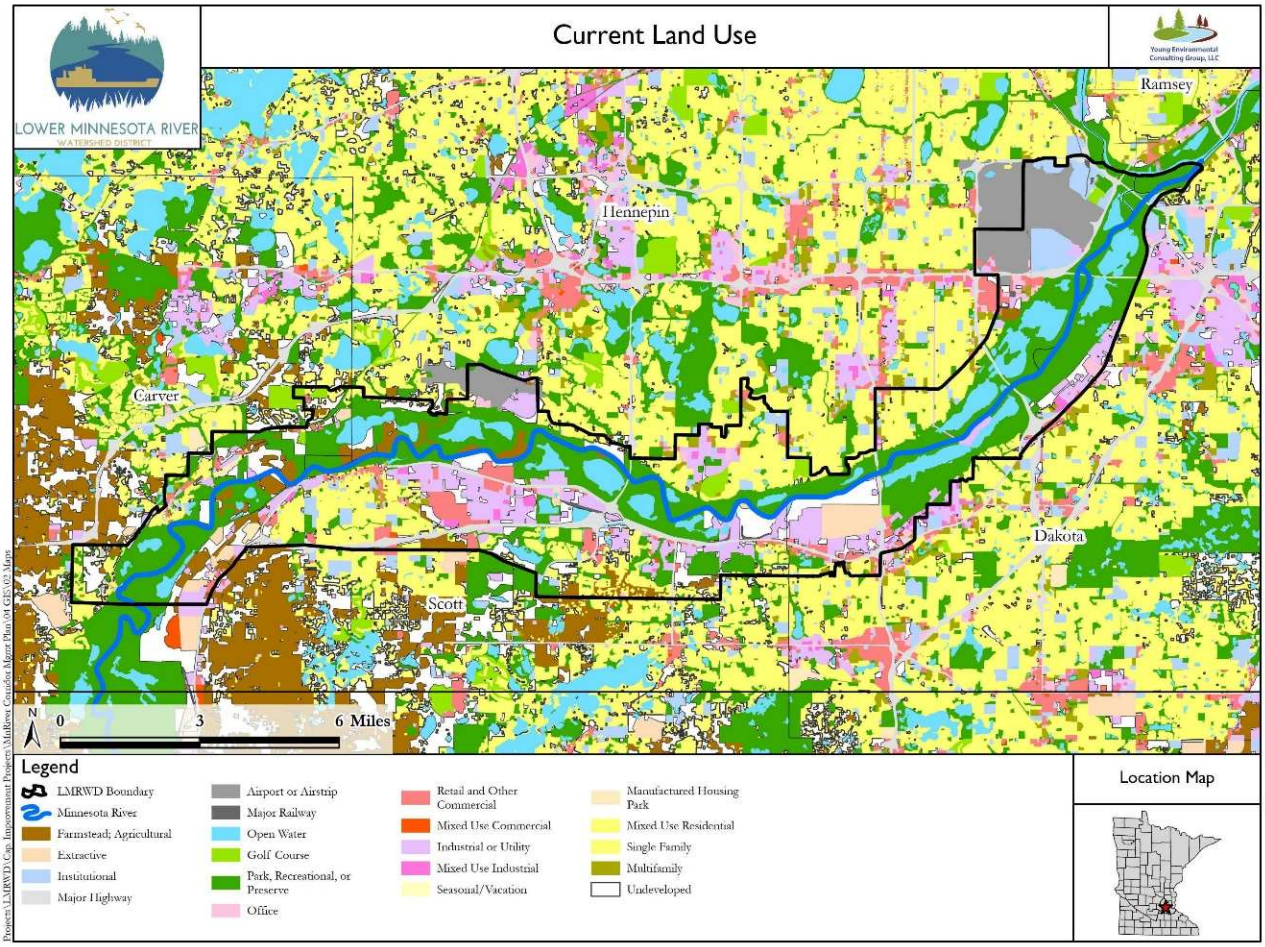
2.4 Current Land Use and Urban Development

The following sections outline current and planned land use information that guides zoning and subsequent land use decisions within the corridor.

2.4.1 Current and Planned Use

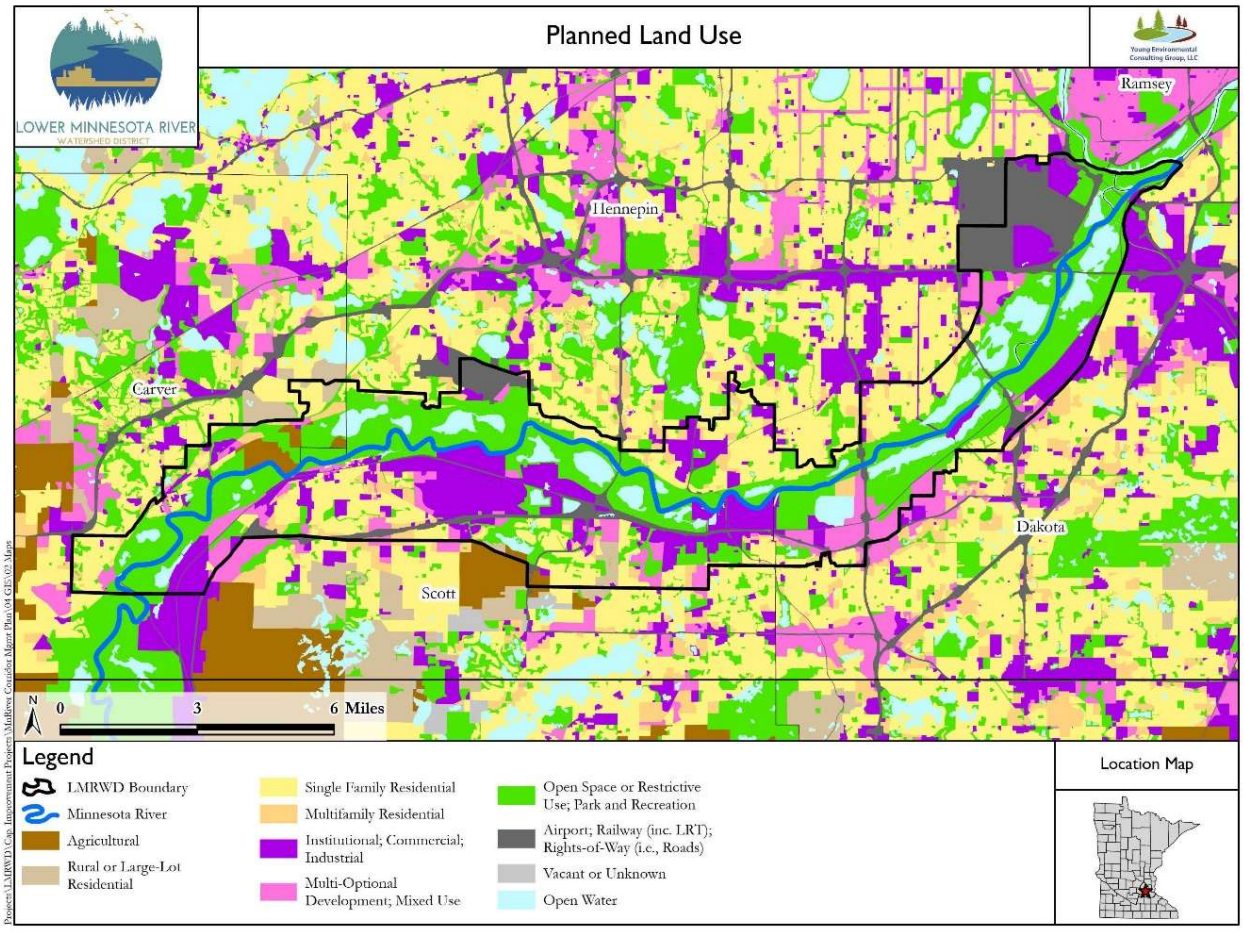
The Lower Minnesota River Valley corridor presently includes diverse land use patterns, including commercial, industrial, residential, institutional, mixed-use development, agricultural and farmland, and parks and green space. Current land use data from 2020 is represented in Figure 2-6. The corridor is within a developing metropolitan area, and adjacent lands are highly desirable for development. Available open space is primarily public land and is located in the Minnesota River's floodplain. The remaining parks and open spaces are managed locally by counties and municipalities in the region.

Figure 2-6: LMRWD Corridor Management Plan Current Land Use



Considering current and planned land use, land usage should remain stable for the next 20 years. Most land use changes will take place south of the Minnesota River, where agricultural and forested lands are expected to shift to single family development, which has the potential to affect the corridor's natural resources. Planned land use information for the year 2040 is shown in Figure 2-7.

Figure 2-7: LMRWD Corridor Management Plan Planned Land Use



2.5 Recreational Opportunities

The corridor offers many natural amenities that provide recreational opportunities for various audiences. The following section describes some of the available recreational opportunities within the corridor.

2.5.1 Parks and Trails in the Corridor

Open space is mainly located in and along the Minnesota River's floodplain and consists almost entirely of public lands, which are administered federally by the United States Fish and Wildlife Service in the Minnesota Valley NWR (Lower Minnesota River Watershed District, 2018). The MNDNR manages the parks and opens spaces in the Minnesota Valley State Recreation Area and Fort Snelling State Park and scientific and natural areas at the state level.

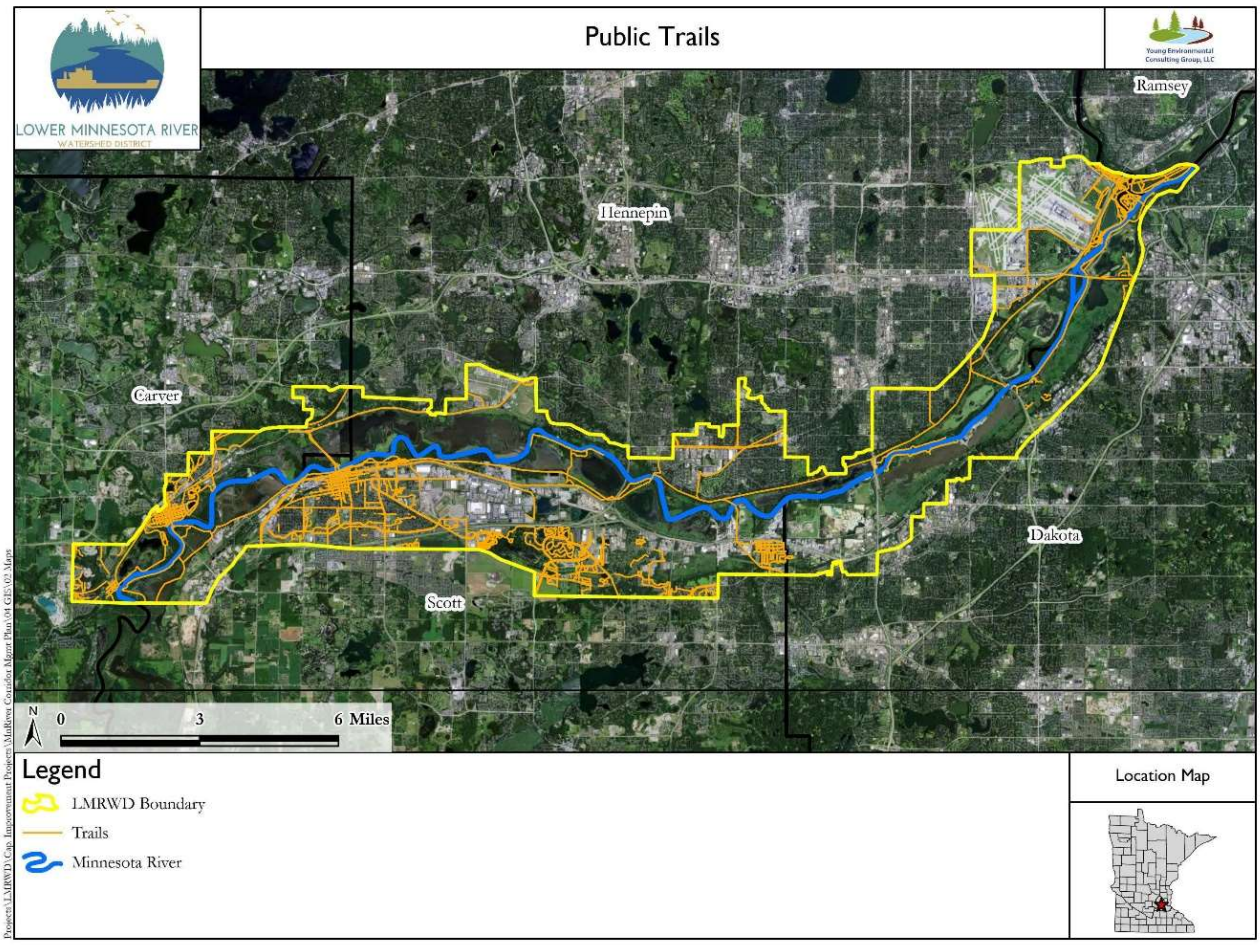
One of the notable trail segments within the corridor includes the Minnesota Valley Trail. The Minnesota Valley Trail was authorized by the state legislature in 1969. Federal legislation entitled *The Minnesota*

Valley National Wildlife Refuge Act of 1976 declared that the congressional policy would preserve the Minnesota River Valley and, as a federal action, establish the 9,500-acre Minnesota Valley National Wildlife Refuge plus an adjacent 8,000-acre wildlife recreation area (Lower Minnesota River Watershed District, 2018). Most of this area is within the district's boundary. The DNR Division of Parks and Recreation manages the state trail. Management objectives are to develop an accessible, scenic, and recreational travel route between Fort Snelling State Park and Le Sueur (Lower Minnesota River Watershed District, 2018). This trail links with other metro area trails to provide hiking, biking, horseback riding, snowmobiling, and cross-country skiing opportunities for recreational users (Lower Minnesota River Watershed District, 2018).

Localized flooding often impairs access to facilities along the Minnesota River. When flooding occurs, it can overwhelm boat landings, parks, and trails, creating damaged trails and unsafe fishing and boating (Lower Minnesota River Watershed District, 2018).

The trail network within the corridor is depicted in Figure 2-8.

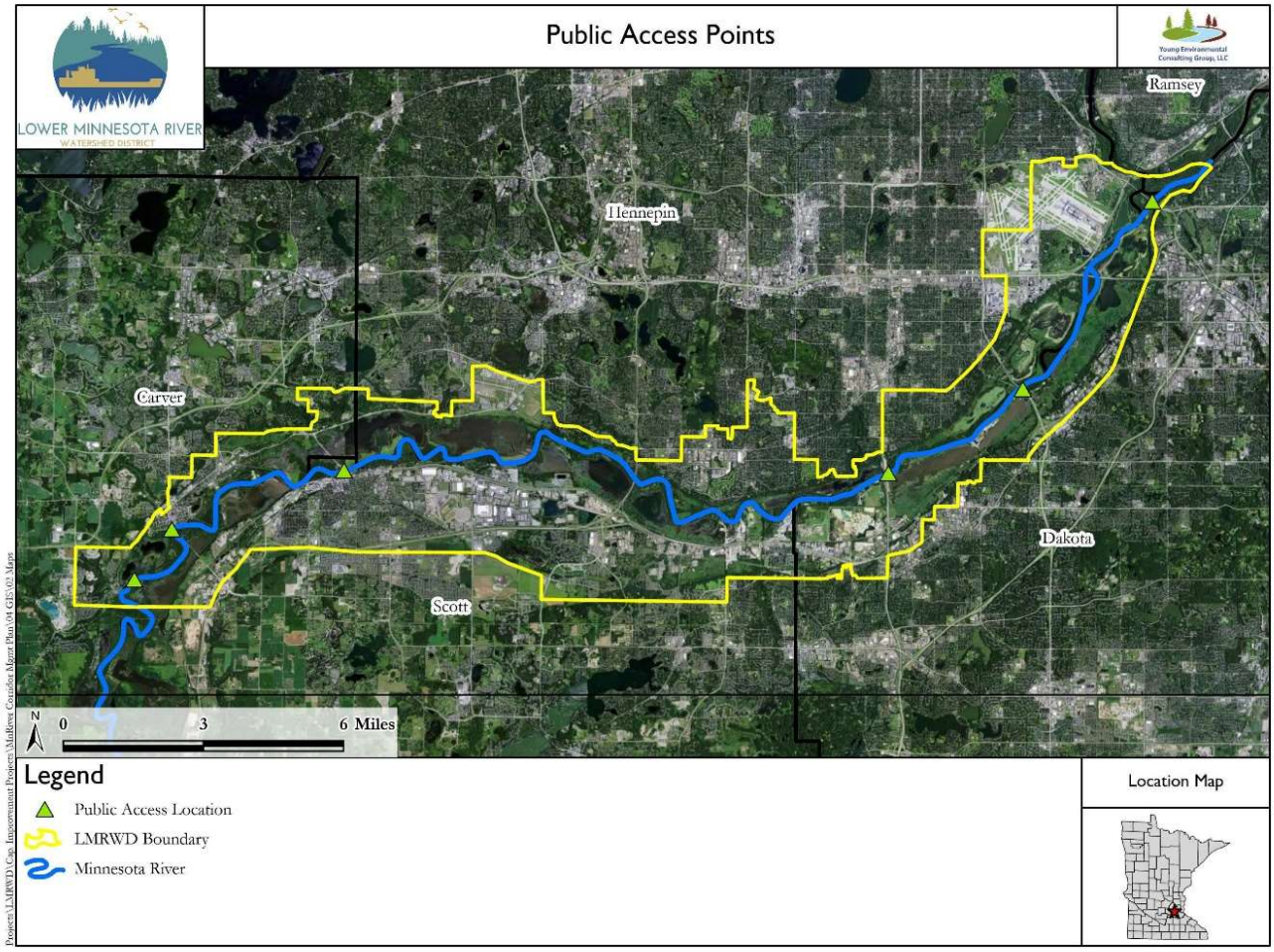
Figure 2-8: LMRWD Corridor Management Plan Public Trails



2.5.2 In-River Recreation

Both private pleasure craft and commercial traffic navigate the Minnesota River within the district. Recreational activities include fishing and the use of pleasure boats, canoes, and personal watercraft (Lower Minnesota River Watershed District, 2018). However, safety and access constraints can limit recreational users' ability to interact with the river. For example, safety can become a concern when commercial and recreational users intersect. Recreational access can be limited by the number of access points (Figure 2-9; Lower Minnesota River Watershed District, 2018). Finally, though the river offers excellent fishing opportunities, anglers should consult the fish consumption advisories from the Minnesota Department of Health before eating fish from the Lower Minnesota River (Minnesota Pollution Control Agency, 2017a).

Figure 2-9: LMRWD Corridor Management Plan Public Access Points



2.6 Coordination and Management in the Corridor

Several agencies and organizations are tasked with protecting the river and the surrounding landscape, as well as improving water quality within the corridor. The following agencies may have a jurisdictional role in the implementation of this plan.

2.6.1 Public Agencies and Roles

Within the corridor, there are many public agencies that are active, including the following agencies:

2.6.1.1 Local

Cities: Cities have broad powers and are responsible for developing comprehensive plans and operating ordinances addressing erosion and sediment control, stormwater runoff quality and volume, grading, and zoning.

Counties: Counties are the administrative arms of the state and carry out certain mandates. They can also administer land use controls in areas outside of cities.

Soil and Water Conservation District: Soil and water conservation district boundaries follow the county lines. They are primarily responsible for soil information, maps of agricultural land, and wetland mapping. They often coordinate with cities and counties for special improvement projects, like drainage and flood control, and work with landowners on various conservation projects.

Townships: Townships govern land mostly outside of cities and can either retain land use control or delegate this authority to the county in which they reside. Like cities, townships can also develop plans and operate ordinances.

2.6.1.2 State

Board of Water and Soil Resources (BWSR): BWSR seeks to improve and protect Minnesota's water and soil resources by working collaboratively with local organizations and private landowners. Their primary tasks include implementation of the state's soil and water conservation policies, comprehensive local water management plans, and the Wetland Conservation Act. BWSR is also the administrative agency for soil and water conservation districts, watershed districts, metropolitan watershed management organizations, and county water managers in Minnesota.

Metropolitan Council: The Metropolitan Council collects and treats wastewater, and they play an important role in metropolitan-area water quality monitoring and reporting, providing regional surface water planning and other plan reviews for watershed plans, funding for regional parks and trails, etc.

Minnesota Department of Health (DOH) – The Minnesota DOH is responsible for protecting drinking water and groundwater, and overseeing groundwater well construction, permitting, and maintenance. They are also instrumental in determining fish consumption advisories for the state's water resources.

Minnesota Department of Natural Resources (MNDNR): The MNDNR is the primary entity responsible for trout stream management, groundwater appropriations, and boat safety. They also enforce the Wetland Conservation Act, permit shore land and aquatic plant management control, and manage the majority of the state-owned land in the district, including Fort Snelling State Park, wildlife management areas, and scenic and natural areas.

Minnesota Pollution Control Agency (MPCA): The MPCA has been delegated permitting authority to administer the National Pollutant Discharge Elimination Permitting Program in Minnesota. The MPCA is

also the responsible authority for other state permits, including septic systems, feedlot permitting and enforcement, managing the state list of special and impaired waters, and collecting water quality monitoring data to support their work.

2.6.1.3 Federal

United States Army Corps of Engineers (USACE): The USACE administers Section 10 of the Rivers and Harbors Act (regulating placement of structures and work in navigable United States waters), and the Section 404 permit (regulating excavation of wetlands and discharge of dredged or fill material into United States waters). The USACE also provides engineering services and operates and maintains water resources and civil projects, including maintaining navigation on the Minnesota River.

United States Fish and Wildlife Service (USFWS): The USFWS manages fish and wildlife resources in the public trust. Their focus is mainly on management of national wildlife refuges, endangered species, and invasive species.

2.6.2 Other Notable Nonprofits or Environmental Groups

In addition to the public agencies, there are multiple non-profit environmental groups that are active within the corridor, including, but not limited to:

Citizens Advisory Committee (CAC): The Lower Minnesota River Watershed District's CAC is a volunteer advisory group appointed annually by the District's Board of Managers. The CAC engages with citizens in the community in actions that protect, improve, and restore water resources within the district, and advises the managers on matters affecting the interests of the district, such as providing feedback on plans, priorities, initiatives, etc.

Friends of the Minnesota Valley: The Friends of the Minnesota Valley is a nonprofit organization with the mission to preserve and protect the natural resources of the Minnesota River Watershed through partnership with government agencies and other nonprofit organizations. This group organizes volunteers to collect water quality data across the Minnesota River basin and monitor agricultural drainage improvements that have the potential to increase water flow.

Izaak Walton League of Minnesota (Minnesota Valley Chapter): The Izaak Walton League of Minnesota is a conservation organization that trains and equips volunteers in water quality monitoring efforts. The organization strives to conserve, restore, and promote the sustainable use and enjoyment of natural resources.

Trout Unlimited: Trout Unlimited is a national nonprofit group that works to conserve, protect, and restore cold water fisheries and their watersheds in North America through education, restoration projects, fundraising, and advocacy.

Although multiple agencies and organizations have distinct roles with direct ties to the corridor, a formal means to ensure the coordination of these entities and their efforts does not currently exist. Therefore, this plan and the outcomes from the shared vision and approach seek to unite these groups on a collective mission to protect and preserve the future of the river and the corridor.

3.0 STAKEHOLDER ENGAGEMENT

Stakeholder engagement was a critical component in the development of this plan. Various groups with vested interests in the lower Minnesota River were brought together by the district to listen to, collaborate with, and influence a shared vision and framework for the corridor. Below is a summary of the processes and outcomes resulting from the stakeholder engagement activities that supplemented this plan.

3.1 Stakeholder Workshop: A River Worth Protecting

On December 16, 2021, the first workshop for the corridor management plan was held. Before the meeting, a survey was distributed to the workshop participants to garner feedback from the stakeholders on district and community priorities. The meeting took place virtually and was recorded with 21 participants in attendance. The meeting started with a brief welcome and introduction from Linda Loomis, District Manager for the Lower Minnesota River Watershed District and Della Young, District Technical Consultant from Young Environmental Consulting Group, Inc. The meeting included an overview of the project and its purpose, along with a summary of the survey results. The survey results included some of the comments received and asked the stakeholders to provide feedback on each of the themes (water, threats, people, funding, and infrastructure) and priorities for the plan. The complete survey, including responses and comments, is provided in Appendix B.

Among the comments received during the people and infrastructure theme discussion were concerns about environmental justice, as well as ADA-compliant access to the Minnesota River and improved fishing opportunities. The need to promote cultural history with a focus on indigenous people was identified. A need to provide recreational opportunities was suggested. Working with legislators on management solutions upstream of the Lower Minnesota River Watershed was also highlighted as a priority.

During the water theme discussion, comments received included concerns over state-threatened fish species, such as the Black Buffalo and Paddlefish, as well as the need for the state to fund upstream projects and projects identified in city, county, watershed district, or watershed management organization plans. In addition, the state needs to address climate change and find ways to mitigate the changes in the future. Another issue discussed is the requirement to change drainage laws to require water storage and consider downstream impacts with drainage projects.

3.2 Focus Groups

Focus groups were scheduled after the kickoff workshop to allow the stakeholders to evaluate specific practices, activities, and actions responsible for the prioritized themes facing the Minnesota River system

and the lower Minnesota River specifically. A total of three separate focus group meetings on threats, waters, and people, funding, and infrastructure were held in 2022 and the outcomes are summarized in the following section.

3.2.1 Threats

The first focus group meeting was held on January 20, 2022, to discuss threats. *Threats* refers to the natural and anthropogenic impacts on infrastructure, property, and water and natural resources throughout the lower Minnesota River corridor. The primary goal of the threats meeting was for the group to describe their beliefs about what caused the threats and consider potential mitigation solutions.

Previously, stakeholders had identified the top three threats as impaired waters, erosion, and climate change, and the group had a focused discussion for each threat that addressed the following questions:

1. What practices, activities, and actions are responsible for this threat?
2. What conventional and out-of-the-box practices should the district implement (or partner with other organizations to implement) to mitigate the threat?
3. What are the gaps between the threat and conventional, unproven, or innovative solutions?

Five common themes emerged from the group's feedback on practices, activities, and actions that are responsible for the prioritized threats. The following is a summary of the five themes.

Altered Hydrology

- Altered hydrology is a threat that results in impaired waters and erosion.
- Upstream needs to stop sending too much water downstream.
- Slowing down the water is important. Potential fixes included extended detention and infiltration to improve baseflow conditions, mimic hydrology, or utilize flow duration curves.
- More water storage could be incorporated into drainage improvement projects.

People

- There is concern that the funding necessary for certain projects may not exist. We need to identify the potential to pull limited resources together and address the various issues because of the collaborative efforts organized by this plan.
- Water management on private property needs to be enhanced. Behavioral change is needed; misinformation should be addressed through education.

Urbanization and Development

- Decreasing water storage capacity and poor lawn management practices
- The belief that roadside sections must be urbanized with curb and gutter
- Increased runoff from increased impervious surfaces, including runoff from lawn and turf

Streambank and Drainage Area Health

- Wind erosion, soil management and health, increases in agricultural drainage
- Improved agricultural practices
- Restore easy-to-fix tiled wetlands
- Establish a minimum buffer rule

Then and Now (History, Geology, and Climate Change)

- Increased frequency and intensity of precipitation is projected to be the result of climate change.
- Loss of floodplain, shoreland, and wetlands will result in habitat loss and river degradation.
- Channel stabilization, floodplain restoration, wetland improvement, lakes, and wetlands internal loading controls (e.g., alum) to control legacy nutrient loading.
- Invasive species management (e.g., buckthorn)

A complete summary of the focus group meeting is available in Appendix C.

3.2.2 Water

The next focus group meeting was initially tabled to convene a BWSR watershed-based implementation funding process, and was held on July 13, 2022, to discuss water. *Water* refers to all natural water resources and involves the management of water quality and quantity, erosion control, resource protection, smart land use decisions, TMDLs and stormwater reuse, and protection and restoration of natural water systems affecting the Minnesota River corridor.

The primary goal for the water focus group was to identify how the threats from the previous focus group meeting impact each water subtheme and to begin thinking about policies, programs, or actions that could mitigate the threats and protect these water resources. To help center the discussion, the group was asked to review the five threats from the last meeting and identify which were the most urgent to address. The group identified the top threats as streambank and drainage area health and altered hydrology. Breakout groups then reviewed impacts from these threats to floodplains, groundwater, surface waters, and

stormwater; however, not every group was able to discuss every threat for each water category due to time constraints. The following is a summary of the comments received for the water categories.

Floodplains

- Altered Hydrology
  - The floodplain is disconnected from water bodies.
  - Floodplain modification has enabled development.
  - Loss of storage in upstream areas has resulted in increased downstream flooding.
  - Everything is going faster, and water moves faster than it used to.
- Urbanization and Development
  - Urban development regulations are successful, and cities are doing a better job of managing the water; however, cities do not have control over what individual property owners do.

Groundwater

- Altered Hydrology
  - Intense storms result in more runoff and less infiltration.
  - Too many people have overtaxed our resources.
  - Unrealistic or unnatural expectations are caused by lack of understanding.
  - Introduction of pollutants from infiltration (because of land use practices)
- Urbanization and Development
  - Introduction of pollutants from infiltration (because of regulatory requirements to prioritize infiltration)
- Streambank and Drainage Area Health
  - Stream loss and baseflow impacts
  - Climate Change, Geology, and History
  - Drought restrictions affecting water use

Surface Waters

- Altered Hydrology
  - Increased drainage results in increased flow volumes.
  - Increased erosion and sedimentation, and nutrient pollution
  - Impaired habitat
- People

- Landscape modification and intensive land use impacts slopes and diverts water.
- Introduction of invasive species

Stormwater

- Altered Hydrology
  - Increased flows result in localized flooding.
  - Storm sewer and other designs are based on 10-year storm events and many storms exceed this design.
  - Impacts to water quality
- Urbanization and Development
  - Impacts on water quality
- Streambank and Drainage Area Health
  - Enhanced agricultural retention upstream of the LMRWD
  - Altered drainage has negatively impacted natural hydrology patterns.

A complete summary of the focus group meeting is available in Appendix D.

3.2.3 People, Funding, and Infrastructure

The final focus group meeting was held on August 17, 2022, to discuss people, funding, and infrastructure. *People* refers to how humans can influence the management, placement, and displacement of water resources. *Funding* includes the financial resources available to leverage local resources to undertake projects with the potential to preserve, protect, and restore water and natural resources within the lower Minnesota River corridor. *Infrastructure* refers to anything organizations do to support the sustainable functionality of their communities.

The main premise of the people, funding, and infrastructure meeting was to identify potential mitigation measures and funding opportunities to resolve some of the threats that had been previously identified. Participants were invited to respond to the following questions:

1. Where do we need to focus the education campaigns? Who is the audience?
2. What partnerships can make the dollars go farther in mitigating altered hydrology impacts and protecting streambanks and drainage areas?

In summary, residents, property managers, and homeowner association management companies were recommended as target audiences for educational campaigns to encourage actions and behavior changes

around the use of native vegetation, lawn management, implementation of residential stormwater BMPs, and erosion prevention.

Participants also recommended partnerships with other WMOs or WDs, large corporations on development projects, local businesses (e.g., native plant nursery), and public agencies (e.g., BWSR, DNR) to share funding resources to mitigate potential threats in the corridor.

A complete summary of the focus group meeting is available in Appendix E.

3.3 Final Open House

The draft framework for the Corridor Management Plan was presented on September 7, 2022, at an open house held at Fort Snelling State Park. Thirteen people attended the open house event. The open house format was informal, with posterboards stationed throughout the meeting space for attendees to review a summary of each focus group meeting and input that was received. Participants were also invited to participate in a canoe paddling activity on the Lower Minnesota River that included a route around Pike Island. Each station included space for attendees to provide comments and add new ideas. Generally, there was consensus among the participants about the feedback that had been collected at the previous focus group meetings. A complete summary of the feedback from the open house is available in Appendix F.

4.0 FRAMEWORK: PRINCIPLES AND GOALS

The results of identifying common issues among stakeholders, describing the watershed, and engaging with stakeholders during the series of focus group meetings provided the essential guidance to create a foundation for cooperation and strategic investments that can provide multiple benefits. The following framework for the Lower Minnesota River corridor management plan is based on guiding principles, goals, and objectives for why the plan was prepared and what the plan should provide.

4.1 Guiding Principles

The guiding principles for this plan are a summary of collective values gathered from the stakeholders who participated in the focus groups. These guiding principles serve as the overall planning approach for protecting the Lower Minnesota River and leveraging resources within the Lower Minnesota River Basin.

1. The Lower Minnesota River is a significant water resource and protecting the river is a universal responsibility.
2. The corridor management plan development process is open to all stakeholders with the goal of creating a shared vision that includes actionable solutions (activities, programs, studies, projects, policies) to mitigate the Minnesota River system's challenges.
3. The corridor management plan will encourage collaboration and communication among landowners, public entities, businesses, institutions, and others for sharing pooled resources.

4.2 Goals and Objectives

The following goals and objectives are the outcomes captured by the corridor management plan:

1. Goal: Improve water quality and quantity in agricultural, residential, urban, and open space locations.

    - Objective: Identify partners and projects to encourage water storage opportunities upstream of the Lower Minnesota River Corridor.
    - Objective: Address increases in agricultural drainage with improved agricultural practices, such as drainage, soil health, wind erosion, incentivizing farmers, and increased education.
    - Objective: Identify opportunities to work with large corporations and development projects to integrate BMPs in development designs that can be used as demonstrations.

2. Goal: Reduce erosion and preserve soil health.

- Objective: Reduce or eliminate erosion by encouraging best practices for soil health and water management on private property.
- Objective: Incentivize erosion repair for both public and private entities through grants, efficient permitting, and partnership opportunities.
- Objective: Manage invasive species through continued removal, monitoring, and introduction of native plants.

3. Goal: Improve streambank and drainage area health.

    - Objective: Protect bluffs, floodplains, and flood fringes by managing impacts from development.
    - Objective: Restore natural flood storage by reconnecting floodplain to waterbodies and restoring natural hydrology patterns.
    - Objective: Maximize infiltration to contribute to base flows and reduce runoff.

4. Goal: Identify and leverage new funding for restoration and preservation activities.

    - Objective: Leverage federal funding opportunities to diversify and maximize available funding opportunities.
    - Objective: Establish or reinvigorate new partnerships to share resources.
    - Objective: Continue to participate in BWSR's "One Watershed, One Plan".

5. Goal: Provide education and outreach to increase awareness about the corridor and the issues that threaten the future of the river.

    - Objective: Focus on active ownership and stewardship by stakeholders, especially youth and young adults.
    - Objective: Provide targeted outreach to lawn care businesses and property management on best management practices for their services and waste management.
    - Objective: Partner with other neighboring WMOs and WDs on educational efforts to promote consistent messaging throughout the corridor and beyond.
    - Objective: Create and share compelling messages to help audiences understand the *why* of the message and call to action, while also understanding that their actions and behaviors have quantifiable results.
    - Objective: Encourage and promote access to the river corridor to enable recreation and ADA-compliant access opportunities.

5.0 PLAN IMPLEMENTATION

Improving the water quality in the Lower Minnesota River is a challenging long-term effort and requires both small- and large-scale efforts by public and private groups. As noted, one of the most significant challenges faced by the Lower Minnesota River corridor is overcoming the impacts from the upper portion of the watershed that affect the water's quality as it flows through agricultural areas and down through the more urban lower watershed. The quality of the Minnesota River depends on the land and resource management decisions of landowners and managers throughout the watershed and is especially important for those who live and work along its banks. Therefore, the future of the Lower Minnesota River is dependent on the coordinated efforts by the entities described in this plan to implement a collective mission to protect and preserve the future of the river and the corridor.

Unlike a capital improvement plan with an organized structure, the Lower Minnesota River Corridor Management Plan's framework will utilize strategic and opportunistic approaches to implement the defined goals and objectives. Strategic approaches will be implemented through targeted outreach and project development efforts with public and private groups. Opportunistic approaches will work with willing private landowners and district partners on a project basis. Long-term endeavors include ongoing coordinated public projects and management efforts. The district will implement the plan's framework over time using various methods, including the following:

1. Continued collaboration with stakeholders to implement and support corridor projects.
2. Increased awareness and understanding about the Lower Minnesota River and the LMRWD's unique water resources.
3. Leveraged funding from new and existing sources to support corridor projects and initiatives and support potential opportunities in the upper watershed.
4. Performance of ongoing maintenance and monitoring of projects to maximize the district's investments and water quality improvements, including documentation of successes and failures to improve the Lower Minnesota River Watershed and Corridor.
5. Enforcement of the district's rules to continue to protect water resources and facilitate equitable development activities.

6.0 NEXT STEPS

This plan provides for a comprehensive and consistent voice to manage the Lower Minnesota River throughout its watershed and across municipal boundaries. It lays out the goals, strategies, and responsibilities for conserving and enhancing the Lower Minnesota River's most valuable qualities with a focus on management in upstream areas, and places where growth rates continue to challenge both man-made and natural environments. Five themes were identified as the focus points for the plan:

1. Water
2. People
3. Infrastructure
4. Threats
5. Funding

The goal of the plan is to preserve the character and integrity of the Minnesota River and its corridor by protecting its natural, historic, and scenic resources as well as to ensure the river's continued use as a multi-use river. This was accomplished by bringing stakeholders together to focus on improving water quality, improving the connectivity of natural habitats, and improving the public's knowledge about the importance of the Minnesota River.

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APPENDIX A - DATA SYNTHESIS MATRIX

Data Synthesis Matrix for the Lower Minnesota River Corridor Management Plan

Issue ID	Source	ID2	Issues Identified	Issue Subject	Type of Goal or Action (General or Specific)	Mitigation Actions Recommended/ future desires	CIP estimated date	CIP Cost	Currently not categorized	Duplicate Categories?	Issue Category1	Issue Category2	Issue Category3	Issue Category 4	Issue Category 5
J1	MP5	Shakopee SW	Minnesota River, Eagle Creek. Identified by the MPCA as impaired waters.	Water Quality	Specific goal	The City will be an active participant with the MPCA and the Watershed Districts to set Total Maximum Daily Loads (TMDLs) for the impaired waters in the City and to help meet the requirements outlined in the TMDL Implementation Plans once they are complete.					Impaired.TMDL				
J10	MP5	Shakopee SW	Illicit discharge	Water Quality	General goal	The City has developed an illicit discharge ordinance, trains staff on illicit discharge annually, and sends notifications if illicit discharge is observed. In addition, the City will educate the public as a part of MS4 SWPPP minimum control measures.					Public engagement.education				
J100	MP26	Chanhassen SW	Lake Susan - Eurasian watermilfoil, curly leave pondweed, control rough fish	Water Quality	Specific goal	reduction of nuisance invasive/exotic species, reduction of rough fish population					Invasives				
J101	MP26	Chanhassen SW	Lake St. Joe - in-lake phosphorous treatment	Water Quality	Specific goal	Improving water quality trends					Impaired.TMDL				
J102	MP7	Eden Prairie SW	Work to achieve water quality standards in lakes, streams, and wetlands consistent with intended use and classification and State of Minnesota water quality standards.	Water Quality	General goal	Require that development and redevelopment projects demonstrate no net increase in the annual mass of total suspended solids (TSS) or total phosphorous (TP) leaving the site compared to pre-development conditions.					Impaired.TMDL				
J103	MP7	Eden Prairie SW	Work to achieve water quality standards in lakes, streams, and wetlands consistent with intended use and classification and State of Minnesota water quality standards.	Water Quality	General goal	Require the use of green infrastructure techniques such as MIDS during development review through a Green Infrastructure Analysis to meet infiltration and reduce pollutant and nutrient loading to water resources where feasible.					Low Impact Devel				
J104	MP7	Eden Prairie SW	Work to achieve water quality standards in lakes, streams, and wetlands consistent with intended use and classification and State of Minnesota water quality standards.	Water Quality	General goal	Work in partnership with the Watershed Districts, DNR, adjacent property owners, and other interested parties to restore creeks, creek banks, and gullies for health, safety, and ecological integrity, using bioengineering for stabilization projects where feasible.					Cooperation				
J105	MP7	Eden Prairie SW	Protect downstream water resources, reduce the potential for flooding, and minimize related public capital and maintenance expenditure necessary to control excessive volumes and rates of runoff and to mitigate erosion	Water Quantity	General goal	Manage floodplain activities in accordance with all City, state, and federal regulations.				Y	Flood	Sediment.Erosion			
J106	MP7	Eden Prairie SW	Protect and/or restore wetlands to improve or maintain their functions and values in accordance with the Minnesota Wetland Conservation Act and the City's Wetland Protection ordinance.	Wetlands	General goal	Continue to act as the responsible Local Government Unit (LGU) for administration of the Minnesota Wetland Conservation Act (WCA) for project sites that have wetlands in the Lower Minnesota River and Riley-Purgatory-Bluff Creek Watershed Districts.					Wetlands				
J107	MP7	Eden Prairie SW	Protect and/or restore wetlands to improve or maintain their functions and values in accordance with the Minnesota Wetland Conservation Act and the City's Wetland Protection ordinance.	Wetlands	General goal	Continue to require the establishment and maintenance of buffers around wetlands as set forth in the City's Wetland Protection ordinance and as outlined in Watershed District standards and rules.					Wetlands				
J108	MP7	Eden Prairie SW	Work to prevent contamination of the aquifers, promote groundwater recharge and encourage water conservation practices.	Groundwater	General goal	Require infiltration of stormwater and resulting groundwater recharge where it is feasible and does not pose a threat to groundwater quality, in accordance with the Minnesota Department of Health's Evaluating Proposed Storm Water Infiltration Projects in Vulnerable Wellhead Protection Areas and the City's NPDES MS4 Stormwater Permit requirements.				Y	Stormwater	Groundwater			
J109	MP7	Eden Prairie SW	Work to prevent contamination of the aquifers, promote groundwater recharge and encourage water conservation practices.	Groundwater	General goal	Require proper well abandonment.					Groundwater				
J119	MP7	Eden Prairie SW	Increase public involvement and knowledge in management and protection of water resources.	Education	General goal	Conduct a public involvement process when considering public policies impacting water and natural resources.					Public engagement.education				
J12	MP5	Shakopee SW	shoreland, floodplain, and erosion control	Water Quality	General goal	The City will continually evaluate these ordinances and will update them as needed. The City will continue to enforce all ordinances as necessary.				Y	Flood	Sediment.Erosion			
J120	CP4	Co-Dakota	Add nature-based or natural resource compatible park recreation and services that people expect and appreciate.	Recreation	General goal	Welcome visitors of all backgrounds, interests, and abilities to their parks.			X						
J121	CP4	Co-Dakota	Develop a network of collaboratively operated greenways to link parks and popular destinations	Recreation	General goal	Protect, restore, and connect Dakota County's urban natural areas and open space (green infrastructure), using regional greenways as a framework.				Y	Development	Corridors	Cooperation		
J122	CP4	Co-Dakota	Develop a network of collaboratively operated greenways to link parks and popular destinations	Recreation	General goal	Provide convenient and accessible recreational open space.				Y	Development	Corridors	Cooperation		
J123	CP4	Co-Dakota	Develop a network of collaboratively operated greenways to link parks and popular destinations	Recreation	General goal	Create Greenway Collaboratives to achieve mutual objectives for greenways and trails.				Y	Development	Corridors	Cooperation		
J124	CP4	Co-Dakota	Protect and manage natural and cultural resources and green infrastructure in Dakota County	Recreation	General goal	Implement the 2017 Natural Resources Management Plan to manage vegetation, water, and wildlife in regional parks, park reserves, county parks, regional greenways, and park conservation areas.					Corridors				
J125	CP4	Co-Dakota	Protect and manage natural and cultural resources and green infrastructure in Dakota County	Recreation	General goal	Protect, design, and maintain scenic park viewsheds to enhance visitor experience.					Open and Green				
J126	CP4	Co-Dakota	Protect and manage natural and cultural resources and green infrastructure in Dakota County	Recreation	General goal	Protect park cultural resources and offer appropriate opportunities for visitors to experience them.					Open and Green				

J127	CP4	Co-Dakota	Protect and manage natural and cultural resources and green infrastructure in Dakota County	Recreation	General goal	Acquire and protect park and greenway lands through a strategic and comprehensive approach.			Corridors	
J128	CP4	Co-Dakota	Protect and manage natural and cultural resources and green infrastructure in Dakota County	Recreation	General goal	Develop and enhance collaborations for County parkland and greenway acquisition and protection.		Y	Corridors	Cooperation
J129	CP4	Co-Dakota	Build awareness of Parks, inform and engage the public	Recreation	General goal	Engage the public in meaningful and diverse ways, through communication and outreach.			Public engagement.education	
J13	MP5	Shakopee SW	construction site erosion control	Water Quality	General goal	The City will continue to implement and enforce erosion control measures from construction activity as required by the NPDES permit requirements. In addition, the City will continue to inspect waterbodies and evaluate the water quality benefit of stormwater ponds to identify maintenance needs.		Y	Stormwater	Sediment.Erosion
J130	CP4	Co-Dakota	Support and encourage orderly development.	Land Use	General goal	Support land use patterns that are compatible with the Metropolitan Council's Thrive MSP 2040 and local comprehensive plans.			Development	
J131	CP4	Co-Dakota	Support and encourage orderly development.	Land Use	General goal	Review city, township, and regional plans for compatibility with County plans and potential impact on County services or facilities			Development	
J132	CP4	Co-Dakota	Support and encourage orderly development.	Land Use	General goal	Assist redevelopment efforts through the County's Environmental Assessment and Remediation program (brownfields).			Development	
J133	CP4	Co-Dakota	Support land use and transportation options that create places where people can live without an automobile.	Land Use	General goal	Support city land use planning efforts to create walkable areas along regional transit corridors and station locations.			Corridors	
J134	CP4	Co-Dakota	Preserve vital functions of natural systems by strategically and collaboratively improving Dakota County's green infrastructure.	Land Use	General goal	Protect, connect, and enhance natural areas, wetlands, stream corridors, open space, agricultural working lands, parks, and greenways.		Y	Corridors	Cooperation
J135	CP4	Co-Dakota	Preserve vital functions of natural systems by strategically and collaboratively improving Dakota County's green infrastructure.	Land Use	General goal	Identify and map opportunities to enhance Dakota County's green infrastructure.			Cooperation	
J136	CP4	Co-Dakota	Preserve vital functions of natural systems by strategically and collaboratively improving Dakota County's green infrastructure.	Land Use	General goal	Lead and manage multi-agency collaborative approaches for green infrastructure protection and restoration priorities.			Cooperation	
J137	CP4	Co-Dakota	Conserve and protect natural resources in Dakota County, including air quality, water, soil, productive farmland, minerals (bedrock, sand, and gravel aggregates), vegetation, and wildlife.	Land Use	General goal	Provide education on natural resource management and conservation.	X			
J138	CP4	Co-Dakota	Conserve and protect natural resources in Dakota County, including air quality, water, soil, productive farmland, minerals (bedrock, sand, and gravel aggregates), vegetation, and wildlife.	Land Use	General goal	Advocate for effective and equitable natural resource management.	X			
J139	CP4	Co-Dakota	Land Resources Policies	Land Use		Collaborate to protect and connect resource lands that enhance natural systems functions.			Cooperation	
J14	MP5	Shakopee SW	Erosion and stabilization issues along the Minnesota River.	Erosion & Sediment	General goal	The City will coordinate with the Lower Minnesota River Watershed District to identify stabilization options and priority areas.			Sediment.Erosion	
J140	CP4	Co-Dakota	Land Resources Policies	Land Use		Avoid impacts to significant natural areas; when unavoidable, mitigate loss at equal value.	X			
J141	CP4	Co-Dakota	Land Resources Policies	Land Use		Avoid fragmenting natural areas and corridors; when unavoidable, mitigate loss at equal or greater value within Dakota County.			Corridors	
J142	CP4	Co-Dakota	Land Resources Policies	Land Use		Discourage use of high value wetlands for stormwater management when alternatives exist.		Y	Unique.Sensitive.h	Stormwater
J143	CP4	Co-Dakota	Land Resources Policies	Land Use		Encourage infiltration of stormwater where appropriate, protection of natural areas, and provision of open space.			Stormwater	
J144	CP4	Co-Dakota	Land Resources Policies	Land Use		Engage the public in planning processes and programs for managing and restoring natural areas.			Public engagement.education	
J145	CP4	Co-Dakota	Land Resources Policies	Land Use		Promote environmentally and economically sustainable uses of County natural resources.	X			
J146	CP4	Co-Dakota	Land Resources Policies	Land Use		Engage residents and stakeholders in developing new regulations and controls to protect natural resources.			Public engagement.education	
J147	CP4	Co-Dakota	Land Resources Policies	Land Use		Establish an advocacy role to encourage the Minnesota Pollution Control Agency and Minnesota Department of Health to address air quality issues and improve air quality in the County.	X			
J148	CP4	Co-Dakota	Increasing flows from increased precipitation and artificial drainage	Water Quality			X			
J149	CP4	Co-Dakota	Excess sediment from unstable, bluffs, banks and farm fields	Water Quality					Sediment.Erosion	
J15	MP5	Shakopee SW	debris in street	Water Quality	General goal	Street sweeping	X			
J150	CP4	Co-Dakota	Excess nutrients and bacteria levels of concern	Water Quality					Impaired.TMDL	
J151	CP4	Co-Dakota	Calcareous Fens	Water Quality					Trout.Fen	
J152	CP4	Co-Dakota	Impaired Waters	Water Quality					Impaired.TMDL	
J153	CP4	Co-Dakota	Sufficient and sustainable high quality water resources.	Water Quality	General goal	Prevent groundwater and surface water degradation from point and non-point source contamination.			Groundwater	
J154	CP4	Co-Dakota	Sufficient and sustainable high quality water resources.	Water Quality	General goal	Support sustainable watershed/ecosystem-based water resource management.	X			
J155	CP4	Co-Dakota	Sufficient and sustainable high quality water resources.	Water Quality	General goal	Protect shoreland and floodplain areas to preserve and enhance surface water quality, prevent economic loss, and conserve the natural environment.			Flood	
J156	CP4	Co-Dakota	Sufficient and sustainable high quality water resources.	Water Quality	General goal	Identify, prioritize, and restore drained wetlands and other water retention sites to improve water quality, enhance wildlife habitat, and prevent/mitigate flood damage to public infrastructure and private property.			Flood	
J157	CP4	Co-Dakota	Sufficient and sustainable high quality water resources.	Water Quality	General goal	Implement Total Maximum Daily Load (TMDL) waste-load allocation reduction projects required under the County's MS4 permit.			Impaired.TMDL	

J158	CP4	Co-Dakota	Water Management Policies	Water Quality	General goal	Support protection of unique water resources, including but not limited to wetlands, fens, springs, and trout streams.		Y	Unique.Sensitive.h	Trout.Fen		
J159	CP4	Co-Dakota	Water Management Policies	Water Quality	General goal	Use and encourage others to use riparian land easement and buffer programs to improve water quality.	X					
J16	MP5	Shakopee SW	The downtown Shakopee area is completely developed with little to no stormwater management.	Land Use	General goal	he City is completing a targeted BMP study to identify project opportunities throughout the downtown Shakopee area. Implement water quality BMPs during redevelopment projects based on stormwater requirements and to the maximum extent feasible.		Y	Stormwater	Development		
J160	CP4	Co-Dakota	Water Management Policies	Water Quality	General goal	Participate cooperatively with watershed management organizations, as appropriate.			Cooperation			
J161	CP4	Co-Dakota	Water Management Policies	Water Quality	General goal	Protect shoreland and floodplain areas to preserve and enhance surface water quality, prevent economic loss, and conserve the natural environment through County Ordinance No. 50.			Flood			
J162	CP4	Co-Dakota	Water Management Policies	Water Quality	General goal	Collaborate with others in the control of aquatic invasive species.		Y	Invasives	Cooperation		
J163	CP4	Co-Dakota	Water Management Policies	Water Quality	General goal	Work with local communities and state agencies to identify and implement TMDL waste-load allocation reduction projects required under the MS4 permit.			Impaired.TMDL			
J164	CP4	Co-Dakota	Sufficient and sustainable high quality water supplies.	Water Quality	General goal	Protect a sustainable and sufficient water supply through collaboration, regulation, water conservation, and education.			Cooperation			
J165	CP4	Co-Dakota	Sufficient and sustainable high quality water supplies.	Water Quality	General goal	Prevent groundwater and surface water degradation from point and non-point sources.			Groundwater			
J166	CP4	Co-Dakota	Sufficient and sustainable high quality water supplies.	Water Quality	General goal	Increase community awareness of water resource and supply issues.			Public engagement.education			
J167	CP4	Co-Dakota	Sufficient and sustainable high quality water supplies.	Water Quality	General goal	Work with state, regional, and local partners on water supply issues.			Cooperation			
J168	CP4	Co-Dakota	Sufficient and sustainable high quality water supplies.	Water Quality	General goal	Work to identify high quality infiltration areas to be protected from contamination and to utilize for maintaining future groundwater recharge.			Groundwater			
J169	CP12	Ci-Burnsville	City's land use mix is maintained with a healthy balance between residential, commercial, industrial/office, and park/open space.	Land Use	General goal	Support the reinvigoration of the city's existing neighborhood commercial areas through redevelopment into neighborhood-oriented mixed-use centers, improving transit options, providing links to neighborhood amenities and cultural facilities, encouraging live/work units, and allowing higher residential densities to support neighborhood commercial operations and services.			Open and Green			
J17	MP5	Shakopee SW	local water education	Water Quality	General goal	continue to implement community education to increase residents awareness and reduce violations concerning proper water resource management			Public engagement.education			
J170	CP12	Ci-Burnsville	City's land use mix is maintained with a healthy balance between residential, commercial, industrial/office, and park/open space.	Land Use	General goal	Preserve open space to protect sensitive natural areas and enhancement of wildlife habitats through use of the Open Space land use designation, Conservancy Zoning District, and Environmental Overlay District zoning tools			Unique.Sensitive.high value			
J171	CP12	Ci-Burnsville	Burnsville's physical character and identity is enhanced through property maintenance, redevelopment, and new development.	Land Use	General goal	Preserve and maintain natural, recreational, historical and cultural landmarks that are unique and essential to Burnsville's identity.			Development			
J172	CP12	Ci-Burnsville	New development and redevelopment projects incorporate creative site design.	Land Use	General goal	Preserve and incorporate outstanding natural (such as woodlands, steep slopes, wetlands), cultural, historical and unique features as part of development projects.		Y	Unique.Sensitive.h	Development	Steep slopes	
J173	CP12	Ci-Burnsville	New development and redevelopment occurs in an environmentally sensitive manner, preserving and restoring natural resources.	Land Use	General goal	Protect environmentally sensitive features through preservation, best management practices, green/sustainable design and construction techniques.		Y	Unique.Sensitive.h	Development		
J174	CP12	Ci-Burnsville	Job creation, retention and enhanced tax base are assured by growth, redevelopment, and sustained viability of commercial and industrial properties.	Land Use	General goal	Focus and promote the City's redevelopment efforts in the following areas: (a) Heart of the City (HOC) (b) Orange Line Bus Rapid Transit (BRT) Station Areas (c) Cliff Road Business Park (d) Burnsville Center/County Road 42 Corridor (e) Minnesota River Quadrant (MRQ)			Development			
J175	CP12	Ci-Burnsville	Historic and environmental resources are protected as required by state statutes.	Land Use	General goal	Support preservation of historic sites by private parties by directing interested parties to existing resources at the local, state and federal levels.	X					
J176	CP12	Ci-Burnsville	Energy reduction	Land Use	Specific goal	Continue to preserve open space, natural beauty, and critical environmental areas			Open and Green			
J177	CP12	Ci-Burnsville	Sustainable water supply	Land Use	Specific goal	Include the provision and protection of local water supply at planning concepts.	X					
J178	CP12	Ci-Burnsville	Sustainable water supply	Land Use	Specific goal	Continue to protect groundwater			Groundwater			
J179	CP12	Ci-Burnsville	Sustainable water supply	Land Use	Specific goal	Direct development and re-development in a manner consistent with watershed health.	X					
J18	MP5	Shakopee SW	Aging infrastructure and reduced effectiveness of water quality BMPs throughout the City.	Water Quality	General goal	The City will continue to complete inspections of the stormwater infrastructure and evaluate BMP effectiveness as required by the MPCA's MS4 NPDES Permit. The City of Shakopee is responsible for maintenance of its stormwater system in conformance with the MPCA's MS4 Program. This includes maintenance of pipes, outlets, constructed ponds, lakes, wetlands, ditches, swales, and other drainage ways.			Stormwater			
J180	CP12	Ci-Burnsville	Sustainable water supply	Land Use	Specific goal	Coordinate regional planning for a resilient municipal water supply.	X					
J181	CP12	Ci-Burnsville	Efficient use of infrastructure and land	Land Use	Specific goal	Provide infrastructure and design to support walkability & connectivity	X					
J182	CP12	Ci-Burnsville	Natural resource conservation	Land Use	Specific goal	Develop a Tree Canopy Assessment Plan that includes strategies to protect/expand use of native species, as well as evaluate the ecosystem services provided by the existing urban forest.			Vegetation			
J183	CP12	Ci-Burnsville	Natural resource conservation	Land Use	Specific goal	Continue to promote environmental stewardship by educational programs in areas of environmental science			Public engagement.education			
J184	CP12	Ci-Burnsville	Natural resource conservation	Land Use	Specific goal	Provide experiences for children in local natural environments.			Public engagement.education			

J185	CP12	Ci-Burnsville	Natural resource conservation	Land Use	Specific goal	Consider developing an Insect Assessment Plan to identify the existence and threats posed by invasive/non-beneficial insects.				Invasives		
J186	CP12	Ci-Burnsville	Natural resource conservation	Land Use	Specific goal	Continue to protect and enrich the urban forest and biodiversity	X					
J187	CP12	Ci-Burnsville	Climate Resiliency	Land Use	Specific goal	Provide and promote green linkages that allows non-car commuters to get anywhere				Open and Green		
J188	CP12	Ci-Burnsville	Climate Resiliency	Land Use	Specific goal	Promote climate awareness and adaptation preparedness by educational programs.				Public engagement.education		
J189	CP12	Ci-Burnsville	Burnsville's identity as an attractive and desirable place in which to live, work, shop and play is actively promoted.	Economic Development	General goal	Enhance and connect Burnsville's recognized amenity areas (MRQ, HOC, Burnsville Center, Southcross Business Park, Ridges Medical Campus, Cliff Road Business Park) with improved pedestrian and bicycle facilities, "high impact" streetscapes, water features, public areas, way finding signage, public art, and signature buildings.	X					
J19	MP5	Shakopee SW	Polycyclic aromatic hydrocarbons	Water Quality	General goal	As accumulated sediment is identified to be dredged from stormwater ponds, the City will follow protocol for testing the sediment for PAHs and disposal of dredged material properly.			Y	Stormwater	Sediment.Erosion	
J190	CP12	Ci-Burnsville	Burnsville's identity as an attractive and desirable place in which to live, work, shop and play is actively promoted.	Economic Development	General goal	Showcase the Minnesota River through amenities, trails, lighting, and building orientation.				Increase River Use		
J191	CP12	Ci-Burnsville	Burnsville's identity as an attractive and desirable place in which to live, work, shop and play is actively promoted.	Economic Development	General goal	Maintain the vision of a unique and high quality development future for the Minnesota River Quadrant, following the expiration of the gravel mine and closure of Waste Management Burnsville Sanitary Landfill.				Development		
J192	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	To reclaim the Minnesota Riverfront for public access/recreation, open space, natural habitat, as well as unique high density housing options				Increase River Use		
J193	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Convert the Burnsville Sanitary Landfill site, following its closure, to an 18-hole championship golf course	X					
J194	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Create a new 340-acre freshwater lake, following closure of the Kraemer Quarry	X					
J195	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Redevelop areas adjacent to the east side of the new lake with a mix of land uses, including hotels, offices, residential, and class A office in signature iconic buildings with recreational opportunities linked to the lake and river			Y	Development	Increase River Use	
J196	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Aesthetic, purposeful, attractive re-use of properties located at North Gateway along I-35W, an important gateway into the community	X					
J197	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Redevelop the I-35W corridor with high quality office/showroom development on the west and commercial development on the east				Development		
J198	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Provide an area in the southwest part of the MRQ for heavy industrial uses, existing and relocated	X					
J199	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Redevelop and enhance the Highway 13 corridor with a mix of high quality businesses, including office/showroom in the southeast, industrial in the south central area, commercial/mixed use in the southwest, and mixed-use at the County Road 5/Highway 13 intersection				Development		
J2	MP5	Shakopee SW	Dean Lake Wetland poor water quality	Water Quality	Specific goal	Dean Lake Wetland was recently reclassified from a lake to a wetland. The City will work with the Lower Minnesota River Watershed District (LMRWD) on studies related to water quality and overall health of Dean Lake Wetland. It is anticipated that the Watershed District will be the lead, but the City should assist and provide support to the Watershed District.				Wetlands		
J20	MP5	Shakopee SW	Chloride	Water Quality	General goal	One significant contributor to elevated chloride concentrations in surface water and groundwater is road salt application during the winter. The City will continue to implement chloride best management practices such as reducing salt use on roadways and implement prewetting and anti-icing strategies. The City will also continue to educate private business owners and residents about correct salt application, and improve policies designating salt usage.				Groundwater		
J200	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Explore opportunities for sustainable energy development and generation				Development		
J201	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Work with the development community and property owners to utilize green building techniques and energy efficient site design			Y	Development	Low Impact Devel	
J202	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Establish transit, walking, and bike trail connections within the MRQ and to other areas of the city and the City of Savage				Increase River Use		
J203	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ)	Economic Development	Specific goal	Provide high-tech communications, fiber, wireless and other cutting edge technologies and encourage the development community to install these systems at the time of development and redevelopment				Development		
J204	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) Energy reduction	Economic Development	Specific goal	Consider utilization of district energy (using lake for heat exchange)	X					
J205	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) Energy reduction	Economic Development	Specific goal	Use walkable and transit-oriented developments where development is planned				Development		
J206	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) Sustainable water supply	Economic Development	Specific goal	Consider installation of district level greywater reuse infrastructure	X					
J207	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) Sustainable water supply	Economic Development	Specific goal	Ensure new and redevelopment meet the City's water resources management plan development standards				Development		
J208	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) Sustainable water supply	Economic Development	Specific goal	Implement green/living streets policies/standards upon redevelopment			Y	Development	Low Impact Devel	
J209	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) Sustainable food system operations	Economic Development	Specific goal	Support aquaculture as a potential land use	X					
J21	MP5	Shakopee SW	Increased demand for public access and/or trail systems for waterbodies within the City.	Recreation	General goal	The City will continue to work to improve public access and/or trail systems for waterbodies within the city as part of the current Parks and Recreation Master Plan.				Trails		
J210	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) Sustainable food system operations	Economic Development	Specific goal	Consider allowing small scale farming on capped landfills				Agriculture		
J211	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) Sustainable food system operations	Economic Development	Specific goal	Continue to allow small scale farming in floodplains				Flood		

J212	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) efficient use of infrastructure and land	Economic Development	Specific goal	Create multimodal connected streets and places	X				
J213	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) natural resource conservation	Economic Development	Specific goal	Restore disturbed floodplain, and remediation of the old landfill			Flood		
J214	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) climate resiliency	Economic Development	Specific goal	Consider an urban compact green environment where residential development is proposed		Y	Development	Low Impact Devel	
J215	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) climate resiliency	Economic Development	Specific goal	Allow for green roofs			Open and Green		
J216	CP12	Ci-Burnsville	Minnesota River Quadrant (MRQ) climate resiliency	Economic Development	Specific goal	Implement stormwater reuse (evaporated heat loss)			Stormwater		
J217	CP12	Ci-Burnsville	Promote protection, conservation, and enhancement of natural resources within Burnsville for the community's long-term use.	Wildlife	General goal	Manage the community's wildlife resources to protect and preserve native habitat and wildlife, and to protect human safety.			Vegetation		
J218	CP12	Ci-Burnsville	Promote protection, conservation, and enhancement of natural resources within Burnsville for the community's long-term use.	Natural Resources	General goal	Develop, redevelop, and maintain an organized system of open space, trails for biking and running, greenways, corridors, and active and passive parks to improve community character and protect natural resources.			Corridors		
J219	CP12	Ci-Burnsville	Preserve, enhance, and restore the Minnesota River Valley as a natural area and for public use with compatible private amenities.	Recreation	General goal	Maximize appropriate recreational opportunities, business and economic activities in concert with overall river valley development.			Increase River Use		
J22	MP8	Savage SW	The Minnesota River has been listed as impaired by the MPCA for Fecal Coliform, Mercury, PCB, Dissolved oxygen	Water Quality	General goal	The Lower Minnesota River Dissolved Oxygen TMDL was approved in 2004, with the Implementation Plan being approved in 2006. The City has continued to require stormwater BMPs for new and redevelopment and have also implemented BMPs during City projects to reduce TP loading to the Minnesota River. The City will work with the MPCA, Watershed Districts, and Watershed Management Organizations to develop Total Maximum Daily Loads (TMDLs) for the impaired waters within their boundaries.		Y	Stormwater	Impaired.TMDL	
J220	CP12	Ci-Burnsville	Preserve, enhance, and restore the Minnesota River Valley as a natural area and for public use with compatible private amenities.	Recreation	General goal	In addition to open space preservation, promote recreation and cultural opportunities associated with the Minnesota River corridor.			Increase River Use		
J221	CP12	Ci-Burnsville	Preserve, enhance, and restore the Minnesota River Valley as a natural area and for public use with compatible private amenities.	Recreation	General goal	Participate with other organizations, agencies and land owners to enhance, and restore the Minnesota River and adjacent lands for public use and as valuable wildlife habitat.			Increase River Use		
J222	CP12	Ci-Burnsville	Preserve, enhance, and restore the Minnesota River Valley as a natural area and for public use with compatible private amenities.	Dredge	Specific goal	Continue to work with the U.S. Army Corps of Engineers and Lower Minnesota River Watershed District to allow dredge material sites at the Burnsville Sanitary Landfill Inc. (BSLI) landfill and Kraemer sites on a short term, interim basis provided the sites are out of view of the Gateway Area. Discourage dredge spoil sites in other areas of the MRQ and east of I-35W.			Navigation.boating		
J223	CP12	Ci-Burnsville	Preserve, enhance, and restore the Minnesota River Valley as a natural area and for public use with compatible private amenities.	Water Quality	Specific goal	Support the Minnesota Pollution Control Agency (MPCA) and Environmental Protection Agency's (EPA) efforts to close Freeway Landfill in an environmentally sustainable manner.	X				
J224	CP12	Ci-Burnsville	Protect, improve and recognize the importance of preserving the community's valuable water resources and open space.	Water Quality		Work with the regional and state agencies, as well as the local water management organizations, to meet the water quality goals established for the Minnesota River and other waters in Burnsville.			Cooperation		
J225	CP12	Ci-Burnsville	Protect, improve and recognize the importance of preserving the community's valuable water resources and open space.	Water Quality	Specific goal	Develop programs to preserve, maintain, further enhance and prevent degradation of surface water resources and interconnected groundwater resources, including lakes, ponding areas, drainage areas, and wetlands by: - Protecting lakes and other water bodies from negative impacts of development, including pollution, sedimentation, and native vegetation removal. - Protecting both surface and ground water from pollutants, including hazardous waste, fertilizers, and pesticides. - Protecting surface water from intrusive vegetation that would disturb or destroy its natural ecosystem. - Evaluating the use of mitigation measures in the development process to preserve and enhance existing wetlands through the development process.		Y	Sediment.Erosion	Groundwater	
J226	CP12	Ci-Burnsville	Partner with private and public sector organizations to maximize the preservation of natural resources.	Natural Resources	General goal	Partner with other government agencies to provide viable greenway and natural habitat corridors that connect to existing and planned facilities/natural areas.			Corridors		
J227	CP12	Ci-Burnsville	Ensure that the development of the MRQ is not only a commercial success, but that high quality natural resource and recreational values are also achieved.	Natural Resources	General goal				Development		
J228	CP12	Ci-Burnsville	Encourage conservation of water resources.	Water Quantity	General goal	Educate property owners and businesses about future cost savings with the use of native plantings, less manicured lawns and tree plantings.			Vegetation		
J229	CP12	Ci-Burnsville	TMDL	Water Quantity	Specific goal	Minnesota River TMDL			Impaired.TMDL		

J23	MP8	Savage SW	There are concerns that, if not properly managed, the quality of stormwater runoff entering the Savage Fen complex may have an adverse effect on the stability of the Fen.	Water Quality	Specific goal	The City will implement the AUAR Mitigation Plan for the Savage Fen Area. This includes no new or expanded discharges into the Fen. A Stormwater Management Plan for the Savage Bluff Area was first completed in 2011. This Plan identified future surface water management for the bluff area upstream of the Savage Fen wetland complex. The primary goals of the study were to avoid impacts to the Savage Fen and other natural resources due to stormwater runoff, and provide a plan to protect the Savage Fen while allowing for orderly development of the remaining undeveloped properties that currently drain or could potentially drain to the Savage Fen. Implementation items that were identified included regional facilities, ravine stabilization and water quality retrofits. In 2014, a first phase Stormwater Management Plan was also completed that analyzed the existing capacity of the storm sewer system that discharges to the Credit River to the east. The City will continue to study this area and will identify implementation items from the various plans to limit impacts from future development.		Y	Stormwater	Steep slopes	Trout.Fen
J230	CP12	Ci-Burnsville	Invasive Species	Water Quantity	Specific goal				Invasives			
J231	CP12	Ci-Burnsville	Groundwater Sustainability	Water Quantity	Specific goal				Groundwater			
J232	CP12	Ci-Burnsville	Climate Change	Water Quantity	Specific goal		X					
J233	CP12	Ci-Burnsville	Stormwater System Maintenance	Water Quantity	Specific goal				Stormwater			
J234	CP12	Ci-Burnsville	Natural environment energy reduction	Open Space	Specific goal	Take advantage of opportunities for sustainable land uses, compact housing and open spaces			Open and Green			
J235	CP12	Ci-Burnsville	Natural environment energy reduction	Wildlife	Specific goal	Take advantage of integrated park and wildlife corridor opportunities to create better wildlife as well as human bike/pedestrian connections and travel			Corridors			
J236	CP12	Ci-Burnsville	Natural environment energy reduction	Pollinator	Specific goal	Encourage low-maintenance, native, pollinator-supporting landscaping			Vegetation			
J237	CP12	Ci-Burnsville	Natural environment sustainable water supply	Water Quality	Specific goal	Implement land restoration projects to restore/maintain infiltration and native landscapes			Vegetation			
J238	CP12	Ci-Burnsville	Natural environment sustainable water supply	Water Reuse	Specific goal	Identify and capitalize upon water reuse projects	X					
J239	CP12	Ci-Burnsville	Natural environment sustainable water supply	Water Quality	Specific goal	Contribute to pollutant reductions necessary to bring impaired waters into compliance with state water quality standards			Impaired.TMDL			
J24	MP8	Savage SW	Eagle Creek has been noted as having poor water quality due to E. coli. Temperature patterns have also been noted as a concern within the Creek.	Water Quality	Specific goal	The City will work with LMRWD to complete a study to identify BMPs aimed at reducing the watershed load to the creek for E. coli. The City will continue to work with the LMRWD as they monitor the temperature patterns of the Creek.			Monitoring			
J240	CP12	Ci-Burnsville	Natural environment sustainable water supply	Water Quality	Specific goal	Pursue stormwater management initiatives by participating in local/regional partnerships to develop innovative and consistent practices			Stormwater			
J241	CP12	Ci-Burnsville	Natural environment efficient use of infrastructure and land	Water Quality	Specific goal	Protect steep slopes, bluffs, and other sensitive environmental features		Y	Unique.Sensitive.h	Steep slopes		
J242	CP12	Ci-Burnsville	Natural environment natural resource conservation	Invasive Species	Specific goal	Conduct programs to remove/mitigate invasive species			Invasives			
J243	CP12	Ci-Burnsville	Natural Resource Management Plan Sustainable Water Supply	Water Quantity	Specific goal	Increase green space and usage of infiltration techniques to replenish groundwater			Groundwater			
J244	CP12	Ci-Burnsville	Natural Resource Management Plan efficient use of infrastructure and land	Land Use	Specific goal	Work with partners to conserve land			Cooperation			
J245	CP12	Ci-Burnsville	Natural Resource Management Plan natural resource conservation	Open Space	Specific goal	Continue natural vegetation conversion for passive park areas			Vegetation			
J246	CP12	Ci-Burnsville	Wetland Protection and Management Plan Sustainable Water Supply	Wetlands	Specific goal	Restore wetlands to promote groundwater recharge			Groundwater			
J247	CP12	Ci-Burnsville	Wetland Protection and Management Plan Natural Resource Conservation	Wetlands	Specific goal	Implement wetland restoration projects identified in inventory			Wetlands			
J248	CP12	Ci-Burnsville	Wetland Protection and Management Plan Climate Resiliency	Wetlands	Specific goal	Continue protection of wetlands to provide water and natural habitat storage/capacity in the landscape			Wetlands			
J249	CP12	Ci-Burnsville	Water Resources Management Sustainable Water Supply	Water Quality	Specific goal	Implement daylighting of surface water resources strategies (restore natural channels and corridors) where appropriate			Corridors			
J25	MP8	Savage SW	Downtown Savage localized flooding	Flooding	General goal	Construct drainage improvements to correct flooding and drainage related issues at each of these locations.			Flood			
J250	CP12	Ci-Burnsville	Water Resources Management Sustainable Water Supply	Water Quality	Specific goal	Shift the emphasis of stormwater infrastructure towards capture, infiltration, and utilization			Stormwater			
J251	CP12	Ci-Burnsville	Water Resources Management Natural Resource Conservation	Open Space	Specific goal	Identify and capitalize on opportunities to convert vegetation to passive park spaces			Vegetation			
J252	CP12	Ci-Burnsville	Natural Environment Area - natural resources	Buffer	Specific goal	Consider the establishment of buffer standards (minimum 50 foot width) for lands located adjacent to major natural open space areas such as Murphy-Hanrehan Park Reserve, Rudy L. Kramer Nature Preserve and the Minnesota Valley National Wildlife Refuge			Open and Green			
J253	CP12	Ci-Burnsville	Natural Environment Area - water resources	Water Quality	Specific goal	Partner with Kraemer Mining and Manufacturing (KMM) to establish water quality goals, a healthy lake fishery, protection measures for future drinking water resources, development standards, and to establish shorelines that are naturally shaped and aesthetically pleasing			Cooperation			
J254	CP12	Ci-Burnsville	Work to integrate multiple methods of transportation into the existing and future transportation system that are safe and convenient	Transportation	General goal	Coordinate with the City of Savage, Scott and Dakota Counties and the Metropolitan Council to identify the area where the Minnesota River Greenway and Black Dog segment of the Big Rivers Regional Trail will be connected. Focus on the westerly extension of 124th Street as a possible trail corridor for the new connection.		Y	Corridors	Increase River Use		
J255	CP12	Ci-Burnsville	Work to coordinate the development of the transportation needs of the MRQ development.	Transportation	General goal	Work with MnDOT and Dakota County to determine the access needs of MRQ to the state and county roadway systems.			Development			
J256	CP12	Ci-Burnsville	Expand non-motorized use	Transportation	Specific goal	Complete trail connections on Cliff Road, the Lake Marion Regional Trail and along the Minnesota River			Increase River Use			
J257	CP12	Ci-Burnsville	Ensure that development and redevelopment provides for adequate parks and open space.	Open Space	General goal	Continue to require the dedication of park land, or payment of cash in lieu of land, for all commercial, industrial, and residential development, in accordance with the park dedication policy, Subdivision Ordinance and state law.			Development			

J258	CP12	Ci-Burnsville	Ensure that development and redevelopment provides for adequate parks and open space.	Open Space	General goal	Support the development and operation of a private golf course and clubhouse (open to the public), on the Burnsville Sanitary Landfill site following closure of the landfill (upon review and evaluation of a need for golf course facilities at that time).			Development		
J259	CP12	Ci-Burnsville	Ensure that development and redevelopment provides for adequate parks and open space.	Open Space	General goal	Support development of the Minnesota Riverfront area of the MRQ for public park and recreation facilities and natural open space.		Y	Development	Increase River Use	
J26	MP8	Savage SW	Credit River floodway south of Highway 13 near the downtown area limits development.	Flooding	Specific goal	A study began in the fall of 2019 to determine if the Credit River floodway could be revised. Once the study is completed it will be shared with FEMA, MnDNR, and LMRWD.		Y	Flood	Development	
J260	CP20	Ci-Eagan	sustainability and resilience strategies	Land Use	General goal	Support appropriate separation between development and ecologically sensitive areas, including water bodies and wetlands			Unique.Sensitive.high value		
J261	CP20	Ci-Eagan	sustainability and resilience strategies	Land Use	General goal	Support the protection of open spaces and important natural features through long-term conservation easements, buffers and acquisitions.			Open and Green		
J262	CP20	Ci-Eagan	sustainability and resilience strategies	Land Use	General goal	Encourage the use of stormwater management techniques which have a low impact on the environment while providing an attractive community amenity			Stormwater		
J263	CP20	Ci-Eagan	active and healthy living	Land Use	General goal	support walking and biking with additional trails and connections			Trails		
J264	CP20	Ci-Eagan	connections	Land Use	General goal	Facilitate connections to the greater metropolitan area through enhanced transit connections to major destinations like downtown St. Paul.	X				
J265	CP20	Ci-Eagan	placemaking	Land Use	General goal	Creating more pedestrian and bicycle links to parks and green spaces.			Open and Green		
J266	CP20	Ci-Eagan	Provide Healthy Living Opportunities Year Round	Recreation	General goal	Support and facilitate trails, sidewalks, and on-street bikeways for recreation and transportation			Trails		
J267	CP20	Ci-Eagan	Provide Healthy Living Opportunities Year Round	Recreation	General goal	Preserve and restore habitat for plants and animals			Natural Resource Protection		
J268	CP20	Ci-Eagan	Open and Green Space	Recreation	General goal	Preserve/Maintain green space and open space			Open and Green		
J269	CP20	Ci-Eagan	Open and Green Space	Recreation	General goal	Obtain high quality natural areas for continuous greenways			Corridors		
J27	MP8	Savage SW	Eutrophication	Water Quality	General goal	Continue to improve stormwater treatment practices. Continue to educate residents on use of fertilizers, lawn care practices, and pet waste management to minimize algae blooms, etc.			Stormwater		
J270	CP20	Ci-Eagan	Open and Green Space	Recreation	General goal	Acquire other significant resources as opportunities arise			Open and Green		
J271	CP20	Ci-Eagan	Recreation strategies	Recreation	General goal	Identify opportunities to partner with interested parties for the development of new and unique and special facilities where either economic criteria or public demand warrants the action			Cooperation		
J272	CP20	Ci-Eagan	Recreation strategies	Recreation	General goal	Provide trails and alternative methods of transportation to make possible commutes, recreational activity, and access to facilities by means other than private motor vehicles			Vegetation		
J273	CP20	Ci-Eagan	Recreation strategies	Recreation	General goal	Protect and, as feasible, increase open space and natural resources where clear value will accrue to the residents of Eagan			Open and Green		
J274	CP20	Ci-Eagan	Minnesota Riverfront	Recreation	Specific goal	Access to the Minnesota riverfront area along the northwest border of Eagan remains somewhat limited, although having improved over time. Research needs to be done with State and Federal agencies to determine what, if any, types of recreational and public amenities or increased access could be added to this area in the future to leverage the natural beauty and river access into an additional attraction for Eagan residents and employees. Dakota County is continuing to develop greenway trails and corridor for this area as part of their Visioning process.		Y	Corridors	Navigation.boating	Increase River Use
J275	CP20	Ci-Eagan	Open and Green Space	Open Space	Specific goal	The goal for open space should be to evaluate remaining undeveloped areas on a case by case basis and strive to acquire only those that have unique and/or vanishing natural characteristics that need to preserved, that significantly contribute to an established park or greenway or that provide another feature needed for the public good.		Y	Unique.Sensitive.h	Corridors	
J276	CP20	Ci-Eagan	Natural resource preservation	Open Space	Specific goal	Preservation efforts are important to the maintenance of wildlife habitat and movement corridors; preservation of rare or endangered flora and fauna; storm water detention and aquatic recharge areas; visual relief and aesthetic considerations; preservation of the community's historical perspective; and to provide environmental education. The rationale supporting resource preservation and an assessment of programs, policies, and resource preservation methods and regulations are described in the park plan as well as the Water Quality and Wetland Management Plan.			Corridors		
J277	CP20	Ci-Eagan	trail development	Recreation	General goal	Develop an interconnected system of trails that serve transportation and recreational needs while accommodating a variety of skill levels			Development		
J278	CP20	Ci-Eagan	natural resources goals/policies	Natural Resources	General goal	To provide adequate protection, preservation and enhancement of natural resources such as scenic views, woodlands, prairies, lakes, wetlands, groundwater recharge areas, and wildlife habitats.			Groundwater		
J279	CP20	Ci-Eagan	natural resources goals/policies	Open Space	General goal	To protect and properly manage large public open spaces and to preserve significant elements of the “pre-development” natural environment and wildlife habitats by minimizing fragmentation of previously uninterrupted expanses of natural landscapes.			Open and Green		
J28	MP8	Savage SW	Vegetation management due to aquatic invasive species	Water Quality	General goal	Monitor any known areas where aquatic invasive species are prevalent and address areas as needed.		Y	Monitoring	Invasives	
J280	CP20	Ci-Eagan	natural resources goals/policies	Open Space	General goal	To work with Dakota County and other agencies to maintain and acquire, where feasible, natural greenway corridors to foster ecosystem continuity.			Corridors		
J281	CP20	Ci-Eagan	natural resources goals/policies	Wildlife	General goal	To protect and preserve rare or endangered flora and fauna, where feasible, to foster biological diversity.			Natural Resource Protection		
J282	CP20	Ci-Eagan	natural resources goals/policies	Erosion & Sediment	General goal	To control runoff and erosion to prevent negative impacts to surface water quality, plant communities, and natural habitats.			Sediment.Erosion		
J283	CP20	Ci-Eagan	natural resources goals/policies	Recreation	General goal	To provide high quality opportunities for residents and visitors to experience and learn about the natural environment.	X				
J284	CP20	Ci-Eagan	natural resources goals/policies	Education	General goal	To expand knowledge and understanding of natural resources and ecosystems in order to protect them from detrimental impacts.			Public engagement.education		
J285	CP20	Ci-Eagan	natural resources goals/policies	Education	General goal	To create and support initiatives that encourage residents and neighborhood groups to take specific actions, to become involved, and to join together to preserve, enhance, and manage natural resources.			Public engagement.education		

J286	CP20	Ci-Eagan	Resource Protection and Management	Open Space	General goal	The City will strive to maintain existing natural greenway corridors connecting parks and open space.			Corridors			
J287	CP20	Ci-Eagan	Resource Protection and Management	Wildlife	General goal	The City will continue to identify and acquire, when feasible, significant habitat areas and areas of unique plant and animal species to ensure their preservation for posterity.			Unique.Sensitive.high value			
J288	CP20	Ci-Eagan	Resource Protection and Management	Open Space	General goal	The City will support efforts of the Metropolitan Parks and Open Space Commission, Dakota County, the Minnesota Department of Natural Resources, and the U.S. Fish and Wildlife Service to protect and preserve endangered and threatened species and their natural habitats.			Open and Green			
J289	CP20	Ci-Eagan	Resource Protection and Management	Natural Resources	General goal	The City will continue to initiate inventories and analyses of its natural resources.	X					
J29	MP8	Savage SW	Water quality on the Credit River is being impacted by stream bank erosion. Significant improvements have been made but many smaller opportunities for improvement are available.	Water Quality	Specific goal	The City will continue to address Credit River erosion issues as well as erosion that is tributary to Credit River. A stream assessment will be completed with partnerships from various agencies to identify specific areas in need of shoreline restoration.			Sediment.Erosion			
J290	CP20	Ci-Eagan	Resource Protection and Management	Natural Resources	General goal	The City will continue to monitor the condition of priority water and forest resources at a frequency and intensity sufficient to assess trends in their conditions over the long term.			Monitoring			
J291	CP20	Ci-Eagan	Resource Protection and Management	Natural Resources	General goal	The City is committed to initiating and working with other organizational units to develop and test new techniques that will improve the effectiveness of natural resource management efforts.	X					
J292	CP20	Ci-Eagan	Lakes and Wetlands	Water Quality	General goal	The City will protect lakes and wetlands from impacts of land development and re-development activities, to the extent technically and financially feasible, through control of stormwater runoff pollutants from watersheds.			Stormwater			
J293	CP20	Ci-Eagan	Lakes and Wetlands	Water Quality	General goal	The City will manage lakes and wetlands using scientifically-based, common sense approaches that meet or exceed regional, state, and federal regulatory requirements.			Wetlands			
J294	CP20	Ci-Eagan	Lakes and Wetlands	Water Quality	General goal	The City will manage lakes to achieve clear water conditions with abundant and diverse native-dominated plant communities and according to individual lake management plans.			Vegetation			
J295	CP20	Ci-Eagan	Lakes and Wetlands	Water Quality	General goal	The City will manage fisheries populations in lakes using the best available science, data, and expert advice, considering available resources and expected fishing pressure.	X					
J296	CP20	Ci-Eagan	Tree Preservation	Invasive Species	General goal	The City will continue to take a pro-active approach in efforts to identify and treat diseased trees in a timely manner through implementation of the City's Shade Tree Disease program.			Invasives			
J297	CP20	Ci-Eagan	environmental education and awareness	Education	General goal	The City will conduct ongoing public awareness and education programs to enhance knowledge of the City's natural resources and environment.			Public engagement.education			
J298	CP19	Ci-Mendota Heights	Provide a park system that is safe, accessible, and equitable in its offerings to all of Mendota Heights' residents, stakeholders and visitors.	Recreation	General goal	Create and maintain a park system that provides the optimum amount of active and passive open space for the enjoyment of all Mendota Heights residents.			Open and Green			
J299	CP19	Ci-Mendota Heights	Provide a park system that is safe, accessible, and equitable in its offerings to all of Mendota Heights' residents, stakeholders and visitors.	Recreation	General goal	Plan and build safe connections for pedestrians and bicyclists within and between park facilities and major destinations in the community			Trails			
J3	MP5	Shakopee SW	Flooding and erosion	Flooding	Specific goal	The City will cooperate with the Cooperators of the PLOC to evaluate channel capacity and flooding concerns, and support operation and maintenance to address channel capacity, flooding, and erosion. As development occurs along the PLOC, the city will work with the PLOC cooperators to evaluate opportunities to improve and address any channel capacity, flooding, and/or erosion issues.		Y	Flood	Sediment.Erosion	Cooperation	
J30	MP8	Savage SW	Erosion control at construction sites continues to be an area with opportunity for improvement.	Water Quality	General goal	Provide inspections of all construction sites. Continue to implement City's MS4 SWPPP.			Sediment.Erosion			
J300	CP19	Ci-Mendota Heights	Use the park system as a means to enhance and sustain the environment of each neighborhood and the city as a whole	Water Quality	General goal	Ensure that stormwater is managed in park facilities in a manner that protects and preserves water quality and the ecology of the watershed.			Stormwater			
J301	CP19	Ci-Mendota Heights	Cooperate with Dakota County and surrounding communities in park and recreation facilities and programming	Recreation	General goal	Improve and expand safe bicycle and pedestrian connections to city parks and other community destinations.			Cooperation			
J302	CP19	Ci-Mendota Heights	Develop a professional, comprehensive, strategic Natural Resources Management Plan for city-wide natural areas and natural resources.	Natural Resources	General goal	Develop capabilities to monitor and implement the Natural Resources Management Plan through city staff expertise, as well as through partnerships with community groups, volunteers, and adjacent communities and agencies, thus recognizing the interconnectedness of ecosystems.		Y	Monitoring	Development		
J303	CP19	Ci-Mendota Heights	Develop a professional, comprehensive, strategic Natural Resources Management Plan for city-wide natural areas and natural resources.	Natural Resources	General goal	Develop site-specific management plans that identify and prioritize opportunities to enhance and protect the city's high-quality areas and address significant issues, such as: vegetation plans, tree planting plans, tree inventories, green infrastructure, surface waters, roadside restoration, wildlife management, tree diseases, pests, and invasive species		Y	Invasives	Development	Low Impact Devel	
J304	CP19	Ci-Mendota Heights	Develop a professional, comprehensive, strategic Natural Resources Management Plan for city-wide natural areas and natural resources.	Natural Resources	General goal	Seek partnerships and grant opportunities to help implement natural resources goals			Development			
J305	CP19	Ci-Mendota Heights	Develop a professional, comprehensive, strategic Natural Resources Management Plan for city-wide natural areas and natural resources.	Erosion & Sediment	General goal	Protect steep slopes, bluffs, and other sensitive areas from erosion and other threats, specifically throughout the development process		Y	Unique.Sensitive.h	Development	Sediment.Erosic	Steep slopes

J306	CP19	Ci-Mendota Heights	Protect, connect, restore, buffer, and manage natural areas, wildlife habitat, and other natural resources, for high ecological quality and diversity of plant and animal species	Invasive Species	General goal	Monitor tree disease and pest outbreaks (i.e. Emerald Ash Borer) with the implementation of control and replanting programs, such as an Integrated Pest Management program, for current tree diseases as well as emerging diseases and pests.		Y	Monitoring	Invasives		
J307	CP19	Ci-Mendota Heights	Protect, connect, restore, buffer, and manage natural areas, wildlife habitat, and other natural resources, for high ecological quality and diversity of plant and animal species	Invasive Species	General goal	Continue to partner with outside agencies and community groups to monitor and control invasive species and noxious weeds.		Y	Monitoring	Invasives		
J308	CP19	Ci-Mendota Heights	Protect, connect, restore, buffer, and manage natural areas, wildlife habitat, and other natural resources, for high ecological quality and diversity of plant and animal species	Pollinator	General goal	Restore areas throughout the city with pollinator-friendly or native species to protect and enhance habitat for native pollinators and birds in accordance with City Resolution 2016-01 (see Appendix - E).			Vegetation			
J309	CP19	Ci-Mendota Heights	Protect, connect, restore, buffer, and manage natural areas, wildlife habitat, and other natural resources, for high ecological quality and diversity of plant and animal species	Wildlife	General goal	Monitor wildlife populations and address over-population as needed.			Monitoring			
J31	MP8	Savage SW	Potential impacts to Eagle Creek.	Water Quality	Specific goal	Previously addressed by improvements to storm sewer systems. Currently monitored by Eagle Creek Aquatic Management Area Committee.			Monitoring			
J310	CP19	Ci-Mendota Heights	Protect, connect, restore, buffer, and manage natural areas, wildlife habitat, and other natural resources, for high ecological quality and diversity of plant and animal species	Water Quality	General goal	Look for opportunities to reduce or minimize impervious cover city-wide.	X					
J311	CP19	Ci-Mendota Heights	Protect, connect, restore, buffer, and manage natural areas, wildlife habitat, and other natural resources, for high ecological quality and diversity of plant and animal species	Open Space	General goal	Emphasize the use of, and identify areas including public open space and park land, that could be restored to include native species, pollinator plants, wildlife habitat, or turf alternatives.			Open and Green			
J312	CP19	Ci-Mendota Heights	Protect and restore the natural ecological functions of the city's water resources with emphasis on the improvement of stormwater management.	Water Quality	General goal	Work with partners to implement projects and develop and support programs that encourage infiltration, to reduce stormwater runoff and pollution to water-bodies			Stormwater			
J313	CP19	Ci-Mendota Heights	Protect and restore the natural ecological functions of the city's water resources with emphasis on the improvement of stormwater management.	Invasive Species	General goal	Work with partners to monitor Aquatic Invasive Species (AIS). Set goals for AIS removal and management, and reintroduction of native species. Educate lakeshore owners and residents about AIS		Y	Stormwater	Monitoring	Invasives	
J314	CP19	Ci-Mendota Heights	Protect and restore the natural ecological functions of the city's water resources with emphasis on the improvement of stormwater management.	Water Quality	General goal	Identify areas within the city, including public and private land that are lacking adequate stormwater treatment, and other stormwater BMPs. Implement projects to establish functioning stormwater treatment in order to protect and improve the city's water resources.			Stormwater			
J315	CP19	Ci-Mendota Heights	Protect and restore the natural ecological functions of the city's water resources with emphasis on the improvement of stormwater management.	Water Quality	General goal	Implement the city's Local Surface Water Management Plan (LSWMP) through the use of ordinances, policies, and development standards.			Stormwater			
J316	CP19	Ci-Mendota Heights	Protect and restore the natural ecological functions of the city's water resources with emphasis on the improvement of stormwater management.	Water Quality	General goal	Carry out steps toward meeting the Minnesota Pollution Control Agency's (MPCA) Swimmable, Fishable, Fixable water quality standards.			Stormwater			
J317	CP19	Ci-Mendota Heights	Protect and restore the natural ecological functions of the city's water resources with emphasis on the improvement of stormwater management.	Water Quality	General goal	Manage public riparian areas to be resilient to stormwater runoff.			Stormwater			
J318	CP19	Ci-Mendota Heights	Enhance and provide public education and understanding of nature, natural systems, and environmental issues by providing programs, materials, and information; while promoting a culture of stewardship on public and private lands	Education	General goal	Continue to develop, improve, and expand audiences through the use of diverse methods of education and outreach including: programs, field trips, brochures, exhibits, signage, articles, website, video, social media, service learning, and community gatherings and events.			Public engagement.education			
J319	CP19	Ci-Mendota Heights	Enhance and provide public education and understanding of nature, natural systems, and environmental issues by providing programs, materials, and information; while promoting a culture of stewardship on public and private lands	Education	General goal	Collaborate with other agencies, such as Watershed Districts, Watershed Management Organizations, and surrounding County and Metropolitan Cities to share information and ideas regarding natural resources.		Y	Public engagement	Cooperation		
J32	MP8	Savage SW	Runoff volumes may be impacting the erosion potential within the Credit River.	Water Quality	General goal	Work to minimize runoff volume to the Credit River by minimizing runoff from new development and redevelopment. This includes continued implementation of the City's stormwater volume reduction Ordinance and Policy. The City will also look to identify volume reduction practices within Community Park to limit stormwater discharge to the Credit River. The City will partner with Scott WMO.		Y	Stormwater	Sediment.Erosion		

J320	CP19	Ci-Mendota Heights	Enhance and provide public education and understanding of nature, natural systems, and environmental issues by providing programs, materials, and information; while promoting a culture of stewardship on public and private lands	Education	General goal	Develop and promote stormwater educational outreach programs, using available programs offered through outside agencies, and utilizing volunteer groups such as Master Gardeners, Master Water Stewards, and Master Naturalists.		Y	Stormwater	Public engagement.education			
J321	CP19	Ci-Mendota Heights	Enhance and provide public education and understanding of nature, natural systems, and environmental issues by providing programs, materials, and information; while promoting a culture of stewardship on public and private lands	Education	General goal	Implement, encourage, and sustain collaborative city programs such as residential curb-cut rain gardens and green infrastructure, throughout road re-construction projects		Y	Public engagement	Cooperation			
J322	CP19	Ci-Mendota Heights	Enhance and provide public education and understanding of nature, natural systems, and environmental issues by providing programs, materials, and information; while promoting a culture of stewardship on public and private lands	Education	General goal	Develop and implement city-led initiatives to engage citizens in the stewardship and care of natural areas and infrastructure through programs such as Adopt-a-Park, Adopt-a-Roadside Pollinator Planting, Adopt-a-Boulevard, Adopt-a-Tree, and Adopt-a-Storm Drain.			Public engagement.education				
J323	CP19	Ci-Mendota Heights	Enhance and provide public education and understanding of nature, natural systems, and environmental issues by providing programs, materials, and information; while promoting a culture of stewardship on public and private lands	Education	General goal	Implement, evaluate, or enhance citizen participation in monitoring programs such as the Wetland Health Evaluation Program (WHEP), State and Metropolitan Council water monitoring programs, as well as other Citizen Science monitoring programs that monitor vegetation, aquatic invasive species, as well as those programs that monitor wildlife such as birds, bats, bees, aquatic wildlife, and insects		Y	Monitoring	Invasives	Public engagement.education		
J324	CP19	Ci-Mendota Heights	Proactively maintain public health and safety during extreme weather and climate-related and other unforeseen events	Climate Change	General goal	Consider conducting a Population Vulnerability Assessment and Climate Adaptation Framework plan to outline priority vulnerabilities and identify available resources to strengthen community capacity to respond	X						
J325	CP19	Ci-Mendota Heights	Guide land use and development and redevelopment activities consistent with the management purpose of each district	Mississippi River Critical Corridor /	General goal	Adopt a new MRCCA ordinance overlay district compliant with the goals and policies of the MRCCA plan, and with Minnesota Rules, part 6106.0070, Subp. 5 · Content of Ordinances; and work collaboratively with the MnDNR to address flexibility with the ordinance, if needed, and as noted in previous sections of this Plan.		Y	Development	Cooperation			
J326	CP19	Ci-Mendota Heights	Protect Primary Conservation Areas and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).	Mississippi River Critical Corridor /	General goal	Adopt a new MRCCA ordinance overlay district compliant with the goals and policies of the MRCCA plan, and with Minnesota Rules, part 6106.0070, Subp. 5 · Content of Ordinances; and work with the MnDNR on flexibility with the ordinance as noted in previous sections of this Plan.			Development				
J327	CP19	Ci-Mendota Heights	Protect Primary Conservation Areas and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).	Mississippi River Critical Corridor /	General goal	Support mitigation of impacts to PCAs through: subdivisions/PUDs, variances, CUPs, and other permits.		Y	Development	Low Impact Devel			
J328	CP19	Ci-Mendota Heights	Protect Primary Conservation Areas and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).	Mississippi River Critical Corridor /	General goal	Prioritize the restoration and protection of Native Plant Communities and natural vegetation in riparian areas a high priority during development.			Development				
J329	CP19	Ci-Mendota Heights	Protect Primary Conservation Areas and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).	Mississippi River Critical Corridor /	General goal	Support alternative design standards that protect the Local Government Units (LGU's) identified PCAs, such as conservation design, transfer of development density, or other zoning and site design techniques that achieve protection or restoration of primary conservation areas.		Y	Development	Low Impact Devel			
J33	MP8	Savage SW	Lawn and shoreline maintenance practices may adversely affect water resource.	Water Quality	General goal	Provide education to residents and businesses on BMPs that can be implemented at the source to reduce runoff and pollutants. This is being done through the Scott Clean Water Education Program as well as City of Savage efforts.			Public engagement.education				
J330	CP19	Ci-Mendota Heights	Protect Primary Conservation Areas and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).	Mississippi River Critical Corridor /	General goal	Protect and prioritize through permanent protection measures, such as public acquisition, conservation easement, deed restrictions, etc., which protect PCAs in the corridor.			Development				
J331	CP19	Ci-Mendota Heights	Protect Primary Conservation Areas and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).	Mississippi River Critical Corridor /	General goal	Create and update ordinances that protect and minimize impacts to PCAs from public and private vegetation management activities.			Development				
J332	CP19	Ci-Mendota Heights	Protect Primary Conservation Areas and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).	Mississippi River Critical Corridor /	General goal	Work with adjacent communities to determine appropriate protection of identified PCAs			Development				
J333	CP19	Ci-Mendota Heights	Protect native and existing vegetation during the development process and require restoration if any is removed by development. Priorities for restoration shall include stabilization of erodible soils, riparian buffers and bluffs or steep slopes visible from the river.	Mississippi River Critical Corridor /	General goal	Seek opportunities to restore vegetation to protect and enhance PRCVs identified in this Plan.		Y	Development	Steep slopes			

J334	CP19	Ci-Mendota Heights	Protect native and existing vegetation during the development process and require restoration if any is removed by development. Priorities for restoration shall include stabilization of erodible soils, riparian buffers and bluffs or steep slopes visible from the river.	Mississippi River Critical Corridor /	General goal	Seek opportunities to restore vegetation in restoration priority areas identified in this Plan through the CUP, variance, vegetation permit and subdivision/ PUD processes.		Y	Development	Steep slopes		
J335	CP19	Ci-Mendota Heights	Protect native and existing vegetation during the development process and require restoration if any is removed by development. Priorities for restoration shall include stabilization of erodible soils, riparian buffers and bluffs or steep slopes visible from the river.	Mississippi River Critical Corridor /	General goal	Sustain and enhance ecological functions (habitat value) during vegetation restorations.		Y	Development	Steep slopes		
J336	CP19	Ci-Mendota Heights	Protect native and existing vegetation during the development process and require restoration if any is removed by development. Priorities for restoration shall include stabilization of erodible soils, riparian buffers and bluffs or steep slopes visible from the river.	Mississippi River Critical Corridor /	General goal	Evaluate proposed development sites for erosion prevention and bank and slope stabilization issues and require restoration as part of the development process.		Y	Development	Sediment.Erosion	Steep slopes	
J337	CP19	Ci-Mendota Heights	Protect and enhance the city's open space and recreational facilities within the MRCCA through appropriate land use guiding and zoning implementation	Mississippi River Critical Corridor /	General goal	Encourage creation, connection, and maintenance of open space and recreational facilities that provide access to the river.			Open and Green			
J338	CP19	Ci-Mendota Heights	Protect and enhance the city's open space and recreational facilities within the MRCCA through appropriate land use guiding and zoning implementation	Mississippi River Critical Corridor /	General goal	Identify and encourage connections of CA-SR land to existing and planned parks and trails within the city.			Open and Green			
J339	CP19	Ci-Mendota Heights	Protect and enhance the city's open space and recreational facilities within the MRCCA through appropriate land use guiding and zoning implementation	Mississippi River Critical Corridor /	General goal	Encourage land dedication requirements be incorporated into the city's park dedication ordinance and park planning that provide public connections to the river, where possible.			Open and Green			
J34	MP8	Savage SW	Need for local water education programs to increase public awareness of local water management and improve the quality of stormwater runoff.	Water Quality	General goal	The City will implement community education as part of their MS4 program to increase residents' awareness and reduce violations concerning proper water resource management. The City will continue to provide education content and opportunities to residents, businesses, developers, and others. These efforts may include regular notices in the City's bi-monthly newsletter, articles in the local paper, postings on the City website, and flyers in the utility bill. The City will coordinate with the watersheds and County to improve the efficiency of educational efforts and reduce duplication.			Stormwater			
J340	CP19	Ci-Mendota Heights	Protect and enhance the city's open space and recreational facilities within the MRCCA through appropriate land use guiding and zoning implementation	Mississippi River Critical Corridor /	General goal	Require new development to identify significant natural features such as steep slopes, bluffland, vegetation, etc., and protect such features into perpetuity through a conservation easement, or similar.			Steep slopes			
J341	CP19	Ci-Mendota Heights	Provide effective stormwater management and protection for existing lands throughout the community, and ensure future development/redevelopment areas do not pose any threat or create any harmful impacts to surrounding areas and water features	Water Quality	General goal	Maintain and improve the following in the community and other affected jurisdictions: - Water quality and quantity; - Erosion and sediment control; - Public water bodies, including lakes, streams and wetlands; - Public participation, information, and education; - Maintenance and inspection; - Recreation, fish and wildlife; and - Analyze and consider appropriate measures to reduce salt use on local roadways.		Y	Stormwater	Development	Sediment.Erosion	
J342	CP19	Ci-Mendota Heights	Implement the Surface Water Management Plan	Water Quality	General goal	Carefully monitor, inspect and permit municipal separate storm sewer system (MS4) regulatory activities throughout the city, to ensure the reduction to the amount of sediment and other pollutants entering water bodies from city stormwater systems.		Y	Stormwater	Monitoring	Sediment.Erosion	
J343	CP19	Ci-Mendota Heights	Implement the Surface Water Management Plan	Water Quality	General goal	Cooperate with local watershed groups to ensure compliance with policies and standards in the SWMP, and provide for any changes or amendments as recommended or needed.			Cooperation			
J344	CP19	Ci-Mendota Heights	Maintain and improve the wastewater system to serve existing and future development.	Water Quality	General goal	Continue to implement the annual sanitary sewer lining program in areas suspected to have Inflow and infiltration (I/I) potential			Development			
J345	CP18	Ci-Lilydale	Insure a comprehensive overall transportation system relating to vehicular travel and roadways, airports and airspace, mass transit, walking, biking and Freightways	Recreation	Specific goal	Work with Mendota and Mendota Heights on corridor study of Hwy 13 for autos, bikes and pedestrians	X					
J346	CP18	Ci-Lilydale	Parks and trails	Education	General goal	Work with local volunteers interested in native plant restoration, invasive species control and water management issues		Y	Invasives	Public engagement.education		
J347	CP18	Ci-Lilydale	Protect, conserve and enhance natural resources and environmentally sensitive areas within and adjacent to the city for the communities long term environmental benefit and to protect and preserve the biological functions of the River corridor.	Open Space	General goal	encourage additional open space for protection of rare and endangered species and their habitats especially along shorelines areas and to increase and restore wildlife habitat and biological diversity in new development projects		Y	Unique.Sensitive.h	Corridors		
J348	CP18	Ci-Lilydale	Work to protect the Mississippi River and Critical Areas corridor for its long term protection and enjoyment for all	Water Quality	General goal	encourage future construction to be sensitive to natural drainage		Y	Unique.Sensitive.h	Corridors		

J349	CP18	Ci-Lilydale	enhance the community character and identify while preserving and enhancing the River corridors natural aesthetic. Cultural, and historical value for public use	Natural Resources	General goal	conserve scenic, environmental, recreational, mineral, economic, cultural and historic resources and functions in the river corridor			Corridors				
J35	MP8	Savage SW	There is a variance between hydrologic and geographic boundaries of Watershed Districts and Watershed Management Organizations.	Water Quality	General goal	City will work with Watersheds and WMOs to redefine their boundaries to match the hydrologic boundaries within the City.	X						
J350	CP18	Ci-Lilydale	enhance the community character and identify while preserving and enhancing the River corridors natural aesthetic. Cultural, and historical value for public use	Open Space	General goal	encourage open space land use for the protection of any historical, archeological or cultural resources			Corridors				
J351	CP18	Ci-Lilydale	work in Lilydale will be managed for non-degradation to surface water	Water Quality	General goal	development, redevelopment and other projects within the tributary watershed will be designed to preserve or improve existing water quality			Natural Resource Protection				
J352	CP18	Ci-Lilydale	work in Lilydale will be managed for non-degradation to surface water	Water Quality	General goal	address mandatory TMDL requirements			Impaired.TMDL				
J353	CP18	Ci-Lilydale	work in Lilydale will be managed for non-degradation to surface water	Water Quality	General goal	cooperate with local agencies to conduct water quality monitoring		Y	Monitoring	Cooperation			
J354	CP18	Ci-Lilydale	work in Lilydale will be managed for non-degradation to surface water	Water Quality	General goal	work with local agencies to establish water quality goals for surface waters	X						
J355	CP18	Ci-Lilydale	work in Lilydale will be managed for non-degradation to surface water	Water Quality	General goal	asses and prioritize shoreland restoration areas			Natural Resource Protection				
J356	CP18	Ci-Lilydale	work in Lilydale will be managed for non-degradation to surface water	Water Quality	General goal	design streambank stabilization and streambed control measures for energy dissipation			Sediment.Erosion				
J357	CP18	Ci-Lilydale	operate, manage and maintain Lilydale's stormwater system to ensure proper functioning	Water Quality	General goal	implement BMPs			Stormwater				
J358	CP18	Ci-Lilydale	operate, manage and maintain Lilydale's stormwater system to ensure proper functioning	Water Quality	General goal	inspect BMPs			Stormwater				
J359	CP18	Ci-Lilydale	operate, manage and maintain Lilydale's stormwater system to ensure proper functioning	Water Quality	General goal	inspect, operate, maintain and repair stormwater system			Stormwater				
J36	MP8	Savage SW	Need to preserve open spaces and allow for connections between open species to promote native species and additional water quality benefits.	Water Quality	General goal	The City will look into opportunities to identify new open space areas and will continue to preserve existing open spaces.			Open and Green				
J360	CP18	Ci-Lilydale	improve quality of stormwater runoff	Water Quality	General goal	new development BMPs requiring minimum 50% removal of TP for runoff and no net increase of TSS or TP loading to downstream water.			Stormwater				
J361	CP18	Ci-Lilydale	improve quality of stormwater runoff	Water Quality	General goal	redevelopment results in 80% TSS and 50% TP reductions			Stormwater				
J362	CP18	Ci-Lilydale	implement soil protection and sedimentation controls	Erosion & Sediment	General goal	land disturbing activities will comply with Lilydale's Bluff Management Plan and WMO/WD standards			Sediment.Erosion				
J363	CP17	Ci-Mendota	Land use	Natural Resources	General goal	Provide for public and institutional uses that connect natural, cultural and recreational resources	X						
J364	CP17	Ci-Mendota	Land use	Natural Resources	General goal	Encourage commercial uses that build on the City's proximity to the Mississippi and Minnesota Rivers.			Increase River Use				
J365	CP17	Ci-Mendota	Land use	Natural Resources	General goal	Work with applicable government agencies to encourage development of river frontage in Fort Snelling State Park to encourage enjoyment of riverfront in Mendota			Increase River Use				
J366	CP17	Ci-Mendota	Parks and trails	Recreation	General goal	Connect parks, trails and open space between residential neighborhoods, downtown, and regional recreational facilities			Open and Green				
J367	CP17	Ci-Mendota	Parks and trails	Recreation	General goal	A bike trial along Highway 13 that connects to the Big Rivers Regional Trail and Fort Snelling State Park, as well as to the Sibley House Historic Site and Veterans Park			Trails				
J368	CP17	Ci-Mendota	Water Resources	Water Quality	General goal	Restrict or prohibit development on wetlands and other natural features that serve important environmental functions			Wetlands				
J369	CP17	Ci-Mendota	Water Resources	Water Quality	General goal	Protect the limited water resources of the City to promote aesthetic qualities, natural habitat areas and ground water recharge.			Natural Resource Protection				
J37	MP8	Savage SW	Increased flows to the Credit River from development south of the City of Savage. This may increase erosion and flooding along the River within the City of Savage.	Water Quality	General goal	Continue to implement stormwater management practices to mitigate development impacts to the Credit River within Savage and to work with Scott WMO to manage areas south of the City.		Y	Stormwater	Flood	Development	Low Impac	Sediment.
J370	CP17	Ci-Mendota	Water Resources	Water Quality	General goal	Maintain and enhance the storm water drainage system in the City and improve the quality of storm water runof	X						
J371	CP17	Ci-Mendota	Resilience	Climate Change	General goal	Support the inclusions of additional storm water management capacities to account for changing rainfall patterns.	X						
J372	CP17	Ci-Mendota	Resilience	Climate Change	General goal	Promote education and awareness regarding hazards and risks in the community			Public engagement.education				
J373	CP17	Ci-Mendota	Resilience	Climate Change	General goal	Mitigate the potential negative impacts of climate change on the community	X						
J374	CP17	Ci-Mendota	Transportation	Transportation	General goal	Collaborate with the Minnesota Department of Transportation to provide crosswalks, bike trails, and landscaping along Highway 13 to improve the pedestrian environment and attractiveness of the corridor for residents, businesses and reinvestment.		Y	Corridors	Cooperation			
J375	CP17	Ci-Mendota	Transportation	Transportation	General goal	Support a multi-modal transportation system that provides for safe and convenient movement of vehicles, pedestrians, and bicyclists	X						
J376	CP17	Ci-Mendota	Transportation	Recreation	Specific goal	Big Rivers Regional Trail trailhead facilities at two locations in Mendota -- the intersection of Highway 13, on the east end of the city, and at D Street -- would provide safe access to the trail. Currently, a trailhead parking lot exists adjacent to the Sibley House Historic Site. . A description of proposed trailhead facilities at these locations, included in the Big Rivers Regional Trail Development Plan, is in The Plan for the River Corridor.			Corridors				

J377	CP17	Ci-Mendota	Transportation	Recreation	Specific goal	A bike trail along Main Street, connecting Big Rivers Regional Trail at the end of the city and the MNDOT parking lot near the Mendota Bridge, would provide a more direct connection to the sub regional trail system and downtown Mendota. In addition, this trail could connect to Veterans Park in Lowertown.		Trails		
J378	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Open Space	Specific goal	Encourage development and redevelopment consistent with the designation of the city as part of the Urban Open Space District of the Critical Area		Open and Green		
J379	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Economic Development	Specific goal	Encourage development in the river corridor that is consistent with the Metropolitan Council's plans and polices, and with the capacity of the regional systems.	Y	Development	Corridors	
J38	MP8	Savage SW	Identify developing areas that drain into other jurisdictions and evaluate infrastructure needs or planning	Water Quality	Specific goal	end of pipe discharge evaluations		Development		
J380	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Erosion & Sediment	Specific goal	Prohibit development on slopes exceeding 18 percent		Sediment.Erosion		
J381	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Erosion & Sediment	Specific goal	Require erosion control measures for development on slopes exceeding 12 percent, but not exceeding 18 percent.		Sediment.Erosion		
J382	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Erosion & Sediment	Specific goal	Prohibit alteration to slopes exceeding 18 percent.		Sediment.Erosion		
J383	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Natural Resources	Specific goal	Prohibit clear cutting of slopes exceeding 12 percent; permit selective cutting and trimming of vegetation on slopes exceeding 12 percent only under a permit from the City Council		Vegetation		
J384	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Economic Development	Specific goal	Prohibit development of new buildings within 40 feet of the bluffline.		Development		
J385	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Natural Resources	Specific goal	Protect environmentally sensitive areas.		Unique.Sensitive.high value		
J386	CP17	Ci-Mendota	Mississippi National River and Recreation Area Comprehensive Management Plan	Water Quality	General goal	Coordinate with the Minnesota Department of Transportation, Fort Snelling State Park and Mendota Heights to reduce runoff that would impact the residents, businesses, the river and the river corridor		Corridors		
J387	MP9	Burnsville WR	Achieve water quality goals in lakes, streams, and wetlands consistent with their intended use and established classification.	Water Quality	General goal	The City will play an active role in participating in TMDL studies for impaired waters to which the City has discharges.		Impaired.TMDL		
J388	MP9	Burnsville WR	Achieve water quality goals in lakes, streams, and wetlands consistent with their intended use and established classification.	Water Quality	General goal	The City will work with the WMOs in developing and implementing water quality improvement plans and achieving the load reductions necessary to meet TMDLs. .		Impaired.TMDL		
J389	MP9	Burnsville WR	Manage flooding and minimize related public capital and maintenance expenditure necessary to control excessive volumes and rates of runoff.	Water Quantity	General goal	The City shall attempt to acquire easements covering public ponds, wetlands, flood plains and ditches as part of land development approvals.	Y	High value easeme	Flood	
J39	MP8	Savage SW	Elevated levels of chloride concentrations have been found in stormwater ponds, surface water bodies, and groundwater throughout the Twin Cities Metropolitan Area. At levels exceeding the water quality standards, chloride can be toxic to aquatic life and can make drinking water sources not economically feasible to treat.	Water Quality	Specific goal	The City will continue to implement chloride best management practices such as reducing salt use on roadways, education to private business owners and residents about correct salt application, and improve policies designating salt usage	Y	Stormwater	Groundwater	
J390	MP9	Burnsville WR	Minimize soil erosion through increased education and enforcement	Erosion & Sediment	General goal	Horizontal, terrestrial buffer zones are encouraged around existing wetlands and stormwater ponds. New development or redevelopment projects must provide a buffer zone around wetlands and are encouraged to provide buffers around existing stormwater ponds. Buffers are required around new storm ponds, resulting from new development or re-development. Buffers shall be maintained in native vegetation, to provide habitat for wildlife. (See also Table 19)	Y	Stormwater	Sediment.Erosion	
J391	MP9	Burnsville WR	Minimize soil erosion through increased education and enforcement	Erosion & Sediment	General goal	The City will maximize the use of bioengineering approaches whenever practicable for slope stabilization and permanent erosion control projects.		Sediment.Erosion		
J392	MP9	Burnsville WR	Increase public participation and knowledge in management of the water resources.	Education	General goal	The City will establish model interpretive sites for public education.		Public engagement.education		
J393	MP9	Burnsville WR	Implement a comprehensive water resource-monitoring program.	Monitoring	General goal	The City will continue to cooperate with all public agencies to conduct monitoring projects and share monitoring data with them.	Y	Monitoring	Cooperation	
J394	MP9	Burnsville WR	Implement a comprehensive water resource-monitoring program.	Monitoring	General goal	The City will continue citizen-monitoring programs.		Monitoring		
J395	MP9	Burnsville WR	Manage water recreation activities and improve fish and wildlife habitat.	Recreation	General goal	The City shall support programs for controlling exotic and invasive species of plants and animals.		Invasives		
J396	MP9	Burnsville WR	Manage water recreation activities and improve fish and wildlife habitat.	Natural Resources	General goal	The City will Promote intergovernmental cooperation in protecting and improving areas with shared responsibility		Cooperation		
J397	MP9	Burnsville WR	Manage water recreation activities and improve fish and wildlife habitat.	Natural Resources	General goal	The City will encourage development along the Minnesota River Valley Area which will enhance its use as a recreational area and support the preservation of natural resources in a manner consistent with this Plan.		Natural Resource Protection		

J398	MP9	Burnsville WR	Maintain regulatory authority at the local level while recognizing the role of other local, state and federal entities and complying with specified programs and requirements	Regulatory	General goal	The City shall inform WMOs of projects within the respective jurisdictions which impact strategic waterbodies or MnDNR Public Waters.	X			
J399	MP9	Burnsville WR	Establish funding sources to finance water resources management activities	Finance	General goal	The City shall encourage the WMOs to finance inter-community issues and projects.	X			
J4	MP5	Shakopee SW	Stormwater flow - Shakopee Historic District - along Highway 101 is impacting/degrading historical and cultural resources.	Rate Control	Specific goal	The City will continue to work with project stakeholders to identify short- and long-term solutions for addressing the concern at this location.			Stormwater	
J40	MP21	Nine Mile Creek WR	Ensure stormwater runoff from new development and redevelopment sites is regulated to maintain or reduce runoff rates and volumes, and reduce pollutant loadings to receiving waters.	Water Quality	General goal	Implement stormwater volume, quality and rate-control criteria in District rules.		Y	Stormwater	Development
J400	MP9	Burnsville WR	TMDL	Water Quantity	Specific goal	Minnesota River TMDL			Impaired.TMDL	
J401	MP9	Burnsville WR	Fertilizer Application	Water Quality	Specific goal	The City's fertilizer ordinance prohibits fertilizers near water bodies, requires commercial applicators to be licensed, and requires everyone to use phosphorus-free fertilizer unless a soil test is conducted to verify the need for phosphorus.			Impaired.TMDL	
J402	MP9	Burnsville WR	ISTS	Water Quality	Specific goal	Approximately 229 properties in southwest Burnsville continue to be served by on-site waste water systems. In Burnsville, these systems are regulated by City Code Chapter 11, Subsurface Sewage Treatment Systems (SSTS) that was adopted in 2011.	X			
J403	MP9	Burnsville WR	Groundwater Sustainability	Water Quantity	General goal	Burnsville has developed a multi-layered groundwater model focusing on the Burnsville well field, Kraemer Quarry, Black Dog Fen and Savage Fen. The model will be utilized in design of groundwater withdrawal and minimization of impacts to protected surface waters. The City is currently working with the Minnesota Department of Natural Resources and Metropolitan Council in developing a groundwater management plan.		Y	Groundwater	Trout.Fen
J404	MP9	Burnsville WR	Resilience	Climate Change	General goal	the updated Atlas 14 depths and distributions and will endeavor to continue to adapt its policies and standards with the climate change trends.	X			
J405	MP14	Mendota Heights SV	TMDL	Water Quantity	Specific goal	Minnesota River TMDL			Impaired.TMDL	
J406	MP14	Mendota Heights SV	Stormwater discharge into Gun Club Lake Fen	Water Quantity	Specific goal			Y	Stormwater	Trout.Fen
J407	MP14	Mendota Heights SV	Chloride	Water Quantity	Specific goal	the City is looking to incorporate the Twin Cities Metropolitan Area Chloride Management Plan to reduce salt use during winter applications.			Impaired.TMDL	
J408	MP14	Mendota Heights SV	ISTS	Water Quality	Specific goal	Approximately 40 septic systems exist in the City. City ordinance requires inspections of the systems. The Mendota Heights ordinance that regulates septic systems is identical to that of Dakota County and meets all Metropolitan Council and MPCA requirements	X			
J409	MP14	Mendota Heights SV	Soil erosion along the bluffs and at construction sites is a potential source of pollution.	Erosion & Sediment	General goal				Sediment.Erosion	
J41	MP21	Nine Mile Creek WR	Manage stormwater collaboratively with other local governments.	Water Quality	General goal	ensure, through LSWMP review, implementation of stormwater management standards and criteria. With LGUs to implement demonstration projects/programs. Provide technical assistance		Y	Stormwater	Cooperation
J410	MP14	Mendota Heights SV	Mendota Heights drainage system in some detail. One of the primary discharges from this system occurs through a 54-inch pipe into the Minnesota Department of Transportation (MnDOT) system adjacent to and under Trunk Highway 13. The highway system carries MnDOT and Mendota Heights runoff water into the Quarry Island fen, as indicated by the flow arrows on Figure 5.	Water Quality	Specific goal	The Quarry Island fen lies within the jurisdiction of the LMRWD and the district is considering whether to pursue a detailed assessment and monitoring program for this fen. Regardless of what the watershed does toward studying the area, it is highly likely that the LMRWD and DNR will pursue a project to reroute this drainage around the fen and into Gun Club Lake. The City and MnDOT are likely to be financial participants in this project when it becomes a reality. The City's share of the project cost could be substantial. Given this, the implementation section of this SWMP includes an item for the Quarry Island fen storm drainage project with an unknown date for implementation		Y	Monitoring	Trout.Fen
J411	MP14	Mendota Heights SV	Intercommunity water resources issues planning shall consider alternative solutions	Drainage	General goal	All drainage studies or feasibility studies, whether by a watershed organization or municipality, leading to projects in a subwatershed with an intercommunity drainage issue shall consider the impact of the project on the drainage issue and shall consider the total intercommunity project cost.			Vegetation	
J412	MP14	Mendota Heights SV	River bluffs	Open Space	General goal	Work with the DNR and watershed organizations on cooperative and collaborative projects in the public lands below the river bluffs.			Cooperation	
J413	MP14	Mendota Heights SV	Work with LMRWMO, LMRWD, and neighboring communities to maintain and/or enhance the water quality of Mendota Heights' lakes, wetlands, streams, and other water resources.	Water Quality	General goal	Support water quality monitoring efforts being undertaken by the LMRWMO and LMRWD.			Monitoring	
J414	MP14	Mendota Heights SV	Protect and enhance fish and wildlife habitats, water recreational facilities, and water resource aesthetics	Water Quality	General goal	Water resources shall be maintained in such a manner as to preserve or restore their intrinsic aesthetic qualities and wildlife habitat			Natural Resource Protection	
J415	MP14	Mendota Heights SV	Inform and educate the public concerning urban stormwater management and the problems pollutants cause if allowed to enter into water resources.	Education	General goal	Coordinate education efforts with the watershed organizations so that redundant efforts are avoided		Y	Stormwater	Public engagement.education
J416	MP14	Mendota Heights SV	Protect and preserve wetlands through administration of the WCA.	Water Quality	General goal	Refer to LMRWMO and LMRWD Rules and Standards on their websites for Wetland Management Policies within the City.			Wetlands	

J417	MP14	Mendota Heights SV	Floodplain Development	Floodplain	General goal	Control development in floodplains and floodways including those subject to FEMA studies (Mississippi and Minnesota Rivers) and those that are not regulated by FEMA studies like ponds, wetlands, lakes, and channels within the City limits	Y	Flood	Development			
J418	MP19	Mendota Heights NI	Invasive plants are one of the greatest threats to the ecological integrity of the City's natural areas. Removal and control of invasive vegetation often takes a concerted effort followed by long-term monitoring and management.	Invasive Species	General goal	This NRMP provides a foundation for strategic prioritization of ecological restoration and management, including the control of invasive vegetation. Through increased funding, partnerships, and volunteer engagement, the City can address this critical need, significantly improving the ecological quality of its natural areas	Y	Monitoring	Invasives	Public engagement.education		
J419	MP19	Mendota Heights NI	Climate change presents its own suite of challenges. Predictions for the Twin Cities region suggest warmer temperatures (especially during winter), which is contributing to changes in species distribution and new invasions by invasive plants and pests from the south. The prediction of more severe storms suggests greater potential for flooding and erosion, especially along already unstable streams such as Big Foot/Interstate Valley Creek.	Climate Change	General goal	While the City has little control over the climate, it can plan and manage its natural resources for greater resilience despite predicted changes in temperature and precipitation	Y	Invasives	Flood	Sediment.Erosion		
J42	MP21	Nine Mile Creek WR	Promote regional stormwater management	Water Quality	General goal	Work with local governments in identifying high-priority areas, planning, and development of regional stormwater management facilities to enhance treatment and provide flexibility for stormwater management compliance as redevelopment occurs. Establish a regional stormwater-management compliance option in the NMCWD rules.		Stormwater				
J420	MP19	Mendota Heights NI	Climate change presents its own suite of challenges. Predictions for the Twin Cities region suggest warmer temperatures (especially during winter), which is contributing to changes in species distribution and new invasions by invasive plants and pests from the south. The prediction of more severe storms suggests greater potential for flooding and erosion, especially along already unstable streams such as Big Foot/Interstate Valley Creek.	Climate Change	General goal	Tree canopy protection and augmentation can help mitigate localized heat islands, discussed above.	Y	Invasives	Flood	Sediment.Erosion		
J421	MP19	Mendota Heights NI	Climate change presents its own suite of challenges. Predictions for the Twin Cities region suggest warmer temperatures (especially during winter), which is contributing to changes in species distribution and new invasions by invasive plants and pests from the south. The prediction of more severe storms suggests greater potential for flooding and erosion, especially along already unstable streams such as Big Foot/Interstate Valley Creek.	Climate Change	General goal	There are many additional climate resilience and adaptation strategies beyond the scope of this project (see the City's 2040 Comprehensive Plan).	Y	Invasives	Flood	Sediment.Erosion		
J422	MP19	Mendota Heights NI	The majority of Mendota Heights is private land. Multiple ownerships make landscape-scale conservation challenging, including the systematic and contiguous control of invasive vegetation, which readily crosses property lines.	Private land	General goal	The City is well positioned to work with its partners and private landowners within the City to more effectively and efficiently achieve its natural resources goals. Some private land opportunities are discussed above under the invasive vegetation and climate change challenges.		Invasives				
J423	MP19	Mendota Heights NI	The City's development density (including rooftops, roadways, parking lots, etc.) results in significant stormwater runoff from impervious surfaces. For example, one inch of rainfall on a 1,000 square foot roof will yield approximately 600 gallons of runoff (Minnesota Pollution Control Agency 2017). This results in polluted, high-energy, erosive flows that cause flooding and degrade streams, wetlands, and other downstream waterbodies.	Erosion & Sediment	General goal	While not a focus of this NRMP, there are many stormwater best management practices (BMPs) that can help reduce the adverse impacts of runoff. Many of these will require or benefit from partnering with private landowners.	Y	Stormwater	Flood	Development	Sediment.Erosion	
J43	MP21	Nine Mile Creek WR	Promote stormwater capture and reuse to reduce runoff volume and conserve groundwater.	Groundwater	General goal	Work with others to evaluate and implement reuse.	Y	Stormwater	Groundwater			
J44	MP21	Nine Mile Creek WR	Manage runoff to prevent erosion.	Water Quality	General goal	Update NMCWD rules as needed and implement through permitting program.		Sediment.Erosion				
J45	MP21	Nine Mile Creek WR	Promote groundwater recharge by implementing stormwater infiltration projects in areas with high recharge potential.	Groundwater	General goal	Work with others to evaluate and implement infiltration projects that promote groundwater recharge.	Y	Stormwater	Groundwater			
J451	MP5	Shakopee SW	AIS	Wildlife	General goal	The City will work with the watershed districts to address concerns with aquatic invasive species in public waters.		Invasives				

J452	MP7	Eden Prairie SW	Control or manage sediment discharge into surface water resources and drainage ways.	Erosion & Sediment	General goal	Require the use of BMPs for erosion and sediment control as specified in the Minnesota Stormwater Manual (MPCA, 2005), as may be amended, and watershed district requirements.				X				
J453	MP7	Eden Prairie SW	Support water recreation activities and fish and wildlife habitat by implementation of programs to maintain or improve water quality.	Recreation	General goal	Preserve vegetative buffers around wetlands and riparian areas to provide habitat for wildlife.					Y	Wetlands	Natural Resource Protection	
J454	MP7	Eden Prairie SW	Support water recreation activities and fish and wildlife habitat by implementation of programs to maintain or improve water quality.	Recreation	General goal	Balance water recreational activities with water quality, habitat, and Aquatic Invasive Species (AIS) issues.						Invasives		
J455	MP7	Eden Prairie SW	Support water recreation activities and fish and wildlife habitat by implementation of programs to maintain or improve water quality.	Recreation	General goal	Explore new opportunities to integrate surface water based recreation activities and wildlife interests within wildlife corridors.				X				
J456	MP7	Eden Prairie SW	Support water recreation activities and fish and wildlife habitat by implementation of programs to maintain or improve water quality.	Recreation	General goal	Enhance recreational opportunities and access to the creek corridor.				X				
J457	MP7	Eden Prairie SW	Support water recreation activities and fish and wildlife habitat by implementation of programs to maintain or improve water quality.	Recreation	General goal	Maintain the natural beauty, accessibility, and wildlife habitat for the creek corridors.				X				
J458	MP7	Eden Prairie SW	Support water recreation activities and fish and wildlife habitat by implementation of programs to maintain or improve water quality.	Recreation	General goal	Support programs for monitoring and managing exotic and invasive species.						Invasives		
J459	MP7	Eden Prairie SW	Support water recreation activities and fish and wildlife habitat by implementation of programs to maintain or improve water quality.	Recreation	General goal	Manage the spread of AIS through programs such as watercraft inspection programs, harvesting, herbicide treatments of invasive species, and water quality and vegetation monitoring. The annual program will be coordinated with the Watershed Districts.						Invasives		
J46	MP21	Nine Mile Creek WR	Monitor District lakes.	Water Quality	General goal	develop and document lake monitoring plan. Collect, interpret and report water quality data. Establish citizen monitoring program.						Monitoring		
J461	MP7	Eden Prairie SW	Support water recreation activities and fish and wildlife habitat by implementation of programs to maintain or improve water quality.	Recreation	General goal	Design and construct lake outlets to provide a barrier to upstream migration of rough fish, and evaluate and maintain existing barriers as needed in coordination with the Watershed Districts.								
J47	MP21	Nine Mile Creek WR	Monitor District streams	Water Quality	General goal	develop and document stream monitoring plan. Maintain and operate flow and sampling stations. Monitor water quality, fish community, macroinvertebrates, stream habitat.						Monitoring		
J48	MP21	Nine Mile Creek WR	Conduct targeted monitoring to assess pollutant sources	Water Quality	General goal	Conduct targeted monitoring						Monitoring		
J49	MP21	Nine Mile Creek WR	Minimize water quality impacts from new development, redevelopment, and land disturbing activities.	Water Quality	General goal	Implement stormwater management rules through permitting program					Y	Stormwater	Development	
J5	MP5	Shakopee SW	Old Downtown undersized pipes leading to localized roadway flooding	Flooding	Specific goal	The City will continue to review and evaluate capacity and condition of storm sewer during development/redevelopment projects and street reconstruction projects. The City will evaluate the need for redevelopment requirements specific for this area to improve this issue.						Flood		
J50	MP21	Nine Mile Creek WR	AIS	Water Quality	General goal	conduct inventory, develop targeted management strategy, work with stakeholder's				X				
J500	MP26	Chanhassen SW	Lower Bluff Creek TMDL Implementation	Water Quality	CIP	Volume reduction and rate control in the Bluff Creek drainage are to reduce channel and gully erosion and sedimentation into the Creek. Includes LMRWD Bluff Creek Restoration Project and Erosion Repair Project	2018-2022		$1,450,000		Y	CIPs.Projects	Impaired.TMDL	
J501	MP7	Eden Prairie SW	Minnesota River Bank Stabilization Project	Water quality	CIP	Collaboration project with Lower Minnesota River Watershed District to stabilize a section of the Minnesota River along Old Riverview Road .	2023-2024		$350,000		Y	Sediment.Erosion	CIPs.Projects	
J502	MP5	Shakopee SW	Blue Lake Channel (east) regional storm pond - rate control	Water Quality	CIP	Blue Lake Channel (East) Regional Storm Pond - It is important to control rates to manage the stormwater system and protect/reduce the potential for flooding in the downstream Prior Lake Outlet Channel. If there is infiltration, the project may reduce share outlined in the Prior Lake Outlet Channel Agreement. This project can provide water quality benefits by reducing sediment and phosphorus to help meet water quality goals and NPDES MS4 requirements.		2021	$750,000		Y	Stormwater	CIPs.Projects	
J503	MP5	Shakopee SW	Blue Lake Channel (west) regional storm pond - rate control	Water Quality	CIP	Blue Lake Channel (West) Regional Storm Pond - It is important to control rates to manage the stormwater system and protect/reduce the potential for flooding in the downstream stormwater system. It may also provide water quality benefit by reducing sediment and phosphorus to help meet water quality goals and NPDES MS4 requirements.		2023	$750,000		Y	Stormwater	CIPs.Projects	
J504	MP5	Shakopee SW	Ridge Creek Park and Prior Lake Outlet Channel Improvements	Water Quality	CIP	Ridge Creek Park and Prior Lake Outlet Channel Improvements - The channel improvements include realignment of the Prior Lake Outlet Channel to better handle increased run-off due to development, incorporating water quality BMPs to reduce sediment and phosphorus, and wetland enhancement.		2019	$1,200,000		Y	Flood	CIPs.Projects	
J505	MP5	Shakopee SW	Prior Lake Outlet Channel (PLOC) Improvements	Water Quality	CIP	Prior Lake Outlet Channel (PLOC) Improvements - Maintenance and improvements to the PLOC. There is a Memorandum of Agreement between the City of Shakopee, City of Prior Lake, Shakopee Mdewakanton Sioux Community, and Prior Lake-Spring Lake Watershed District that requires the Cooperators to maintain the channel and crossings.	2020-2028 & 2029-2033		between $30,000 & $100,000 depending on year		Y	Flood	CIPs.Projects	
J506	CP12	Ci-Burnsville	Keller Lake to MN River Water Level H&H Analysis and Report	Water Quality	CIP	Keller Lake to MN River Water Level H&H Analysis and Report		2019	$75,000		Y	Flood	CIPs.Projects	
J507	CP20	Ci-Mendota Heights	Lake Augusta Erosion	Water Quality	CIP	Lake Augusta Erosion		2020	$150,000		Y	Sediment.Erosion	CIPs.Projects	

J508	MP8	Savage SW	Schroeder's Acres Park/Savage Fen Storm water Management Project	Water Quality	CIP	Schroeder's Acres Park/Savage Fen Stormwater Management Project - This project will evaluate options for incorporating stormwater wetland and irrigation reuse systems on the site and address phosphorous, temperature, metals, E. coli and runoff volume in Eagle Creek. Partner with LMRWD and DNR.	2022	$190,000	Y	Stormwater	CIPs.Projects
J509	MP8	Savage SW	Credit River CLOMR, Floodplain Manage ment, and Stormwater Evaluation	Water Quality	CIP	Credit River CLOMR, Floodplain Management, and Stormwater Evaluation - The City is currently completing a study to evaluate the floodway associated with the downtown area, floodplain management, and stormwater management needs for potential future development/redevelopment.	2020	$76,873	Y	Flood	CIPs.Projects
J51	MP21	Nine Mile Creek WR	TMDL	Water Quality	General goal	participate in TMDL and WRAPS. Promote implementation. Develop and maintain database				Impaired.TMDL	
J510	MP8	Savage SW	Credit River Streambank Erosion	Water Quality	CIP	Credit River Streambank Erosion - The City will work with its partner agencies to complete a streambank assessment of the Credit River. Various areas have been noted as having streambank and bluff erosion. Ravines discharging to the Credit River in Savage have been stabilized.	2021	$5,000			
J52	MP21	Nine Mile Creek WR	Implement water quality management / improvement actions	Water Quality	General goal	Consider implementation of recommended programs and projects from UAAs, TMDL, and WRAPS studies. Work with cities and other stakeholders to promote implementation of recommendations from UAA, TMDL, and WRAPS studies. Develop and maintain a system to track pollutant load reductions achieved toward meeting UAA, TMDL, and/or WRAPS goals.				Impaired.TMDL	
J53	MP21	Nine Mile Creek WR	Chloride	Water Quality	General goal	Identify and target priority chloride sources to Nine Mile Creek. Work with winter salt applicators to reduce salt usage on roadways and other hard surfaces. Implement District cost-share program to support reduction of salt use on roadways, parking lots, and sidewalks. Conduct educational programming on salt usage.				Impaired.TMDL	
J54	MP21	Nine Mile Creek WR	Improve the stability of Nine Mile Creek and reduce erosion.	Water Quality	General goal	Identify and target areas prone to erosion. Conduct stream stabilization improvement projects. Implement stormwater management rules through the NMCWD permitting program. Identify and implement stormwater volume reduction projects and practices in the watershed.			Y	Stormwater	Sediment.Erosion
J55	MP21	Nine Mile Creek WR	Enhance access to water resources, while protecting and conserving natural areas.	Open Space	General goal	Work with cities and developers to provide access to water resources through the development/redevelopment process or in conjunction with NMCWD water management projects, while protecting and conserving natural areas.				Natural Resource Protection	
J56	MP21	Nine Mile Creek WR	Protect and enhance natural areas to improve fish and wildlife habitat, water quality and recreational opportunities	Recreation	General goal	Implement natural area and habitat improvements as part of NMCWD capital improvement projects. Partner with other local governments, agencies, and other organizations to pursue natural area, recreation, and habitat protection and enhancement opportunities.				Cooperation	
J57	MP21	Nine Mile Creek WR	Maintain natural stream corridor qualities for recreational users and general public.	Recreation	General goal	Evaluate Nine Mile Creek corridor for opportunities to restore natural function and scenic values. Partner with other local governments and private landowners to improve stream corridor through buffers, riparian plantings and restoration projects.				Corridors	
J58	MP21	Nine Mile Creek WR	Avoid negative impacts and fragmenting of locally and regionally significant natural areas and corridors when feasible, and mitigate when unavoidable.	Recreation	General goal	Work with other local governments to identify locally and regionally significant natural areas and corridors and promote preservation and/or management of these areas.				Corridors	
J59	MP21	Nine Mile Creek WR	Work with other local governments to adopt land use and development ordinances or other regulatory controls to complement NMCWD's wetland protection rule and achieve no net loss of wetland acreage, function, and value.	Wetlands	General goal	Establish an incentive program for implementation of wetland buffer areas on private properties.				Development	
J6	MP5	Shakopee SW	Upper Valley Drainage Ditch south of Highway 169 and east of Old Brick Yard Road does not have capacity for drainage from future development.	Drainage		The City will work with the watershed to complete a feasibility study to evaluate capacity and water quality at this regional facility. Implementation of improvements to the regional facility are dependent on development.				Development	
J60	MP21	Nine Mile Creek WR	Achieve no net loss of wetland acreage, function, and values on District-sponsored projects.	Wetlands	General goal	Pursue wetland enhancement, restoration, and creation opportunities to offset potential wetland losses within the District.				Wetlands	
J61	MP21	Nine Mile Creek WR	Protect and restore high-quality wetland areas, sensitive habitats, sensitive animal and plant species, and rare or endangered species.	Wetlands	General goal	Inventory wetlands within the watershed, including delineation, functions and values assessment. Compile and track wetland functions and values assessments conducted within the Nine Mile Creek watershed. Identify rare and high-quality wetland plant communities, and sensitive habitats and animal and plant species for protection. Develop wetland restoration and protection plan to address high-quality wetlands areas, sensitive habitats and plant species, and rare, endangered, and threatened plants and animals within watershed. Partner with other local governments to identify and implement wetland restoration opportunities. Work with other local governments and natural resource agencies to manage invasive species and restore native species.			Y	Unique.Sensitive.h	Invasives
J62	MP21	Nine Mile Creek WR	Collect and evaluate data relevant to increasing the District's understanding of groundwater resources.	Groundwater	General goal	Develop a groundwater monitoring plan, including consideration of monitoring groundwater levels and contaminant concentrations. Continue collection of static groundwater levels from observation wells throughout the watershed. Study the interaction of groundwater and surface water resources in the Nine Mile Creek watershed to better understand the impacts of groundwater on lake, wetland and stream hydrology and to identify areas with high aquifer recharge potential. Summarize groundwater monitoring data annually in the District Engineer's Report and provide data to the appropriate state agencies			Y	Monitoring	Groundwater

J63	MP21	Nine Mile Creek WR	Cooperate with other state and local agencies to identify and fill data gaps.	Groundwater	General goal	Collaborate with others to research infiltration impacts on groundwater and develop a consistent approach to protecting areas sensitive to groundwater contamination. Collaborate with other agencies to enhance groundwater monitoring efforts.	Y	Unique.Sensitive.h	Monitoring	Cooperation	Groundwater
J64	MP21	Nine Mile Creek WR	Participate in regional groundwater planning efforts.	Groundwater	General goal	Support the MDH and other state, regional, and local agencies in implementing wellhead protection programs and plans within the District. Partner with Hennepin County, other local water management organizations, cities, and state agencies to develop a regional groundwater management plan, and participate in regional groundwater planning efforts.		Groundwater			
J65	MP21	Nine Mile Creek WR	Promote groundwater conservation and sustainable groundwater use.	Groundwater	General goal	Require cities to adopt and implement a groundwater-conservation policy. Work with cities and state agencies to promote the use of, and reduce regulatory barriers to, stormwater reuse. Encourage cities to develop groundwater sustainability goal(s).	Y	Stormwater	Groundwater		
J66	MP21	Nine Mile Creek WR	Promote groundwater recharge – especially where it will protect and improve ground-water dependent natural resources.	Groundwater	General goal	Identify and map areas in the watershed based on potential for (and limitations to) groundwater recharge. Work with cities to encourage recharge within their regulatory controls and other guidance, especially where it will protect and improve groundwater-dependent natural resources. Seek opportunities to incorporate recharge into District projects, especially where it will protect and improve groundwater-dependent natural resources.		Groundwater			
J67	MP21	Nine Mile Creek WR	Collaborate with cities to identify and promote water resource improvement opportunities as part of local or regional planning efforts.	Land Use	General goal	Participate in local and regional land use planning efforts to identify opportunities to achieve District goals, objectives and policies. Inform local and regional land use planning efforts by providing information and analysis regarding opportunities for improved water resources management and protection. Provide assistance to cities to incorporate low impact development requirements into local controls.		Cooperation			
J68	MP21	Nine Mile Creek WR	Require development, redevelopment and other land-disturbing activities within the watershed to prevent impacts on water resources, including cumulative impacts.	Land Use	General goal	Implement District rules through the permitting program. Ensure coordination of the District's regulatory program with local land use controls to support the District's policies and objectives.	Y	Development	Low Impact Devel		
J69	MP21	Nine Mile Creek WR	Ensure that impacts of development on water resources, including cumulative impacts, are understood and considered.	Land Use	General goal	Assist cities in understanding the individual and cumulative impacts of development on water resources.	Y	Development	Low Impact Devel		
J7	MP5	Shakopee SW	Localized flooding issues	Flooding	General goal	The City will continue to provide frequent maintenance, monitor and evaluate short- and long-term solutions for addressing the concern at this location.	Y	Monitoring	Flood		
J70	MP21	Nine Mile Creek WR	Prevent floodplain encroachment in order to maintain no net loss of floodplain storage	Land Use	General goal	Work with cities to identify floodplain areas and permissible land uses. Work with cities to develop and distribute educational materials on floodplain locations, protection, and floodplain land use restrictions.		Flood			
J71	MP21	Nine Mile Creek WR	The natural function of the floodplain as a floodwater storage area will be protected from encroachment.	Flooding	General goal	Work with other local governments to establish natural vegetated buffers on all publicly owned lands adjacent to Nine Mile Creek and stormwater detention areas. Pursue opportunities to preserve, restore, and manage floodplain wetlands.	Y	Stormwater	Flood		
J72	MP21	Nine Mile Creek WR	Work with cities to address increased flood potential from NOAA Atlas 14 precipitation frequency depths.	Flooding	General goal	Assist cities in identifying and prioritizing flooding problems identified using Atlas 14 precipitation frequency estimates. Assist cities in identifying improvement alternatives to address regional flooding problems. Assist cities in implementing infrastructure improvements to address regional flooding problems. Work with cities to incorporate flood risk information into local land-use controls.		Flood			
J73	MP21	Nine Mile Creek WR	Understand and address the potential for increased flood risk due to predicted changes in climate.	Flooding	General goal	Assess increased flood risk due to predicted climate changes. Work with cities and stakeholders to understand the increased flood risks and identify potential adaptation strategies. Review District rules and policies for adequacy under climate change scenario(s).		Flood			
J74	MP21	Nine Mile Creek WR	Promote climate change adaptation to minimize property damage and impacts to District natural and water resources.	Climate Change	General goal	Evaluate impacts and develop a District climate change adaptation strategy to identify natural and water resource vulnerabilities to climate change and potential adaptation strategies. Work with other local governments and other stakeholders to educate regarding the impacts of climate change and assist in developing city specific climate change adaptation strategies. Work with other local governments to implement climate change adaptation strategies. Collaborate with other natural resource management agencies to utilize current data and develop shared strategies.		Cooperation			
J75	MP21	Nine Mile Creek WR	Provide opportunities to engage the public and promote a stewardship principle.	Education	General goal	Develop and promote volunteer opportunities at Nine Mile Creek Discovery Point. Continue to develop and promote educational programming that builds the connection between people and nature. Promote and work to increase participation in Discovery Point programming. Use the District's website communication methods such as social media to engage the public and promote stewardship of the District water and natural resources.		Public engagement.education			
J76	MP21	Nine Mile Creek WR	Coordinate education and outreach efforts and promote efficient and effective education and outreach through partnerships with cities, other local and state agencies, nonprofits, and other organizations.	Education	General goal	Assist in distributing materials or promoting programs developed by other organizations. Assist in promoting, developing, and/or implementing education and outreach programs and materials in partnership with other organizations. Meet yearly with cities to coordinate education and outreach efforts.		Public engagement.education			
J77	MP21	Nine Mile Creek WR	Engage new and maintain existing partnerships.	Education	General goal	Assist in distributing materials or promoting programs developed by other organizations. Assist in promoting, developing, and/or implementing education and outreach programs and materials in partnership with other organizations. Financially sponsor programs and the development of new education programs, when appropriate.		Public engagement.education			

J78	MP21	Nine Mile Creek WR	Coordinate water resource management efforts and collaborate with District partners, including residents, cities, pertinent governmental units, and other organizations, to promote efficiency and cost effective use of funds for water resource management.	Water quality	General goal	Identify opportunities to incorporate water resource management efforts into capital improvement projects and major redevelopment projects. Provide financial and technical assistance to District partners for water resource management and protection activities. Promote innovative water resource management through implementation of District projects and support of projects by District partners. Coordinate water quality monitoring efforts to avoid redundancy.		Y	Monitoring	Cooperation
J79	MP26	Chanhassen SW	Explore reductions in discharge rate in the Bluff Creek System	Water quality	Specific goal	Review of proposed development projects, Hydrologic / hydraulic models, Analysis of downstream impacts	X				
J8	MP5	Shakopee SW	Protect groundwater levels within the Eagle Creek Watershed to protect the Boiling Springs and Fen areas.	Groundwater	Specific goal	The City of Shakopee will work with the Lower Minnesota River Watershed District and City of Savage regarding groundwater studies contributing to the Eagle Creek Boiling Springs and Fen areas.		Y	Groundwater	Trout.Fen
J80	MP26	Chanhassen SW	Evaluate highwater levels on Lotus Lake	Water quality	Specific goal	identify opportunities for volume and water quality benefits	X				
J81	MP26	Chanhassen SW	Explore water quality improvement projects on Riley and Lotus Lakes for anticipated TMDL	Water quality	Specific goal	Install BMPs, improve water quality, increase treatment capacity			Impaired.TMDL		
J82	MP26	Chanhassen SW	Participate in TMDL studies for Riley and Lotus lakes	Water quality	Specific goal	implement recommendations			Impaired.TMDL		
J83	MP26	Chanhassen SW	Continue water quality monitoring on local lakes	Water quality	General goal	assess data, management approach adjustments			Monitoring		
J84	MP26	Chanhassen SW	Complete neighborhood studies and implement treatment BMPs	Water quality	General goal	complete projects, establish treatment capacity	X				
J85	MP26	Chanhassen SW	Implement the wetland management program described in Section V of this Plan	Wetlands	General goal	complete annual WMP activities, implement projects, create new wetlands			Wetlands		
J86	MP26	Chanhassen SW	continue to implements erosion sediment control program	Erosion & Sediment	General goal	Implement projects			Sediment.Erosion		
J87	MP26	Chanhassen SW	Explore opportunities for erosion protection and bank stabilization at key storm system conveyances and outlets	Erosion & Sediment	General goal	install BMPs, reduce bank erosion, reduce gullies and washouts			Sediment.Erosion		
J88	MP26	Chanhassen SW	Explore opportunities for grant program funding	Finance	General goal	complete study, implement changes to assessments and / or utility rates	X				
J89	MP26	Chanhassen SW	Continue to implement the City's NPDES Permit program SWPPP.	Regulatory	General goal	program assessment	X				
J9	MP5	Shakopee SW	The Minnesota River is impaired for nutrients and turbidity.	Water Quality	General goal	The city will participate in the development of TMDL Studies. One completed TMDL study which addresses dissolved oxygen and phosphorus load allocations identified a 30% reduction in non-point source phosphorus loads from permitted Municipal Separate Storm Sewer Systems (MS4) communities. There is a TMDL study for turbidity in development but is not yet completed. The City will continue to implement Shakopee's Comprehensive Surface Water Management Plan, meet requirements associated with the City's MS4 National Pollutant Discharge Elimination System (NPDES) Permit, and implement its SWPPP to address non-point source pollution.			Impaired.TMDL		
J90	MP26	Chanhassen SW	Maintain consistency with Watershed Management Organization Plan Goals and Policies	Regulatory	General goal	plan updates as needed	X				
J91	MP26	Chanhassen SW	Remain involved in local educational campaigns	Education	General goal	distribute products/information			Public engagement.education		
J92	MP26	Chanhassen SW	Publish water resources articles	Education	General goal	place articles in quarterly Chanhassen Connection newsletter			Public engagement.education		
J93	MP26	Chanhassen SW	Lake Ann - Eurasian watermilfoil, curly leave pondweed, water quality monitoring	Water Quality	Specific goal	reduction of Eurasian watermilfoil, curly leave pondweed. Improving water quality trends			Monitoring		
J94	MP26	Chanhassen SW	Christmas Lake - 1994 lake management plan recommendations	Water Quality	Specific goal	Improving water quality trends	X				
J95	MP26	Chanhassen SW	Lotus Lake - invasive/exotic species, Eurasian watermilfoil, curly leave pondweed, purple loosestrife	Water Quality	Specific goal	reduction of nuisance invasive/exotic species			Invasives		
J96	MP26	Chanhassen SW	Lake Lucy - curly leave pondweed, complete a lake and vegetation management plan	Water Quality	Specific goal	reduction of nuisance invasive/exotic species, Improving water quality trends			Invasives		
J97	MP26	Chanhassen SW	Lake Minnewashta - monitor adjacent wetlands, Eurasian watermilfoil, curly leave pondweed, purple loosestrife	Water Quality	Specific goal	reduction of nuisance invasive/exotic species, Improving water quality trends		Y	Monitoring	Invasives	
J98	MP26	Chanhassen SW	Rice Lake Marsh - 1994 lake management plan recommendations, curly leaf pondweed	Water Quality	Specific goal	reduction of nuisance invasive/exotic species, Improving water quality trends			Invasives		
J99	MP26	Chanhassen SW	Lake Riley - Support the implementation of water quality treatment practices throughout the watershed	Water Quality	Specific goal	Improving water quality trends	X				
K1	CP1	Scott	Critical and sensitive features	LAND USE AND GROWTH MANAG	General goal	Identify and evaluate all critical and sensitive environmental features in Scott County. Reason: It is important to identify and map all environmental features that should be protected before any land use changes occur.			Unique.Sensitive.high value		
K10	CP1	Scott	Minnesota River Corridor trail search to connect with the Minnesota River Greenway	Parks and trails	Specific Project	Minnesota River Extension Regional Trail Search Corridor (26) This corridor would connect with the Minnesota River Greenway (a portion of which is the Big Rivers Regional Trail) in Dakota County and follow the Minnesota River to The Landing near Shakopee		Y	Increase River Use	CIPs.Projects	Trails
K100	CP1	Scott	Preserve and protect non-metallic mineral deposits.	AGGREGATE RESOURCE	Specific Action	If the proposed end land use of the aggregate mining site is for natural area conservation of wildlife protection or if it is determined that a proposed end use for development is unlikely for a given property, requirements in the mining permit should be put in place to ensure ecological enhancement and long-term financial stewardship of the land to sustain the environmental value of the property.			Natural Resource Protection		

K101	MP15	Scott	Deposition of till by glaciers and incision by the Minnesota River have created a geologic setting that is naturally highly erosive and very susceptible to increased erosion and mass wasting, where shallow lakes are predominant, and where terraces along the Minnesota River have shallow depths to bedrock and are highly susceptible to groundwater contamination.	Erosion and Pollution	General Issue			Y	Sediment.Erosion	Groundwater		
K102	MP15	Scott	The landscape of the watershed has been significantly altered by agriculture.	Land Use	General Issue				Agriculture			
K103	MP15	Scott	Stability of streambanks and aquatic habitat has been impacted by changes to streamside vegetation, channel alterations, ditching and wetland drainage.	Land use	General Issue				Wetlands			
K104	MP15	Scott	Surface water quality is impaired.	Surface Water Quality	General Issue				Impaired.TMDL			
K105	MP15	Scott	Public awareness of water resource issues is limited, and a large number of citizens do not believe that they have the ability to implement conservation or that conservation will make a difference.	Public Investment	General Issue				Public engagement.education			
K106	MP15	Scott	Urban development has altered the landscape and additional development is expected.	Land Use	General Issue				Development			
K107	MP15	Scott	Localized flooding issues are a concern in Jordan, and lakes throughout the SWMO are experiencing high water levels and/or outlet issues.	Flooding	General Issue				Flood			
K108	MP15	Scott	Upstream portions of the Sand Creek Watershed and eastern areas of the Credit River Watershed are not in the jurisdictional boundary of the SWMO.	Cross Jurisdiction	General Issue		X					
K109	MP15	Scott	Impaired Waters with detailed study or TMDL Complete	Surface Water Quality	Specific goal	Sand Creek at Jordan—achieve 40% of the load reduction necessary to achieve the TSS equivalency concentration for meeting the turbidity standard based on the 2010 study. Estimated mass of this reduction is 300 Tons/day under high flows. By 2025			Impaired.TMDL			
K11	CP1	Scott	Find opportunities to share resources and provide integrated parks and trails	Parks and trails	General goal	Seek opportunities to share physical and financial resources with other governmental units and special districts (cities, townships, law enforcement, Three Rivers, school districts, adjacent counties, Metropolitan Council, State, and Federal) to provide and maintain an integrated parks and trails system with linkages between neighboring communities and publicly owned parkland.			Cooperation			
K110	MP15	Scott	Impaired Waters without detailed study of TMDL (see 2018 Impaired Waters List)	Surface Water Quality	Specific goal	Create an improving trend for the parameters (total suspended solids, total phosphorus, water clarity, chlorophyll-a, bacteria) considered impaired. By 2025			Impaired.TMDL			
K111	MP15	Scott	Thole Lake Outlet Stormwater Assessment	Flooding	Specific Action	Thole Lake is experiencing high water levels, and the outlet flow path is largely a collection of private infrastructure which is also stressed. This study would assess the problems identifying potential solutions and opportunities for regional stormwater management.		Y	Stormwater	Flood	CIPs.Projects	
K112	MP15	Scott	Campbell Lake (upper Picha Creek) Regional Stormwater Assessment	Flooding and Water Quality	Specific Action	The Campbell Lake area is the headwaters of Picha Creek, and is slated to be annexed by the City of Prior Lake. This study would assess potential issues with development, and identify potential opportunities for regional stormwater management.		Y	Stormwater	Flood	CIPs.Projects	
K113	MP15	Scott	Cedar Lake Water Quality Modeling Update	Water Quality	Specific Action	Eutrophication modeling was completed for Cedar Lake as part of the TMDL completed in 2010. However, since then conditions have significantly changed and the modeling needs to be updated.		Y	CIPs.Projects	Impaired.TMDL		
K114	MP15	Scott	Ditch Multiple Purpose Assessments	Public Ditch	Specific Action	These assessments will focus on various county ditches to develop long-term multi-purpose management visions. The focus will be on those where the agriculture drainage benefits have significantly declined such as CD4, which covers portions of the Credit River.		Y	CIPs.Projects	Agriculture		
K115	MP15	Scott	Sand Creek Flood Protection Feasibility Analysis	Flooding	Specific Action	City of Jordan has a large number of homes and businesses in the floodplain of Sand Creek. This study will assess the feasibility of various mitigation options, particularly levees and a bypass.*		Y	Flood	CIPs.Projects		
K116	MP15	Scott	Thole Lake Subwatershed Assessment	Surface Water Quality	Specific Action	A draft TMDL has been completed for Thole Lake. This Subwatershed Assessment will identify potential watershed based practices, and septic system program opportunities to reduce phosphorus loading to the lake in accordance with the TMDL when it is complete.		Y	CIPs.Projects	Impaired.TMDL		
K117	MP15	Scott	McMahon Lake Outlet Feasibility Assessment	Flooding and Surface Water Qualit	Specific Action	McMahon Lake is experiencing high water levels, which stay high since the lake does not have an outlet. This floods the public boat launch and is leading to shoreline erosion. This study will examine the feasibility of an outlet.		Y	Flood	Sediment.Erosion	CIPs.Projects	
K118	MP15	Scott	Social Attitudes Survey Regarding Water and Conservation	Collective Action	Specific Action	The SWMO has completed 2 surveys of landowners, and has another underway regarding attitudes toward water resources and adoption of conservation. An additional one will be completed in 2024 to document any changes, and inform the next plan update.			Public engagement.education			
K119	MP15	Scott	Roberts Creek Subwatershed Assessment	Surface Water Quality	Specific Action	Roberts Creek will be listed as impaired due to bacteria, TSS, and invertebrate and fish bioassessments. A TMDL has not been completed, but has been started. This Subwatershed Assessment will identify potential watershed based practices, and septic system program opportunities. It will be scheduled to complement TMDL completion and synoptic monitoring.		Y	Monitoring	CIPs.Projects	Impaired.TMDL	
K12	CP1	Scott	Support the extension of the Minnesota River Scenic Byway	Parks and trails	General goal	Support the extension of the Minnesota River Scenic Byway designation through Scott County from Belle Plaine to Fort Snelling			Increase River Use			

K120	MP15	Scott	City of Shakopee Regional Stormwater Feasibility Studies	Surface Water Quality	Specific Action	This effort consists of feasibility assessments for the incorporation of water quality components in regional stormwater management facilities being contemplated by the City of Shakopee (city projects 19-03 and 22- 002). The City of Shakopee will lead and manage this assessment. The SWMO's role is advisory, and to pass through state Watershed Based Funding for the assessment.	Y	Stormwater	CIPs.Projects		
K121	MP15	Scott	Twin Lakes Stormwater Volume Study	Surface Water Quality and Grounc	Specific Action	This effort consists of completing a feasibility study regarding runoff volume control (including the reuse of stormwater) in the Twin Lakes area of the City of Savage. This City of Savage will lead and manage this study. The SWMO's role is advisory, and to pass through state Watershed Based Funding for the study.	Y	Stormwater	Groundwater	CIPs.Projects	
K122	MP15	Scott	Updating the Sand Creek Water Quality Assessment and Implementation Plan	Surface Water Quality	Specific Action	A Diagnostic Study, and Implementation Plan were completed in 2010 focusing on reducing sediment and phosphorus pollution for Sand Creek and Cedar and McMahon Lakes. Much of the plan has been implemented, and new data has been collected by the MPCA (in support of developing WRAPS and TMDLs), Met Council, and the SWMO. The update will revise current strategies and flesh out additional strategies identified in pending WRAPs and TMDLs. It will then be used to guide targeted implementation	Y	Sediment.Erosion	CIPs.Projects	Impaired.TMDL	
K123	MP15	Scott	City of Prior Lake DWSMA Abandoned Well Assessment	Groundwater Quality	Specific Action	This effort consists of reviewing the City of Prior Lake Drinking Water Supply Management Area to develop a methodology for identifying probable locations of abandoned/unsealed wells. Methodology developed could then be used with other DWSMA's in the SWMO. Results will also be used to target contacts for the well sealing cost share practice implementation through the TACS program	Y	Groundwater	CIPs.Projects		
K124	MP15	Scott	Ravine instability	Erosion	Potential project	There are a number of ravines that the SWMO knows are eroding, but they are not acute sources of sediment, not threatening infrastructure, or there are other issues/questions that need to be resolved before deciding whether to take on a project. For example, the SWMO knows that there are additional near channel sediment sources along Sand Creek, Porter Creek, and Picha Creek in addition to those that have already been stabilized, but staff is recommending that the SWMO wait to see how sediment pollution is responding before deciding to take on more capital improvement projects with respect to near channel sources.	Y	Sediment.Erosion	Steep slopes		
K125	MP15	Scott	Impaired Waters List - bacteria	Pollutants	Specific action	The SWMO may utilize DNA sampling to determine specific sources of the bacteria and work with landowners on solutions. If the source is found to be human, the SWMO will develop a targeted mailing promoting Scott County's septic loan program to owners of older septic systems or systems that are pumped frequently or not at all. If the source is found to be livestock, the SWMO will work with landowners on land application of manure including application amount, location and timing. The SWMO will also promote and target other practices that help control bacteria through the Cost Share and Incentive Strategy	Y	CIPs.Projects	Impaired.TMDL		
K126	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	The SWMO will create awareness about the environmental impacts of chloride through education, outreach, training, and other activities to local residents, public works departments, applicators, elected officials, and businesses.		Impaired.TMDL			
K127	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	The SWMO will collect more detailed data by monitoring local surface waters for chloride concentrations to try to locate the "hotspots", track progress, track trends, and understand where the sources may be coming from with respect to impaired surface waters (see Monitoring Strategy).	Y	Monitoring	Impaired.TMDL		
K128	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	The SWMO will also require Local Governmental Units (LGUs) to detail how they plan to manage road de-icing efforts to meet the Chloride TMDL in their Local Water Plans (LWP).	Y	CIPs.Projects	Impaired.TMDL		
K129	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	The SWMO will consider cost share for singular de-icing practices in the short term if they meet the definition of innovative. For the long term the SWMO will consider adding specific de-icing practices to the list of eligible practices as they become commonly accepted. Consideration both short-term and long-term for cost share needs to be consistent with the Technical Assistance and Cost Share (TACS) Program "Guiding Principles" presented in Section 5.	Y	CIPs.Projects	Impaired.TMDL		
K13	CP1	Scott	Partner with governemental professional and technical natural resource experts to achieve mutual goals	Parks and trails	General goal	Partner with professional and technical natural resource experts from local and regional governmental units, such as the Minnesota Department of Natural Resources, the Scott Soil and Water Conservation District the Scott Watershed Management Organization and together organizations to achieve mutual resource preservation and restoration goals through grant partnerships, resource sharing and innovative collaborations.		Cooperation			
K130	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	The SWMO will also consider joint Capital Improvement Projects with LGUs designed to switch over larger portions of an overall public works operation to accepted chloride reducing de-icing practices if the LGU has included a plan in their LWP as described above, and as described under the Salt and Sanding Practices Local Water Plans Strategy. To be considered the LGU must consult with the SWMO, and submit their project for consideration. The SWMO will base its decision and level of support using the criteria and priorities described under the Capital Improvements Strategy.	Y	CIPs.Projects	Impaired.TMDL		
K131	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	The SWMO will also monitor groundwater for chloride (see Monitoring Strategy).	Y	Monitoring	Groundwater	Impaired.TMDL	
K132	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	If groundwater monitoring finds that chloride is increasing and has the potential to approach the Secondary Drinking Water Standard, the SMWO will consider adding a water softener replacement incentive (to replace older water softeners with newer more efficient systems) as a practice eligible for cost share and incentives.	Y	Monitoring	Groundwater	CIPs.Projects	Impaired.TMDL

K133	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	With respect to chloride impairments in Sand Creek and Raven Stream, the SWMO will also consider assisting public wastewater entities with chloride reduction (i.e., individual water softener rebate program) efforts if it is found to be the most cost effective means of achieving necessary reductions. Otherwise, the SWMO considers achieving reductions in wastewater a responsibility of the NPDES permit holder.	Y	CIPs.Projects	Impaired.TMDL			
K134	MP15	Scott	Impaired Waters List - Chloride	Pollutants	Specific action	If water softening associated with rural individual well and septic system discharges are shown to be significant sources the SWMO will: a) first work with the County to ensure septic systems are not failing and are not direct discharges; and b) the SWMO will consider adding a water softener rebate/incentive to the list of practices eligible for cost share and incentives.	Y	CIPs.Projects	Impaired.TMDL			
K135	MP15	Scott	High nutrients	Pollutants	Specific Action	The SWMO will actively target nutrient management with respect to phosphorus and in lakes where TMDLs have been completed. Active targeting of watershed practice installation will be done through the Cost Share and Incentive Strategy and the Capital Improvement Strategy following the process laid out in the Targeting Strategy. Active targeting for in-lake nutrient management will be implemented following the Targeting Strategy, the Aquatic Invasive Species Strategy, and the Capital Improvement Strategy	Y	Invasives	CIPs.Projects	Impaired.TMDL		
K136	MP15	Scott	High nutrients	Pollutants	Specific Action	The SWMO will passively promote practices that control or reduce phosphorus or nitrates as a means of preventing increasing concentrations or new impairments in the rest of the SWMO. Passive promotion will be through general promotion of the Cost Share and Incentive Strategy.	Y	CIPs.Projects	Impaired.TMDL			
K137	MP15	Scott	High nutrients	Pollutants Ground Water	Specific Action	The SWMO will actively target nitrates in groundwater where information suggests there is a risk. SWMO will complete monitoring as described in the Monitoring Strategy. The SWMO will also target sensitive areas or areas where nitrates are a potential future issue. This targeting will promote practices that control the leakage of nitrates that are eligible for cost share and incentives. See Targeting Strategy for additional detail.	Y	Unique.Sensitive.h	Monitoring	Groundwater	CIPs.Projects	
K138	MP15	Scott	Need for innovation to reduce tile drainage and cost effectively achieve desired outcomes	Innovation and drainage	Specific Project	With this Plan update the SWMO is interested in demonstrations with conservation drainage, cover crops, perennial crops, projects that reduce the need of tile drainage, and projects that test or demonstrate more cost effective ways of achieving desired outcomes. Proposed projects are screened by the SWMO and applications are processed through the Scott SWCD. It is anticipated that this effort will decrease over time as suitable demonstrations are completed. Eligible practices, and cost share and incentive rates will be reviewed annually	Y	CIPs.Projects	Agriculture			
K139	MP15	Scott	Watershed Management is a complex endeavor. Authorities and responsibilities are fragmented, and a significant amount of coordination is necessary to be successful	Coordination	Specific Action	Periodic use of a Technical Advisory Committee comprised of local and agency professionals.		Cooperation				
K14	CP1	Scott	Wetland Management	Wetland Management	General goal	To protect and enhance wetland ecosystems and ensure/encourage a measurable net gain of wetland functions and acreage		Wetlands				
K140	MP15	Scott	Watershed Management is a complex endeavor. Authorities and responsibilities are fragmented, and a significant amount of coordination is necessary to be successful	Coordination	Specific Action	Inclusion of Rice and Le Sueur Counties and SWCDs in the Technical Advisory Committee.		Cooperation				
K141	MP15	Scott	Watershed Management is a complex endeavor. Authorities and responsibilities are fragmented, and a significant amount of coordination is necessary to be successful	Coordination	Specific Action	Periodic meetings with LGUs to track Local Water Plan implementation, and coordinate regrading cross jurisdictional issues. They include both informal as needed meetings, and more formal meetings. Our experience is that one formal meeting to track Local Water Plan implementation every two years is sufficient.		Cooperation				
K142	MP15	Scott	Watershed Management is a complex endeavor. Authorities and responsibilities are fragmented, and a significant amount of coordination is necessary to be successful	Coordination	Specific Action	Maintaining and enabling the Watershed Planning Commission.		Cooperation				
K143	MP15	Scott	Watershed Management is a complex endeavor. Authorities and responsibilities are fragmented, and a significant amount of coordination is necessary to be successful	Coordination	Specific Action	Routinely sharing data and information.		Cooperation				
K144	MP15	Scott	Watershed Management is a complex endeavor. Authorities and responsibilities are fragmented, and a significant amount of coordination is necessary to be successful	Coordination	Specific Action	Being available to assist with water mandates/programs where others are the lead when requested (i.e., Wellhead Protection Plans, MS4 Permit implementation, and Wetland Conservation Act operations, permitting, and Public Values Incentives/Natural Area Corridors).		Corridors				
K145	MP15	Scott	Groundwater conservation	Groundwater supply	Specific Action	Promoting water conservation through education and outreach efforts		Groundwater				
K146	MP15	Scott	Groundwater conservation	Groundwater supply	Specific Action	Supporting wastewater or stormwater reuse projects	Y	Stormwater	Groundwater			
K147	MP15	Scott	Groundwater conservation	Groundwater supply	Specific Action	Supporting Groundwater Conservation Planning outreach efforts to larger commercial or institutional campuses		Groundwater				
K148	MP15	Scott	Increase buffering	Buffers	Specific Action	require buffers recorded as conservation easements on all public watercourses and wetlands when land is subdivided.		High value easements				

K149	MP15	Scott	Increase buffering	Buffers	Specific Action	Continuing to include financial assistance in the form of cost share and incentives for voluntary practices that improve buffering such as filter strips, natural shoreline protection, and herbaceous or forested buffer establishment			Natural Resource Protection		
K15	CP1	Scott	Surface Water Quality.	Surface Water Quality	General goal	To protect and improve surface water quality.			Natural Resource Protection		
K150	MP15	Scott	Increase buffering	Buffers	Specific Action	Providing additional incentives or requiring the use of native plants with cost share and incentive practices.			Vegetation		
K151	MP15	Scott	Increase buffering	Buffers	Specific Action	Acknowledging and using the Other Waters Map/ Inventory (Map 7) created by the Scott SWCD per Minnesota Statutes 103F.48, Subd. 4 to target voluntary implementation of conservation practices, particularly those that improve buffering. Other Waters Map 7 shows additional tributaries not under the MDNR public waters jurisdiction identified by the Scott SWCD in 2017 using criteria developed jointly with watershed organizations in the county (Appendix F).		Y	Corridors	CIPs.Projects	
K152	MP15	Scott	Increase buffering	Buffers	Specific Action	The SWMO will continue to promote the Scott SWCD tree program to Scott County landowners and will add an option for woody vegetation to the 2018 PPM under the conservation cover practice.		Y	CIPs.Projects	Vegetation	
K153	MP15	Scott	Collaborating to implement Natural Areas Corridors legacy	Habitat	General	Continuing to work in collaboration with Scott County Planning & Zoning, Parks, Public Works and willing landowners and developers to continue implementing the purpose of the Natural Area Corridors legacy		Y	Corridors	Cooperation	
K154	MP15	Scott	Capital improvement Projects	Habitat	Specific	Incorporating habitat features in capital improvement projects when practical (i.e., using natural channel restoration techniques and bioengineering as the preferred approach for addressing streambank, ravine and bluff erosion).		Y	Sediment.Erosion	Steep slopes	
K155	MP15	Scott	Multi purpose practices	Habitat	Specific	Promoting practices that provide multiple benefits (i.e., native grass planting that improve habitat, moderate runoff, and improve soil health).			Vegetation		
K156	MP15	Scott	Species diversity	Diversity	Specific	The SWMO will continue to promote the Scott SWCD tree program to Scott County landowners and will require a minimum of ten (10) native species for projects unless the funding source requirements require more than ten.			Vegetation		
K157	MP15	Scott	Living cover	Living cover	Specific	The SWMO and SWCD PPM includes practices that provide living cover such as native grass plantings, contour buffer strips, filter strips, grassed waterways, natural area shoreline, riparian buffers and cover crop			Vegetation		
K158	MP15	Scott	Erosion and Runoff	Cover crops	Specific	the SWMO purchased a cover crop planter for landowners to rent to plant cover crops so there will always be something growing and covering the soil in their fields			Sediment.Erosion		
K159	MP15	Scott	Erosion and Runoff	Cover crops	Specific	SWMO and SWCD continuing to include cover crops in the PPM as an incentive practice for farmers			Sediment.Erosion		
K16	CP1	Scott	Groundwater Management	Groundwater Management	General goal	To protect groundwater quality and supply			Groundwater		
K160	MP15	Scott	Erosion and Runoff	Cover crops	Specific	WMO will also partner with SWCDs to support cover crops and perennial vegetation demonstrations that include monitoring of soil physical conditions in response to the demonstrations over time. The intent is that these demonstration plots can also serve as sites for others to view the practices and for field training		Y	Monitoring	Sediment.Erosion	
K161	MP15	Scott	Rough fish	Water Quality, AQUATIC INVASIVE	Specific	In lakes where studies have demonstrated rough fish are a water quality problem, and where rough fish control is part of an overall comprehensive approach to improving lake quality, the SWMO will consider coordinating efforts, and sharing the cost. Cost share will be considered up to 50% with a $5,000 per year maximum			Invasives		
K162	MP15	Scott	Ensure that benefits resulting from water resource improvements enabled under this Plan last into the future	Public Investment	Specific	Land owners receiving cost share and/or incentives from the SWMO for the installation of practices will be required to enter into a contract with the SWMO or the Scott SWCD. This contract will require that they retain and maintain the practices for a specific term (10 to 15 years depending on the practice). Inspections will then be completed to assess whether maintenance is occurring. Guidance will also be provided to all participants, and technical assistance will be available. In addition, periodic classes will be held as part of the Scott SWMO's Education and Outreach Program, such as prairie or shoreline maintenance, to provide landowners the knowledge and tools to maintain their practices			Public engagement.education		
K163	MP15	Scott	Ensure that benefits resulting from water resource improvements enabled under this Plan last into the future	Public Investment	Specific	Setting up a GIS "asset management system" for tracking and recording inspections and maintenance,	X				
K164	MP15	Scott	Ensure that benefits resulting from water resource improvements enabled under this Plan last into the future	Public Investment	Specific	Budgeting for, and Completing maintenance when needed	X				
K165	MP15	Scott	Curly-leaf pondweed	Water Quality, AQUATIC INVASIVE	Specific	The SWMO will continue to use quantitative monitoring (pointintercept method) and Global Positioning System (GPS) mapping to assess lake aquatic plant communities on lakes we are managing for curly-leaf pondweed. The SWMO will continue to perform aquatic plant management activities (herbicide treatments or phosphorus inactivation) where aquatic plants have a demonstrated negative effect on water quality. Currently the SWMO is partnering on treatments for Cedar, O'Dowd, Thole, and McMahon Lakes. It is anticipated that an additional partnership will be started for Cleary Lake in 2019, and that efforts for Cedar Lake will be declining to a maintenance level		Y	Monitoring	Invasives	
K166	MP15	Scott	Nitrate leakage in DWSMA	Water Quality, Groundwater	Specific	TACS will target Practices known to be effective at controlling nitrate leakage in the Drinking Water Supply Management Area (DWSMA) for Belle Plaine.			Groundwater		

K167	MP15	Scott	High susceptibility areas	Groundwater	Specific	TACS Will Target Well decommissioning in Drinking Water Supply Management Areas and high susceptibility areas shown on the Scott County Geologic Atlas that are located in the SWMO					Groundwater		
K168	MP15	Scott	TMDLs and WRAPS	Water Quality	Specific	TACS will target Other areas identified in pending TMDLs and the Lower Minnesota River Basin WRAPS					Impaired.TMDL		
K169	MP15	Scott	Helena Twp Section 2	Wetland Management	CIP	Wetland Bank Potential wetland bank by BWSR, Scott County Transportation and Scott SWCD with potential to incorporate flood storage using additional SWMO funds. $100,000 to $120,000 Supplemental funding to incorporate modest amount of flood storage Feasibility and Design 2018 Construction 2019		2019	$120,000	Y	Flood	CIPs.Projects	
K17	CP1	Scott	Flood Management	Flood Management	General goal	To protect human life, property, and surface water systems that could be damaged by flood events.					Flood		
K170	MP15	Scott	Cedar Lake Wetland Restoration/Wet Detention Basin	Wetland Management	CIP	Identified in subwatershed analysis of Cedar Lake watershed; carried over from previous Plan $66,000 to $100,000 Landowner contact made, may be interested in the future. Schedule unknown	Unknown		$66,000 to $100,000	Y	CIPs.Projects	Wetlands	
K171	MP15	Scott	Cedar and McMahon Lakes Alum Treatments	Pollution, TMDL	CIP	Identified as part of approved TMDL. Carried over as a CIP from previous Plan. Cedar Lake: $1,100,000 for two treatments* McMahon Lake: $175,200 for two treatments Timing for the treatments of Cedar Lake is based on adaptive management linked to success of other efforts. McMahon Lake treatment has been suspended unless the lake again becomes impaired.	Depends		$1,100,000 & $175,200	Y	CIPs.Projects	Impaired.TMDL	
K172	MP15	Scott	Sawmill Lane Near Channel Sediment Control	Drainage, Sediment	CIP	One of a number of near channel capital projects identified in current Plan. Expect to complete in 2018, but included in case of delay. $425,000** Feasibility and Design 2017/2018 Construction 2018		2018	$425,000	Y	Sediment.Erosion	CIPs.Projects	
K173	MP15	Scott	Helena-Broadway Near Channel Sediment Control	Drainage, Sediment	CIP	One of a number of near channel capital projects identified in current Plan. Currently getting a second opinion on cost and feasibility. If cost and feasibility change significantly, it might be removed from the list. $600,000 Some grant funding available from USEPA Section 319 grant, and potentially from the Sand Creek targeting grant Feasibility 2018 Design 2018/2019 Construction 2019, 2020 or 2021	2018 to 2021		$600,000	Y	Sediment.Erosion	CIPs.Projects	
K174	MP15	Scott	NW McMahon Lake Stabilization and Wetland	Erosion	CIP	Project to stabilize a head cutting gully and restore a prairie in a cropped area NW of McMahon Lake. The combination of practices make it a larger effort than typically handled by the TACS program. It is a priority project for the SMWO because of it benefit to McMahon Lake. $80,000 Landowner contacted in 2017. Waiting for a decision. Schedule unknown	Unknown		$80,000	Y	Sediment.Erosion	Steep slopes	CIPs.Projects
K175	MP15	Scott	Salisbury Hill (CR51) Ravines*	Erosion	CIP	Unstable Ravines are contributing large amounts of sediment to the Minnesota River and impacting county road maintenance. This project was included as a CIP in the previous Plan, but has been delayed because of changing priorities from the 2014 disaster, and waiting for decisions about the future of roads in the area. $750,000 to $1,500,000 depending on option selected for implementation Schedule unknown. Waiting for decisions about roads in the area.	Unknown		$750,000 to $1,500,000	Y	Sediment.Erosion	Steep slopes	CIPs.Projects
K176	MP15	Scott	Blakeley Park Stabilization	Erosion	CIP	Scott County Parks has land in Blakeley Park that has some erosion and small amount of mass wasting. Project will install upland practices and address the mass wasting (see Scott County Parks Improvement Program (PIP) 2018-2022). $130,000 Anticipate pursuing Clean Water Funds and Cost share with Scott County Parks Feasibility and Design 2019 Construction 2020	2019 t0 2020		$130,000	Y	Sediment.Erosion	CIPs.Projects	
K177	MP15	Scott	Lower Picha Creek Ravine Project	Erosion	CIP	Next priority stabilization project identified as part of the Sand Creek Near Channel Sediment Reduction Feasibility $450,000 Feasibility study and Preliminary Design & Clean Water Fund Grant application 2019; Construction 2020 (or later depending on grant availability	2020 or later		$450,000	Y	Sediment.Erosion	Steep slopes	CIPs.Projects
K178	MP15	Scott	Helena Twp Section 3	Erosion	CIP	Near Channel Sediment Control Stabilizations Project consists of stabilizing several actively eroding stream bank sites along Sand Creek in this reach. These sites are located at the upper end of the knick zone in the Middle Sand Creek Subwatershed where total suspended solids (TSS) yields are 10 to 15 times higher than other subwatersheds. $200,000 to $300,000 depending on the number of sites and the design Design: Spring 2019 Construction: Fall/Winter 2019	2019		200,000 to 300,000	Y	Sediment.Erosion	CIPs.Projects	
K179	CP8	Ci-Carver Draft	Preserve natural resources	Land use	General goal	Development techniques should be sensitive to the natural landscape and work to preserve mature trees, native plants and animals while respecting topography and natural wetlands.					Unique.Sensitive.high value		
K18	CP1	Scott	Collective Action	Collective Action	General goal	To engage the public in ways that inspires them to be willing partners					Public engagement.education		
K180	CP8	Ci-Carver Draft	Buffering in land development projects	Land Use	General goal	With an extensive future growth area and land use types, development should include buffering and staging of incompatible uses.					Development		
K181	CP8	Ci-Carver Draft	Natural resource protection	Land Use	General action	The City of Carver will promote, preserve and enhance natural resources within the City and protect them from adverse effects by regulating land disturbances or development activities that would have an adverse and potentially irreversible impact on environmentally sensitive land.					Unique.Sensitive.high value		
K182	CP8	Ci-Carver Draft	Sensitive Development of land	Land Use	General action	The City will encourage development techniques that are sensitive to the natural landscape and work to preserve mature trees, native plants and animals while respecting topography and natural wetlands				Y	Unique.Sensitive.h	Development	
K183	CP8	Ci-Carver Draft	High-quality multijuridsdictional park system	Parks and Trails	General goal	. Provide a balance of both active and passive recreational opportunities in a high-quality, multijurisdictional and private park system that responds to needs of both the community and visitors.					Trails		
K184	CP8	Ci-Carver Draft	Unique high quality resources	Parks and Trails	General action	Acquire area that has been identified as unique, high-quality resources that will allow for development of new parks and trails at the community park level or destination park level					Unique.Sensitive.high value		
K185	MP6	Ci-Carver SW	Carver downtown area discharges directly to Carver Creek, Spring Creek, and the Minnesota River without water quality treatment	Stormwater	Specific action	Add structural pollution control devices such as sumps, SAFL Baffles, tree boxes, pervious pavement to future reconstruction projects.				Y	Stormwater	CIPs.Projects	

K186	MP6	Ci-Carver SW	Carver downtown area discharges directly to Carver Creek, Spring Creek, and the Minnesota River without water quality treatment	Stormwater	Specific action	Construct water quality (infiltration/filtration) retrofit BMPs in downtown area where feasible.		Y	Stormwater	CIPs.Projects		
K187	MP6	Ci-Carver SW	Carver downtown area discharges directly to Carver Creek, Spring Creek, and the Minnesota River without water quality treatment	Stormwater	Specific action	Provide education to residents and businesses on proper lawncare practices and other good housekeeping practices		Y	Stormwater	CIPs.Projects		
K188	MP6	Ci-Carver SW	Channel degradation and instability in Spring Creek and Carver Creek near downtown Carver	Stormwater	Specific action	Restore and stabilize the degraded sections of these creeks upstream of 4th Street.		Y	Stormwater	CIPs.Projects		
K189	MP6	Ci-Carver SW	Stormwater runoff from the Lenzen's 1st and 2nd Additions discharges untreated to Spring Creek	Stormwater	Specific action	Retrofit structural treatment devices into existing storm sewer systems in these developments		Y	Stormwater	CIPs.Projects		
K19	CP1	Scott	Public Investment	Public Investment	General goal	To minimize public expenditures and promote efficiency	X					
K190	MP6	Ci-Carver SW	Gully erosion issue (LMRWD Gully Study) in the ravine north of 4th St. and Elm Dr. intersection is contributing sediment to Spring Creek	Stormwater	Specific action	Repair and stabilize the active gully erosion issues.		Y	Stormwater	Sediment.Erosion	Steep slopes	CIPs.Projects
K191	MP6	Ci-Carver SW	Gully erosion issue (LMRWD Gully Study) downstream of the northeast end of Diedrich Dr. is contributing sediment to Spring Creek	Stormwater	Specific action	Repair and stabilize the active gully erosion issues		Y	Stormwater	Sediment.Erosion	Steep slopes	CIPs.Projects
K192	MP6	Ci-Carver SW	Erosion issues in the ditch sections adjacent to 6th Street are contributing sediment to Spring Creek	Stormwater	Specific action	Stabilize existing ditch sections or replace with storm sewer conveyance		Y	Stormwater	Sediment.Erosion	CIPs.Projects	
K193	MP6	Ci-Carver SW	Erosion issues downstream of existing culvert under County Road 43	Stormwater	Specific action	When development occurs, construct a new discharge to Carver Creek to avoid the erosion area		Y	Stormwater	Sediment.Erosion	CIPs.Projects	
K194	MP6	Ci-Carver SW	Multiple gully erosion issues located on private property in City, as identified in LMRWD Gully Study	Stormwater	Specific action	Where gully erosion is located on private property, address specific issues as future development allows		Y	Stormwater	Sediment.Erosion	Steep slopes	CIPs.Projects
K195	MP6	Ci-Carver SW	Degraded wetlands within the study area, as identified in the 2002 Wetland Inventory and Assessment	Stormwater	Specific action	Restore priority wetlands identified as having medium or high restoration potential as development allows		Y	Stormwater	CIPs.Projects		
K196	MP6	Ci-Carver SW	Development activities occurring in areas beyond the City's trunk stormwater conveyance system	Stormwater	Specific action	Coordinate interim conveyance measures with the CCWMO to protect downstream properties. Construct the City's trunk conveyance system		Y	Stormwater	Development	CIPs.Projects	
K197	MP6	Ci-Carver SW	Provide adequate storage and conveyance of runoff and manage development in flood prone areas to protect the public safety and minimize property damage.	Floodplain Management	Specific policy	Maintain or increase existing flood storage volume below the 100-year flood elevation on all waterbodies in the City of Carver as opportunities become available, per the City's policy of "no net loss of flood storage capacity" in designated stormwater basin areas, floodplain, and wetlands.		Y	Stormwater	Flood	Development	
K198	MP6	Ci-Carver SW	Provide adequate storage and conveyance of runoff and manage development in flood prone areas to protect the public safety and minimize property damage.	Floodplain Management	Specific policy	Require on-site mitigation for a loss in existing flood storage volume below the 100-year flood elevation, unless the 100-year floodplain boundary is fully contained on-site.		Y	Flood	Development		
K199	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	As an MS4 community, the City has developed a Storm Water Pollution Prevention Plan (SWPPP) outlining many of the municipal BMPs and associated actions being taken by the City. The SWPPP is referenced here and contains additional information on many of the following topics			Sediment.Erosion			
K2	CP1	Scott	Shoreland and wetlands preservation and restoration	LAND USE AND GROWTH MANAG	General goal	The preservation, restoration, and enhancement of shoreland and wetland environments in their natural state shall be encouraged. Where desirable and practical, development which complements these features and that which is in conformance with federal, state, and local regulations shall be promoted. Reason: This is a federal and state policy supported by regulations. This Scott County 2040 Comprehensive Plan Chapter V - Land Use & Growth Management Adopted: June 18, 2019 Page V-33 reduces erosion caused by excessive storm water runoff, enhances the natural features of the environment, contributes to ground water recharge, and improves air quality			Sediment.Erosion			
K20	CP1	Scott	Resiliency	Resiliency	General goal	To build a resilient landscape			Vegetation			
K200	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	In the design and construction of new and redevelopment, treatment of stormwater runoff is required prior to discharge to a surface water or wetland. Treatment shall meet the requirements listed in the City Stormwater Design Standards, which is included in Appendix B. The City will continue to review and approve construction plans for conformance with the requirements of NPDES permitting.		Y	Stormwater	Sediment.Erosion		
K201	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	The City will administer the rules and regulations of the Lower Minnesota River Watershed District regarding water quality.			Sediment.Erosion			
K202	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	The City will rely on CCWMO to administer their rules and regulations regarding water quality and will require verification that District permit requirements are met.			Sediment.Erosion			
K203	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	The City will continually evaluate opportunities to reduce the phosphorus load to the area surface waters. Additionally, the City contributes runoff to multiple public waters currently on the State's 303(d) list of impaired waters for excessive nutrient concentrations. Therefore, the City will implement nutrient reduction BMPs as necessary to meet waste load allowances approved. Additional information regarding TMDL requirements and tracking can be found in the City's SWPPP, which can be obtained at City Hall		Y	Sediment.Erosion	Impaired.TMDL		
K204	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	The City will make water resource protection a priority for city property, including: parks, open space, and other recreational areas. Areas are swept as needed and buffer establishment or other retrofit treatment techniques may be incorporated into future projects within these areas, when feasible.			Sediment.Erosion			

K205	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	The City will continue to implement Best Management Practices (BMPs) on city-owned land as necessary to retain and prevent pollutants from leaving the site.			Sediment.Erosion			
K206	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	The City will disperse public education information to foster responsible water quality management practices by city residents and businesses. The public information will include proper lawn fertilizing and other lawn chemical use, disposal of lawn waste and solid, liquid, and household hazardous waste products, as well as many other surface water enhancement educational items.			Sediment.Erosion			
K207	MP6	Ci-Carver SW	To maintain or improve water quality of surface waters throughout the City by reducing sediment and nutrient loading.	Water Quality	Specific policy	If full compliance with the treatment by a stormwater treatment feature is not feasible for a new or re-development site, the City may require a cash dedication in lieu of treatment at the discretion of the City Engineer		Y	Stormwater	Sediment.Erosion		
K208	MP6	Ci-Carver SW	To minimize downstream impacts by maintaining peak runoff discharge rates and providing runoff volume reduction.	Water Quantity	Specific policy	In conformance with Carver County rules, extended detention must be provided for the runoff generated from the 2-year event for sites with direct discharges to streams. To demonstrate compliance with the extended detention requirement, calculations showing the 2-year storm discharge reduced by 50 percent of existing conditions shall be submitted.	X					
K209	MP6	Ci-Carver SW	To minimize downstream impacts by maintaining peak runoff discharge rates and providing runoff volume reduction.	Water Quantity	Specific policy	The City will review downstream stormwater-related impacts (within the community) of development proposals and proactively address water resource-related concerns.			Stormwater			
K21	CP1	Scott	Public Drainage	Public Drainage	General goal	To create and enable a long term vision for county ditches	X					
K210	MP6	Ci-Carver SW	To minimize downstream impacts by maintaining peak runoff discharge rates and providing runoff volume reduction.	Water Quantity	Specific policy	The City recognizes the potential environmental impacts associated with constructing new outlets to existing landlocked areas; therefore, the outletting to landlocked areas shall be done only as a last resort and shall be coordinated with the LMRWD and CCWMO.	X					
K211	MP6	Ci-Carver SW	To minimize downstream impacts by maintaining peak runoff discharge rates and providing runoff volume reduction.	Water Quantity	Specific policy	The design of new stormwater storage facilities will accommodate the 100-year storm event, providing the required freeboard and avoiding structure flooding. Storm sewers will be designed to pass the10-year rainfall event without the hydraulic grade line extending above the ground at any location, as long as downstream restrictions do not require a reduced-capacity design		Y	Stormwater	Flood		
K212	MP6	Ci-Carver SW	To minimize downstream impacts by maintaining peak runoff discharge rates and providing runoff volume reduction.	Water Quantity	Specific policy	The City will encourage the use of natural drainageways for conveying stormwater where the drainageway can accommodate or be improved to accommodate proposed flows and volumes.			Stormwater			
K213	MP6	Ci-Carver SW	To minimize downstream impacts by maintaining peak runoff discharge rates and providing runoff volume reduction.	Water Quantity	Specific policy	Enhanced infiltration practices will be encouraged, where feasible, in areas where the present or future land use does not have a significant potential to contaminate groundwater.			Groundwater			
K214	MP6	Ci-Carver SW	To minimize downstream impacts by maintaining peak runoff discharge rates and providing runoff volume reduction.	Water Quantity	Specific policy	The City encourages the reduction of impervious surfaces resulting from new and redevelopment projects. This policy will help preserve existing natural areas and reduce the total volume of runoff generated on a site, reducing the rate control burden on downstream regional detention basins.			Natural Resource Protection			
K215	MP6	Ci-Carver SW	To minimize downstream impacts by maintaining peak runoff discharge rates and providing runoff volume reduction.	Water Quantity	Specific policy	The City will seek to retrofit volume control BMPs into existing developed areas as opportunities arise and funding is available.	X					
K216	MP6	Ci-Carver SW	To prevent erosion and sedimentation to the maximum extent practical through construction site permitting, inspection and good municipal housekeeping.	Erosion and Sediment Control	Specific policy	The City will enforce the erosion and sediment control plan and best management practices on construction sites through the review and inspection process. Areas adjacent to water bodies and wetlands may require additional BMPs due to their environmental sensitivity			Sediment.Erosion			
K217	MP6	Ci-Carver SW	To prevent erosion and sedimentation to the maximum extent practical through construction site permitting, inspection and good municipal housekeeping.	Erosion and Sediment Control	Specific policy	The City will continue to sweep paved public streets as identified in the SWPPP. Areas with direct discharge into lakes, wetlands, and streams will be given priority and areas requiring additional attention will be swept more on an as-needed basis.			Sediment.Erosion			
K218	MP6	Ci-Carver SW	To protect wetland value and ensure conformance with the requirements of the Minnesota Wetlands Conservation Act (WCA), CCWMO & LMRWD Rules, and other State and Federal regulations	Wetlands	Specific policy	The City will notify parties proposing land disturbing activities (i.e.: altering, dredging, filling, and draining) to verify with CCWMO & LMRWD for their wetland protection rules requirements, as well as possible permit requirements from the MDNR and US Army Corps of Engineers (COE			Wetlands			
K219	MP6	Ci-Carver SW	To protect wetland value and ensure conformance with the requirements of the Minnesota Wetlands Conservation Act (WCA), CCWMO & LMRWD Rules, and other State and Federal regulations	Wetlands	Specific policy	The city contains wetland areas that are critical to stormwater drainage throughout the city. The city manages the wetlands as necessary to minimize the potential for structure flooding and maximize public safety. As such, the city must occasionally remove sediment buildup from wetlands and, as in the past, will work with the appropriate agencies on a case-by-case basis.		Y	Stormwater	Flood	Sediment.Erosion	
K22	CP1	Scott	Preserve wetlands	Wetland Management	Specific Action	Preserve Wetlands (no net loss) For Water Retention, Recharge, Soil Conservation, Wildlife Habitat, Aesthetics, and Natural Enhancement of Water Quality			Wetlands			
K220	MP6	Ci-Carver SW	To protect wetland value and ensure conformance with the requirements of the Minnesota Wetlands Conservation Act (WCA), CCWMO & LMRWD Rules, and other State and Federal regulations	Wetlands	Specific policy	The City will cooperate with interested private or governmental parties on wetland restoration projects and may participate in the State's wetland banking program.			Cooperation			
K221	MP6	Ci-Carver SW	To protect groundwater through prudent management of surface waters and areas of potential contamination.	Groundwater	Specific policy	The City will consider the significance of sensitive geologic areas when making land use decisions, when reviewing development proposals, or when proposing construction of stormwater facilities. Activities that may have significant contamination potential will be required to include groundwater protection measures.		Y	Unique.Sensitive.h	Stormwater	Groundwater	
K222	MP6	Ci-Carver SW	To protect groundwater through prudent management of surface waters and areas of potential contamination.	Groundwater	Specific policy	The City will encourage the use of infiltration methods to promote groundwater recharge where groundwater will not be significantly impacted by the land use or stormwater runoff		Y	Stormwater	Groundwater		

K223	MP6	Ci-Carver SW	To protect groundwater through prudent management of surface waters and areas of potential contamination.	Groundwater	Specific policy	The City defers to the Goals and Policies identified in Section 3H (Groundwater Management) in the 2010 Carver County Water Management Plan. Future Wellhead Protection Plans may identify the need for water quality treatment beyond the City's current standards in certain areas and will be addressed as these plans are completed.		Groundwater			
K224	MP6	Ci-Carver SW	Address target pollutants identified for impaired waters and those in TMDL studies to improve water quality	TMDL and impaired waters	Specific policy	While the City will allow other entities to continue to take the lead on developing TMDL studies, the City will engage the TMDL Report and TMDL Implementation Plan development processes as appropriate to improve water quality.		Impaired.TMDL			
K225	MP6	Ci-Carver SW	Address target pollutants identified for impaired waters and those in TMDL studies to improve water quality	TMDL and impaired waters	Specific policy	Coordinate TMDL implementation efforts with the CCWMO or LMRWD to maximize the efficiency and effectiveness of improvements		Impaired.TMDL			
K226	MP6	Ci-Carver SW	Address target pollutants identified for impaired waters and those in TMDL studies to improve water quality	TMDL and impaired waters	Specific policy	Enforce the City's development standards for construction site stormwater runoff control and post-construction stormwater management as development proceeds to minimize the transport of pollutant loads to impaired waters.	Y	Stormwater	Impaired.TMDL		
K227	MP6	Ci-Carver SW	Encourage development activities to incorporate conservation design approaches.	Conservation Design	Specific policy	The City is aware of the environmental benefits associated with LID and general natural area preservation and will work with development/redevelopment to implement these practices when feasible.a) Impervious area reduction b) Impervious area disconnection Prepared by: Bolton & Menk, Inc. Goals and Policies Surface Water Management Plan | C16.115530 Page 25 c) Decentralized stormwater management d) Street width reduction e) Rural street sections f) Reduced setbacks g) Ecological/pedestrian corridors h) Natural space preservation and incorporation into site design i) Site disturbance minimization j) Pervious pavement k) Green Roofs l) Increased stormwater abstraction (infiltration, filtration, irrigation reuse, etc.)	Y	Stormwater	Development	Low Impact Dev Corridors	
K228	MP6	Ci-Carver SW	Encourage development activities to incorporate conservation design approaches.	Conservation Design	Specific policy	As part of the City's commitment to incorporating Conservation Design practices into new and redevelopment projects, prior to a formal submittal of plans, the City will require a pre-application meeting to discuss how the project will incorporate Conservation Design practices into the site layout.		Development			
K229	MP6	Ci-Carver SW	Protect the City's wetlands, lakes, streams, groundwater, and natural areas to preserve the functions and values of these resources.	Impaired waters	Specific policy	The City is committed to protecting and restoring degraded stream sections in the City to enhance these valuable resources for the future. Three stream sections have been identified for rehabilitation: a) Spring Creek b) Carver Creek c) Timber Creek	Y	Groundwater	Impaired.TMDL		
K23	CP1	Scott	Protect Wetlands	Wetland Management	Specific Action	Protect Wetlands from Impacts Caused by Stormwater Runoff		Stormwater			
K230	MP6	Ci-Carver SW	Protect the City's wetlands, lakes, streams, groundwater, and natural areas to preserve the functions and values of these resources.	Wetlands	Specific policy	Development runoff that discharges directly to a wetland must meet the wetland management standards as identified in the 2002 Wetland Inventory and Assessment		Groundwater			
K231	MP6	Ci-Carver SW	Protect the City's wetlands, lakes, streams, groundwater, and natural areas to preserve the functions and values of these resources.	Wetlands	Specific policy	For development activities in areas outside the study area for the 2002 Wetland Inventory and Assessment, the developer will be responsible for classifying wetlands in accordance with City standards and the wetland standards in the 2002 Wetland Inventory and Assessment will apply		Groundwater			
K232	MP6	Ci-Carver SW	Protect the City's wetlands, lakes, streams, groundwater, and natural areas to preserve the functions and values of these resources.	Wetlands	Specific policy	The City will encourage its residents to retain existing wetlands, vegetation buffers, and open spaces for the benefit of wildlife habitat		Groundwater			
K233	MP6	Ci-Carver SW	Provide educational and outreach opportunities for City residents and business owners, elected officials, City staff, and the development community that address stormwater management and water quality	Public Investment	Specific policy	The City is committed to partnering with the CCWMO and LMRWD to offer stormwater related public education and outreach activities in Carver.	Y	Stormwater	Development		
K234	MP6	Ci-Carver SW	Provide educational and outreach opportunities for City residents and business owners, elected officials, City staff, and the development community that address stormwater management and water quality	Public Investment	Specific policy	The City will continue to promote best management practices for its residents. Public education will include topics such as: fertilizer use and the limited need for phosphorus in fertilizer; lawn care and lawn chemical use; solid, liquid and household hazardous waste disposal; illicit discharge detection; and natural water resource systems and protection methods	Y	Stormwater	Public engagement. Development		
K235	MP6	Ci-Carver SW	Provide educational and outreach opportunities for City residents and business owners, elected officials, City staff, and the development community that address stormwater management and water quality	Public Investment	Specific policy	The City will continue to present information to all City staff, especially those in the Public Works and Parks Departments, regarding the City's stormwater management initiatives/efforts and how they can help the City implement the policies outlined in this SWMP.	Y	Stormwater	Public engagement. Development		
K236	MP6	Ci-Carver SW	Stormwater education of City staff and officials	Stormwater and Public Investmen	Specific action	Carver County WMO presentation – every 2-3 years, the City will invite Carver County WMO staff to a special meeting to educate City staff and elected officials on water resources issues with the County.		Stormwater			
K237	MP6	Ci-Carver SW	Stormwater education of City staff and officials	Stormwater and Public Investmen	Specific action	Staff training – this City will conduct regular training for new/seasonal staff and on-going staff as is relevant to their job responsibilities. This training could include general all staff training sessions, staff specific training sessions, and the distribution of training materials to staff.		Stormwater			
K238	MP6	Ci-Carver SW	Stormwater education of City staff and officials	Stormwater and Public Investmen	Specific action	Updates to the City's SWMP are presented to both the Planning Commission and City Council prior to adoption of the SWMP. This presentation covers the framework of the plan, plan contents, and the updates to the plan, and would occur on an as-needed basis.		Stormwater			
K239	MP6	Ci-Carver SW	Stormwater education of City staff and officials	Stormwater and Public Investmen	Specific action	Periodic stormwater related presentations and training materials – As relevant stormwater related topics emerge (e.g. NOAA Atlas 14, MS4 Permit, Carver County Rule Updates, etc.), the City will take the appropriate measures (e.g. presentations, internal memos, etc.) to educate City staff and elected officials.		Stormwater			
K24	CP1	Scott	Restore Wetlands	Wetland Management	Specific Action	Enhance and Restore Wetlands		Wetlands			

K240	MP6	Ci-Carver SW	Stormwater education of Residents and Buisnesses	Stormwater and Public Investmen	Specific action	Annual stormwater public meeting – this meeting provides an opportunity for residents and business owners to hear about the City's efforts to implement our stormwater program. This meeting also provides an opportunity for residents and business owners to provide feedback and input on the City's stormwater program.					Y	Stormwater	Public engagement.education		
K241	MP6	Ci-Carver SW	Stormwater education of Residents and Buisnesses	Stormwater and Public Investmen	Specific action	Regular stormwater related publications – include stormwater related information in a minimum of 4 City publications (City newsletter, utility billing mailings, etc.) annually. The content will be derived from both internal City sources and partnerships with other entities, such as the CCWMO or LMRWD						Stormwater			
K242	MP6	Ci-Carver SW	Stormwater education of Residents and Buisnesses	Stormwater and Public Investmen	Specific action	Coordination with CCWMO – starting in 2019, the City will seek to formalize an agreement to coordinate public education activities with CCWMO's Education Coordinator, based on the City's available budget						Stormwater			
K243	MP6	Ci-Carver SW	Stormwater education of Residents and Buisnesses	Stormwater and Public Investmen	Specific action	Social media communications – use the City's social media outlets (City blog, Facebook, and Twitter) to notice upcoming stormwater related events, highlight stormwater related happenings in the area, or provide stormwater related educational materials. The City aims for a minimum of 4 stormwater related communications per year via the City's social media outlets						Stormwater			
K244	MP6	Ci-Carver SW	Stormwater education of Residents and Buisnesses	Stormwater and Public Investmen	Specific action	Annual Spring cleanup day – City-wide annual curbside cleanup day accepting mixed solid waste and yard waste						Stormwater			
K245	MP6	Ci-Carver SW	Stormwater education of Developers	Stormwater and Public Investmen	Specific action	Pre-application meeting – The initial guidance related to stormwater mitigation efforts will be provided at the pre-application meeting with developers (see Policy 28). This meeting provides an opportunity to discuss how the project will incorporate Conservation Design practices into the site layout. The City is committed to working with developers to incorporate suitable Conservation Design techniques into site layouts.					Y	Stormwater	Development		
K246	MP6	Ci-Carver SW	Stormwater education of Developers	Stormwater and Public Investmen	Specific action	Plan review process – Throughout the plan review process, the City is in communication with developers regarding the implementation of the City's stormwater related policies, stormwater system maintenance requirements, and general site layouts that promote water quality					Y	Stormwater	Development		
K247	MP6	Ci-Carver SW	6th St Drainage Study	Stormwater	CIP	Study best management practices that can be incorporated to provide water quality while managing increasing flow rates 2020 $650,000		2020	$650,000		Y	Stormwater	CIPs.Projects		
K248	MP6	Ci-Carver SW	Ravine stabilization – 4th St & Elm Drive	Stormwater	CIP	Repair and stabilize the active gully erosion at this location 2020 $250,000		2020	$250,000		Y	Stormwater	Sediment.Erosion	Steep slopes	CIPs.Projects
K249	MP6	Ci-Carver SW	Diedrich Dr & Kirche Hill Dr. Stormwater Improvements	Stormwater	CIP	Include structural BMPs including sumps, SAFL Baffle, etc. in the proposed storm sewer system. 2019 $25,000		2019	$25,000		Y	Stormwater	CIPs.Projects		
K25	CP1	Scott	Sustainable infrastructure	Surface Water Quality	Specific Action	Promote a Sustainable Systems of Buffers and Green Infrastructure						Open and Green			
K250	MP6	Ci-Carver SW	Downtown Water Quality Improvements	Stormwater	CIP	Continue to install structural BMPs such as sumps, SAFL Baffle, etc. as reconstruction projects occur TBD TBD	TBD		TBD		Y	Stormwater	CIPs.Projects		
K251	MP6	Ci-Carver SW	Spring, Carver, and Timber Creeks stream bank stabilization	Stormwater	CIP	As stream rehabilitation funds become available, restore and stabilize selected sections of Spring, Carver, and Timber Creeks. TBD TBD	TBD		TBd		Y	Stormwater	CIPs.Projects		
K252	MP6	Ci-Carver SW	6 th Street Railroad Embankment Drainage Improvements	Stormwater	CIP	Restore functionality of outlet serving upstream drainage area 2019 $100,000		2019	$100,000		Y	Stormwater	CIPs.Projects		
K253	MP6	Ci-Carver SW	Community Park Drainage Improvements	Stormwater	CIP	Add BMPs to provide water quality and quantity improvements. TBD TBD	TBD		TBD		Y	Stormwater	CIPs.Projects		
K254	MP6	Ci-Carver SW	Old Carver Road Stormwater Basin	Stormwater	CIP	Construct Stormwater Basin on Parcel #: 02393762, Provide water quality for Mount Hope Road Storm Sewer System TBD $200,000	TBD		$200,000		Y	Stormwater	CIPs.Projects		
K255	MP6	Ci-Carver SW	Carver Creek Impairment	TMDL and impaired waters	TMDL	Carver Creek TMDL Fecal Coliform - Aquatic Recreation impairment Approved 2007; Turbidity - Aquatic Life impairment approved 2012; Nutrient / Eutrophication - Aquatic Life impairment No approval						Impaired.TMDL			
K256	MP6	Ci-Carver SW	Spring Creek Impairment	TMDL and impaired waters	TMDL	Unnamed Creek (Spring Creek) Fecal Coliform - Aquatic Recreation impairment No approval						Impaired.TMDL			
K257	MP6	Ci-Carver SW	Minnesota River (Bevens Creek to Sand Creek) Impairment	TMDL and impaired waters	TMDL	Minnesota River (Bevens Creek to Sand Creek) Turbidity- Aquatic Life impairment; Mercury in Water Column - Aquatic Consumption impairment approved 2008; Mercury in Fish Tissue - Aquatic Consumption impairment approved 2008; PCB in Fish Tissue - Aquatic Consumption impairment No approval; Fecal Coliform - Aquatic Recreation impairment No approval						Impaired.TMDL			
K258	MP6	Ci-Carver SW	Minnesota River (Sand Creek to Carver Creek) Impairment	TMDL and impaired waters	TMDL	Minnesota River (Sand Creek to Carver Creek) Mercury in Water Column - Aquatic Consumption impairment approved 2008; Mercury in Fish Tissue - Aquatic Consumption impairment approved 2008; PCB in Fish Tissue - Aquatic Consumption impairment No approval;						Impaired.TMDL			
K259	MP6	Ci-Carver SW	Minnesota River (Carver Creek to RM 22) Impairment	TMDL and impaired waters	TMDL	Minnesota River (Carver Creek to RM 22) Turbidity- Aquatic Life impairment; Mercury in Water Column - Aquatic Consumption impairment approved 2008; Mercury in Fish Tissue - Aquatic Consumption impairment approved 2008; PCB in Fish Tissue - Aquatic Consumption impairment No approval;						Impaired.TMDL			
K26	CP1	Scott	Prevent degradation	Surface Water Quality	Specific Action	Prevent Further Degradation				X					
K260	CP6	Ci-Chaska	Carver Creek Turbidity TMDL	TMDL and impaired waters	TMDL	Carver Creek Turbidity Implementation Plan – This implementation plan states the following: "Comparing [the current MS4 TSS Loadings – TMDL Implementation Plan Table 3.2] to allowable loadings ([TMDL Implementation Plan] Table 2.2) indicates that no reductions appear to be needed from MS4 areas. The regulated MS4 communities will need to maintain at least the existing level of treatment of their stormwater discharges to ensure continued compliance with the conditions of the MS4 general permit. At the time of permit application, permittees will indicate that a WLA was assigned to them in this TMDL project, they are currently meeting that WLA since no reductions were called for, and they will continue to maintain the current BMPs on the landscape to ensure compliance with their permit."					Y	Stormwater	Impaired.TMDL		
K261	CP6	Ci-Chaska	Natural resource protection	Natural Resources	General goal	Natural resources, open spaces, parks, and trails are improved and protected, and environmental preservation is a commitment.						Open and Green			
K262	CP6	Ci-Chaska	Natural resource preservation	Resource Preservation	General policy	The City's significant natural and environmental resources shall be preserved for their functional value as well as their positive aesthetic impact upon proximate urban development.						Natural Resource Protection			

K263	CP6	Ci-Chaska	Vital natural reource protection from development	Development	General policy	Prohibit new development from encroaching upon vital natural resources such as wetlands, wooded steep slopes, bluffs/ravines, drainage ways and floodplains,			Y	Flood	Development	Steep slopes	
K264	CP6	Ci-Chaska	Development designed to be sensitive to environment	Development	General policy	Encourage new developments to capitalize upon the positive influence of Chaska's significant natural environment. Development that is designed with sensitivity to the environment will provide quality living areas while also preserving natural and environmental resources			Y	Unique.Sensitive.h	Development		
K265	CP6	Ci-Chaska	Preserve natural features	Development	General policy	New urban development shall use the Environmental Features Map (FIGURE 3.7), where appropriate, as a basis for preserving significant natural and environmental features.				Development			
K266	CP6	Ci-Chaska	Floodplain regulations	Floodplain Management	General policy	Existing floodplain regulations applicable to the Minnesota River and East and West Chaska Creeks shall be aggressively enforced.				Flood			
K267	CP6	Ci-Chaska	Natural drainage of East and West Chaska Creeks	Floodplain Management	General policy	The natural drainage systems consisting primarily of the East and West Chaska Creeks and their tributaries shall be preserved and protected for their functional values as drainageways and wildlife movement corridors.			Y	Flood	Corridors		
K268	CP6	Ci-Chaska	Valleys and Ravines	Floodplain Management	General policy	Valleys and ravines formed by the drainage system shall be preserved in their natural state for functional and ecological reasons as well as for their aesthetic value			Y	Flood	Steep slopes		
K269	CP6	Ci-Chaska	Urbanization run-off	Floodplain Management	General policy	As urbanization occurs within the various drainage areas, stormwater run-off retention facilities shall be provided so that the normal run-off rate from undeveloped land is not increased. Without such retention ponds or basins, creek flowage would be substantially increased, causing severe erosion and flood damage safety problems, and water quality is degraded.			Y	Stormwater	Flood	Sediment.Erosion	
K27	CP1	Scott	Impaired waters	Surface Water Quality	Specific Action	Address Impaired Waters and Improve Water Quality				Impaired.TMDL			
K270	CP6	Ci-Chaska	Wetland value	Lakes and Wetlands	General policy	Lakes and wetlands are part of the natural ecosystem that provide areas for water retention, natural filtering of stormwater runoff, and natural habitats for plant and animal wildlife. If properly maintained, they can also provide important educational and recreational assets, conserve the natural beauty of the landscape, and enhance property values.				Stormwater			
K271	CP6	Ci-Chaska	Part of the cities storm water drainage system	Lakes and Wetlands	General policy	Lakes and wetlands shall be considered an integral part of the City's storm water drainage system. Alteration for ponding purposes may potentially occur but should be accomplished in such a manner that wildlife habitat is preserved or strengthened				Wetlands			
K272	CP6	Ci-Chaska	Protection from urbanization	Lakes and Wetlands	General policy	When areas in proximity to regulated lakes and wetlands are proposed for urbanization, detailed site plans shall be required to demonstrate how the resource will be protected from potential negative effects from urban development.				Wetlands			
K273	CP6	Ci-Chaska	Wise use of shoreland	Shoreland	General policy	The City of Chaska recognizes that it is in the best interest of the public health, safety, and welfare to provide for the wise use, subdivision, and development of shorelands of public waters, which are designated on the Minnesota Public Water Inventory (PWI)	X						
K274	CP6	Ci-Chaska	shoreland management regulations	Shoreland	General policy	The City of Chaska will continue to work closely with DNR officials to update and enforce shoreland management regulations as required.	X						
K275	CP6	Ci-Chaska	Slopes greater than 18%	Wooded steep slopes and Erosion	General policy	Wooded land with an 18 percent slope or greater shall be preserved in its natural state for environmental value, particularly to deter soil erosion on the steep slopes and protect natural wildlife habitat areas. In addition, buildings and parking shall be set back at least 50 feet from the edge of the 18 percent slope and a 30-foot "no-grade/mow" zone provided for adjacent to the edge of the 18 percent slope for purposes of erosion control.			Y	Sediment.Erosion	Steep slopes		
K276	CP6	Ci-Chaska	Woodlands Preserved	Woodlands	General policy	Where possible, woodland areas of less than 18 percent slope shall be preserved for their ecological, historic, and aesthetic value. Where urbanization does occur within such upland wooded areas, it should be sensitively designed by use of large lots, cluster development, etc. so that the overall woodland effect is preserved.				Unique.Sensitive.high value			
K277	CP6	Ci-Chaska	Minimizing negative impacts	Woodlands	General policy	Detailed site plans shall be required for areas within or proximate to woodlands to ensure that potential negative impacts are minimized.	X						
K278	CP6	Ci-Chaska	Preserve rural and free standing community	Land Use	Specific goal	A permanent Chaska Greenbelt shall be established around the edges of the City to the extent possible to physically and visually separate Chaska from adjacent communities.				Open and Green			
K279	CP6	Ci-Chaska	Natural resource systems protection from development	Land Use	General policy	The protection of natural resource systems and open spaces in the southwest Chaska growth area will be an important land use strategy. Future development planning within the area must include the identification, prioritization, and protection of natural resource systems and open spaces, using the Environmental Features Map (Figure 3.7) and Southwest Chaska Growth & Development Plan as the basis for open space preservation. Protected wildlife corridors should have a general minimum width of 150 feet. Public access to these natural resource systems and open spaces is required.			Y	Development	Corridors		
K28	CP1	Scott	Improve understanding	Surface Water Quality	Specific Action	Improve Understanding of Water Quality	X						
K280	CP6	Ci-Chaska	Greenbelt resource protection	Land Use	General policy	The open space and natural resources systems of the area are identified, prioritized, and protected, using the Environmental Features Map (FIGURE 3.7) as the basis for open space preservation. Public access to these systems is required.				Open and Green			
K281	CP6	Ci-Chaska	Trail system connection	Land Use	Specific policy	Connect to the regional trail system including the planned Southwest Regional Trail along Creek Road, the planned Minnesota River Bluffs LRT Regional Trail Extension into Carver, and the County Road 10 Regional Trail Search Corridor.			Y	Increase River Use	Trails		
K282	CP6	Ci-Chaska	Open space preservation	Open space land uses	General goal	Preservation of an extensive open space network that protects and connects Chaska's abundant and diverse natural resource features.				Open and Green			
K283	CP6	Ci-Chaska	East and West Chaska drainageway system preservation	Open space land uses	Specific policy	The remaining portions of the East Chaska Creek drainageway system that are not currently owned or controlled by the City of Chaska and the portions of the West Chaska Creek drainageway system in Chaska should be preserved for their functional and amenity values through development regulations and conservation/scenic easements obtained at the time of development				High value easements			

K284	CP6	Ci-Chaska	Urban development near drainageways	Open space land uses	General policy	The planning of urban development in the vicinity of the creek drainageway systems should promote the positive influence of that system to be extended outward to the maximum extent possible		Development			
K285	CP6	Ci-Chaska	Bluff Creek Corridor preservation	Open space land uses	Specific policy	The City of Chaska recognizes the Bluff Creek Watershed Natural Resources Management Plan (1996) and the Bluff Creek Overlay District (1998), which were prepared and adopted by the City of Chanhassen, as means to preserve the Bluff Creek Corridor. The intent of this plan and overlay district is to preserve this natural resource corridor through protection of significant natural resources and environmentally sensitive development.	Y	Unique.Sensitive.h	Corridors		
K286	CP6	Ci-Chaska	Southwest Chaska growth area	Open space land uses	General policy	Preserve the natural resources of the southwest Chaska growth area, including the West Chaska Creek drainageway system, wooded steep slopes, wetlands, remnant "Big Woods" and other significant wooded areas, as part of the community's creek/ravine open space system.		Steep slopes			
K287	CP6	Ci-Chaska	Connect Minnesota River Valley open space	Open space land uses	Specific policy	Enhance, expand and better connect the Minnesota River Valley open space amenities by developing collaborative relationships with the organizations and visitors associated with the Minnesota Valley National Wildlife Refuge and the Minnesota Valley State Recreation Area, such as the USFWS, MN DNR, and Friends of the Minnesota Valley.	Y	Cooperation	Increase River Use		
K288	CP6	Ci-Chaska	Connections to MN Landscape Arboretum	Open space land uses	Specific policy	Expand connections between Chaska's open space network and the MN Landscape Arboretum through a collaborative relationship between the City, Arboretum, and adjacent property owners		Cooperation			
K289	CP6	Ci-Chaska	Connect to regional trails	Parks and Trails	General policy	Chaska shall plan for the connection of regional trails with the City's trail system; however, the use of the connecting regional and community trails should be compatible. For example, regional agencies should not indicate a snowmobile trail leading to the City limits if snowmobiles are not permitted in that part of the City.		Trails			
K29	CP1	Scott	Cooridnate with others	Surface Water Quality	Specific Action	Coordinate with other agencies and water quality programs		Cooperation			
K290	CP6	Ci-Chaska	Partner with other agencies	Parks and Trails	General policy	Chaska shall partner with, support, and encourage State, County, and other agencies in developing trail connections within and to Chaska.		Cooperation			
K291	CP6	Ci-Chaska	Trails through open space in Greenbelt	Parks and Trails	General policy	Chaska shall provide trails through natural open space corridors and trailhead facilities in the Chaska Greenbelt to enable public access to natural resource corridors within the Greenbelt, at such time that these areas develop with residential conservation/cluster development.	Y	Corridors	Trails		
K292	CP6	Ci-Chaska		Parks and Trails	General goal	Chaska's parks and open spaces contain natural resource areas that are protected and conserved for the purposes of wildlife habitat, ecological function, environmental services, and aesthetic interest.		Open and Green			
K293	CP6	Ci-Chaska	Protect Cummunity Linear Park/Ravine system	Parks and Trails	Specific policy	Chaska shall preserve and protect the existing and future Community Linear Park/Ravine system in its natural state. It is not essential to own the ravine and attendant wetland system and bluff areas in order to protect them. The City shall use conservation/scenic easements and environmental ordinances are effective preservation devices.	Y	High value easeme	Steep slopes		
K294	CP6	Ci-Chaska	Minnesota Valley State Recreation Area and Trail within the lower Minnesota River Valley	Parks and Trails	Specific policy	Chaska shall support preservation of and connections to the Minnesota Valley State Recreation Area and Trail within the lower Minnesota River Valley	Y	Natural Resource F	Trails		
K295	CP6	Ci-Chaska	Chaska Lake Unit	Parks and Trails	Specific policy	Chaska shall support preservation of and connections to the Chaska Lake Unit of the Minnesota Valley National Wildlife Refuge	Y	Natural Resource F	Trails		
K296	CP6	Ci-Chaska	City's trail system	Parks and Trails	Specific policy	Chaska shall ensure that the City's trail system is connected to the Regional, State and Federal trail systems		Trails			
K297	CP6	Ci-Chaska	Completion Community Linear Park System trails	Parks and Trails	Specific policy	Chaska shall complete the trail system throughout the Community Linear Park System through the acquisition of additional right-of-way outright or by easement. The types of pathways and attendant development, such as rest areas and signs, should be complementary to the desired natural setting.		High value easements			
K298	CP6	Ci-Chaska	Partner to establish roles for a regional TC & W Railroad corridor	Parks and Trails	Specific action	Partner with Carver County, Metro Council and local communities to establish agreed upon roles and responsibilities for planning, designing, funding, developing and maintaining a potential regional trail in the TC & W Railroad corridor		Trails			
K299	CP6	Ci-Chaska	Carver County 2040 Tail and Bikeway System Plan	Parks and Trails	Specific action	Support Carver County's development of the Carver County 2040 Trail and Bikeway System Plan by establishing agreed upon roles and responsibilities with Carver County in planning, designing, funding, developing and maintaining the identified linking trail and bikeway corridors in the County's Plan.		Trails			
K3	CP1	Scott	Provide Density bonuses for preserving natural features in development	LAND USE AND GROWTH MANAG	General goal	Instead of the County's traditional development controls (i.e., zoning, land subdivision regulations), encourage a planned unit development (PUD) track that could include density bonuses in exchange for public values such as preserving, protecting, or enhancing natural features. Reason: Providing a more collaborative and public values-driven approach allows for more creativity in the development process and holds greater promise for win-win outcomes for the public and the developer.	Y	Development	Low Impact Devel	Cooperation	
K30	CP1	Scott	Source protection	Surface Water Quality	Specific Action	Promote Source Protection		Natural Resource Protection			
K300	CP6	Ci-Chaska	MN DNR's Minnesota Valley State Trail	Parks and Trails	Specific action	Chaska shall support continued improvements to the MN DNR's Minnesota Valley State Trail on the south side of the Minnesota River, including safe and convenient connections to the T.H. 41 bridge trail for pedestrians and bicyclists		Increase River Use			
K301	CP6	Ci-Chaska	Southwest Region Trail	Parks and Trails	Specific action	Partner with the City of Victoria, Carver County, and Metro Council to develop the Southwest Regional Trail, thereby connecting Carver Regional Park Reserve to the Minnesota Valley State Trail and completing a loop regional trail system connecting Hopkins, Victoria and Chaska.		Cooperation			
K302	CP6	Ci-Chaska	Met Council's Regional Trail Corridors	Parks and Trails	Specific action	Work with local agencies and partners to complete the proposed Regional Trail Corridors, which are identified in the Metropolitan Council's 2040 Regional Parks Policy Plan, and include the following: • Minnesota River Bluffs LRT Regional Trail • Southwest Regional Trail • Twin Cities & Western Railroad Regional Trail • County Road 10 Regional Trail Search Corridor	Y	Increase River Use	Trails		

K303	CP6	Ci-Chaska	Carver County Bikeways/Linking Trails	Parks and Trails	Specific action	Work with Carver County to build the proposed Carver County Bikeways/Linking Trails, which are identified in the Carver County 2040 Trail and Bikeway System Plan, include the following: • County Road 18 Corridor • Highway 41 Corridor • County Road 11 Corridor • County Road 10 Corridor 9 (west of Clover Ridge Drive) • County Road 61 Trail • Highway 101 Trail				Trails		
K304	CP9	Ci-Eden Prairie	Convert turf grass to native	Stormwater	Specific action	Support the conversion of turf grass into native planting areas and low-mow grass areas on City properties and throughout the community as stormwater mitigation areas and pollinator habitats.				Stormwater		
K305	CP9	Ci-Eden Prairie	Analyze all available land against opportunities for conservation versus buildable development.	Parks and Open spaces	General action	Continue preserving watercourses and wetlands to protect sensitive ecosystems, maintain clean and healthy lakes, improve overall environmental quality, and beautify the community.			Y	Unique.Sensitive.h	Development	
K306	CP9	Ci-Eden Prairie	Analyze all available land against opportunities for conservation versus buildable development.	Parks and Open spaces	General action	Encourage development that provides reserves and manages natural resource amenities that are viable and sustainable.			Y	Development	Low Impact Devel	
K307	CP9	Ci-Eden Prairie	Analyze all available land against opportunities for conservation versus buildable development.	Parks and Open spaces	General action	Update and practice a program of resource management for public conservation and resource areas.				Development		
K308	CP9	Ci-Eden Prairie	Search Corridor	Regional Trails	Specific area	Highway 101 and Bryant Lake Regional Trail. Stretching nine miles, the Highway 101 Regional Trail Search Corridor connects Lake Minnetonka LRT Regional Trail, Twin Cities & Western Regional Trail Search Corridor, and Minnesota River Blufs LRT Regional Trail.			Y	Increase River Use	Trails	
K309	CP9	Ci-Eden Prairie	Search Corridor	Regional Trails	Specific area	20-mile Bryant Lake Regional Trail Search Corridor connects Medicine Lake Regional Trail, French Regional Park, Luce Line Regional Trail, Lake Minnetonka LRT Regional Trail, Minnesota River Blufs LRT Regional Trail, Bryant Lake Regional Park, and County Road 61 Regional Trail Search Corridor in Chanhassen.			Y	Increase River Use	Trails	
K31	CP1	Scott	Protect Groundwater Quality and Supplies	Groundwater Management	Specific Action	Preserve and protect groundwater quality and quantity				Groundwater		
K310	CP9	Ci-Eden Prairie	Environmentally sensitive areas	Conservation Areas	General action	the City will continue to acquire environmentally sensitive areas, such as slopes, wetlands, and foodplains, for conservation as appropriate				Unique.Sensitive.high value		
K311	CP9	Ci-Eden Prairie	Floodplain Areas	Conservation Areas	General action	The City will continue working with the U.S. Fish and Wildlife Service to acquire the foodplain within the Minnesota River Valley to expand the Minnesota Valley National Wildlife Refuge				Flood		
K312	CP9	Ci-Eden Prairie	Wooded slopes	Conservation Areas	General action	The City also encourages the preservation of permanent open space on wooded slopes of creek valleys through scenic easements or public ownership.				High value easements		
K313	CP9	Ci-Eden Prairie	Storm water quality	Storm water	CIP	Storm Water Quality Improvement Projects Revenue $3,700,000 10 years	10 years	$3,700,000	Y	Stormwater	CIPs.Projects	
K314	CP9	Ci-Eden Prairie	Creek and River Corridor	Restoration	CIP	Creek and River Corridor Restoration Projects Revenue $2,830,000 10 years	10 years	$2,830,000	Y	Corridors	CIPs.Projects	
K315	CP10	Ci-Chanhassen	Development outside MUSA	Land Use	General policy	Areas outside the MUSA shall be preserved as agricultural zones or used to support very low-density development. This area should not be prematurely developed, and the city will discourage the creation and/or expansion of commercial and industrial facilities in this area.				Development		
K316	CP10	Ci-Chanhassen	Importance of natural environment	Resource Preservation	General goal	The city recognizes the importance of its natural environment to the quality of life for its citizens and the need to protect and enhance these resources.				Natural Resource Protection		
K317	CP10	Ci-Chanhassen	Slopes	Resource Preservation	General policy	Preserve natural slopes wherever possible.				Natural Resource Protection		
K318	CP10	Ci-Chanhassen	Natural area connection	Resource Preservation	General policy	Seek to connect natural areas whenever possible.				Corridors		
K319	CP10	Ci-Chanhassen	Preserve natural features	Resource Preservation	General policy	Preserve wooded areas, plant communities and native habitat whenever possible.				Vegetation		
K32	CP1	Scott	Improve understanding	Groundwater Management	Specific Action	Improve Understanding of Groundwater Resources				Groundwater		
K320	CP10	Ci-Chanhassen	Education	Public Involvement	General goal	Provide information and educational resources to improve knowledge and promote an active public role in the management of natural resources.				Public engagement.education		
K321	CP10	Ci-Chanhassen	Invasive species	Public Involvement	Specific policy	Identify and provide information on invasive species on public and private lands. Revise city ordinance to include non-herbaceous and/or non-terrestrial invasive species as identified by the State.			Y	Invasives	Public engagement.education	
K322	CP10	Ci-Chanhassen	Water quality	Public Involvement	Specific policy	Establish and implement ongoing programs designed to educate landowners in sensitive water quality management practices and develop and maintain a public education program to promote the reduction of nutrient and sediment loading into water bodies			Y	Unique.Sensitive.h	Public engagement.	Sediment.Erosion
K323	CP10	Ci-Chanhassen	Yard practices	Public Involvement	Specific policy	Encourage residents and landowners to practice environmentally friendly lawn care and housekeeping practices, and to use native plantings or natural landscapes rather than turf lawns, where appropriate. Encourage the reduction in irrigation use. Promote the City of Chanhassen's Water Wise Program.				Public engagement.education		
K324	CP10	Ci-Chanhassen	Public input	Public Involvement	Specific policy	Continue to provide opportunities for public involvement (e.g., neighborhood meetings, public hearings, mailed notices, etc.) for significant water and natural resource decisions or projects.				Public engagement.education		
K325	CP10	Ci-Chanhassen	Coordination with other city entities	Public Involvement	Specific policy	Coordinate and consult with the City Council and appropriate city commissions and committees on surface water and forestry issues.				Public engagement.education		
K326	CP10	Ci-Chanhassen	Natural resource educational programs	Public Involvement	Specific policy	Actively implement the current educational programs and work to develop and implement new education programs and activities related to natural resources. These programs will use a variety of media including use of notices, mailings, local cable television, newsletters, articles, websites, social media, workshops and/or presentations to inform and educate the public.				Public engagement.education		
K327	CP10	Ci-Chanhassen	model interpretative sites	Public Involvement	Specific policy	Cooperate with the other agencies and encourage the establishment of model interpretative sites for public education.			Y	Public engagement	Cooperation	
K328	CP10	Ci-Chanhassen	minimize erosion	Erosion and Sediment Control	General goal	Minimize soil erosion and sedimentation.				Sediment.Erosion		
K329	CP10	Ci-Chanhassen	Implement policies and programs	Erosion and Sediment Control	General policy	Continue to implement the erosion and sediment control policies and the construction site inspection program to ensure reduction of water quality impacts from lack of erosion and sediment control.				Sediment.Erosion		
K33	CP1	Scott	Minimize Flooding	Flood Management	Specific Action	Minimize flooding risk for and from, new and re-development, by regulating: 1) activities in the floodplain, 2) placement of structures in flood prone areas, and 3) the loss of floodplain capacity				Flood		
K330	CP10	Ci-Chanhassen	Minimize disturbances	Erosion and Sediment Control	General policy	Minimize disturbances to existing vegetation (trees, turf grass, native vegetation, etc.).				Sediment.Erosion		

K331	CP10	Ci-Chanhassen		Resource Preservation	General goal	Preserve and protect a variety of natural environments.			Natural Resource Protection		
K332	CP10	Ci-Chanhassen	Bluff Creek Natural Resource Plan	Resource Preservation	Specific policy	Continue to work with the Riley-Purgatory-Bluff Creek Watershed District in implementing the Bluff Creek Natural Resource Plan. Use the plan to guide future development in protecting natural resources in the Creek corridor.			Corridors		
K333	CP10	Ci-Chanhassen	Connect greenways	Resource Preservation	Specific policy	Seek to connect greenways throughout the city. Identify possible connections that can be made at the time of development.			Corridors		
K334	CP10	Ci-Chanhassen	Urban forest	Resource Preservation	General goal	Maintain a healthy and diverse urban forest.			Vegetation		
K335	CP10	Ci-Chanhassen	Use of proper management techniques	Resource Preservation	General goal	Restore, protect and improve natural communities through proper management techniques.			Natural Resource Protection		
K336	CP10	Ci-Chanhassen	Wooded areas	Resource Preservation	Specific policy	Identify significant wooded areas to protect. Preserve areas by means of development restrictions, density transfers, preservation easements, purchase or other methods.			High value easements		
K337	CP10	Ci-Chanhassen	Public natural areas	Resource Restoration	Specific policy	Develop Natural Resources Stewardship Plan that would identify, prioritize and recommend restoration and management strategies for all public natural areas			Natural Resource Protection		
K338	CP10	Ci-Chanhassen	Preserve existing natural features	Resource Preservation	Specific policy	Preserve existing landscape features, such as pond plants, standing dead trees and downed trees, in natural communities.			Vegetation		
K339	CP10	Ci-Chanhassen	Endangered species and pollinator habitat	Resource Preservation	Specific policy	Protect areas identified as endangered species habitat. Increase public land areas for pollinator habitat.			Natural Resource Protection		
K34	CP1	Scott	Prevent increases in flooding	Flood Management	Specific Action	Manage new development and drainage alterations to prevent increases in flood flows and downstream impacts			Flood		
K340	CP10	Ci-Chanhassen	resiliency planning	Climate Change	General goal	Encourage resiliency planning that mitigates and adapts to climate changes	X				
K341	CP10	Ci-Chanhassen	Best management strategies	Climate Change	Specific policy	Develop Best Management Strategies to help plan for weather-related impacts to our community.	X				
K342	CP10	Ci-Chanhassen	GreenStep city	Climate Change	Specific policy	Become certified as a GreenStep City			Open and Green		
K343	CP10	Ci-Chanhassen		Parks and Open spaces	General goal	Maintain a comprehensive and easily navigable trail and sidewalk system that connects neighborhoods to park and recreation facilities, schools, community destinations and other communities.			Trails		
K344	CP10	Ci-Chanhassen	Regional trails	Parks and Open spaces	Specific policy	Collaborate with local and regional agencies on the establishment of regional trails			Cooperation		
K345	CP10	Ci-Chanhassen	inter-community trail connections	Parks and Open spaces	Specific policy	Partner with surrounding communities to create inter-community trail connections that enable users to travel to surrounding communities and regional trails without having to 'jump' between different trails and sidewalks.			Cooperation		
K346	CP10	Ci-Chanhassen	Environmental sustainability	Parks and Open spaces	General goal	Be a leader in environmental sustainability.	X				
K347	CP10	Ci-Chanhassen	Natural area preservation	Parks and Open spaces	Specific policy	Preserve remaining natural areas as opportunities arise			Natural Resource Protection		
K348	CP10	Ci-Chanhassen	Turf to native plantings	Parks and Open spaces	Specific policy	Explore opportunities to convert existing turf areas to native plantings			Vegetation		
K349	CP10	Ci-Chanhassen	incorporate stormwater BMPs	Parks and Open spaces	Specific policy	Reduce impacts on lakes, waterways and groundwater by incorporating stormwater best practices in park and facility design.		Y	Stormwater	Groundwater	
K35	CP1	Scott	maintenance of drainage systems	Flood Management	Specific Action	Promote and ensure maintenance of drainage and stormwater systems		Y	Stormwater	Flood	
K350	CP10	Ci-Chanhassen	Fragmentation of natural areas	Green Corridors	Specific policy	The city should maintain these greenways and natural areas for native plant and animal habitats. The city should also set a goal to limit fragmentation of natural areas and maintain green corridors that connect open space.			Corridors		
K351	CP10	Ci-Chanhassen	Compaction	Erosion and Runoff	Specific goal	The city should reassess what measures could be taken during development to protect soils from compaction in the first place and rebuilding it when the protection isn't enough.			Sediment.Erosion		
K352	CP10	Ci-Chanhassen	Bluff Creek Corridor preservation	Resource Preservation	Specific action	Continue to preserve sensitive lands within the Bluff Creek Corridor		Y	Unique.Sensitive.h	Corridors	
K353	CP10	Ci-Chanhassen	Seminary Fen	Resource Preservation	Specific action	Collaborate with other agencies to protect the Seminary Fen		Y	Cooperation	Trout.Fen	
K354	CP10	Ci-Chanhassen	Minnesota River Valley	Resource Preservation	Specific action	Collaborate with other agencies to protect the Minnesota River Valley			Cooperation		
K355	CP10	Ci-Chanhassen	Management Plan	Resource Preservation	Specific action	Develop natural resource management plan			Natural Resource Protection		
K356	CP10	Ci-Chanhassen	reopen Minnesota River Bluff LRT Regional Trail	Parks and Trails	Specific action	» Work with partner agencies to reopen Minnesota River Bluff LRT Regional Trail			Increase River Use		
K357	CP10	Ci-Chanhassen	Minnesota River trail	Parks and Trails	Specific action	Complete trail connection to Minnesota River			Increase River Use		
K358	MP4	Chaska SW	Preserve natural systems	Groundwater	General goal	Protect, preserve, and use natural surface and groundwater storage and retention systems;			Groundwater		
K359	MP4	Chaska SW	Correct problems	Flooding and water quality	General goal	Correct flooding and water quality problems while efficiently managing capital expenditures;			Flood		
K36	CP1	Scott	Minimize flooding risk with regional approach	Flood Management	Specific Action	Minimize the risk of flooding by promoting a regional approach to stormwater management and maximizing upstream storage		Y	Stormwater	Flood	
K360	MP4	Chaska SW	Surface and groundwater quality	Water quality	General goal	Identify and plan for means to effectively protect and improve surface and groundwater quality;			Groundwater		
K361	MP4	Chaska SW	Uniform policies and controls	Water management	General goal	Establish more uniform local policies and official controls for surface and groundwater management;			Groundwater		
K362	MP4	Chaska SW	Erosion prevention	Erosion	General goal	Prevent erosion of soil into surface water systems;			Sediment.Erosion		
K363	MP4	Chaska SW	Groundwater recharge	Groundwater	General goal	Promote groundwater recharge;			Groundwater		
K364	MP4	Chaska SW	Protect and enhance	Habitat and recreation	General goal	Protect and enhance fish and wildlife habitat and water recreational facilities;			Natural Resource Protection		
K365	MP4	Chaska SW	Secure other benefitls	Water management	General goal	Secure the other benefits associated with the proper management of surface and ground water.	X				
K366	MP4	Chaska SW	Improve water quality	Water quality	General goal	Improve the quality of the City's and the region's surface water resources by, whenever feasible, decreasing phosphorus, total suspended solids, and water volume discharge. At a minimum, the City's antidegradation goal calls for no increase in phosphorus, total suspended solids, and stormwater volume discharge.			Stormwater		
K367	MP4	Chaska SW	Review developments to ensure antidegradation	Development	Specific policy	The City will begin reviewing developments in the context of antidegradation and will apply such BMPs as necessary to maintain or reduce current phosphorus, total suspended solids, and stormwater volume loads.		Y	Stormwater	Development	
K368	MP4	Chaska SW	Trout water temperatures	Stormwater	Specific policy	The City's trout waters will be managed for stormwater runoff temperature as part of the antidegradation goal.		Y	Stormwater	Trout.Fen	
K369	MP4	Chaska SW	retrofit treatment	Stormwater	Specific policy	The City will endeavor to retrofit treatment when opportunities present themselves in public projects.			Stormwater		
K37	CP1	Scott	address cross jurisdictional flooding concerns	Flood Management	Specific Action	Address known regional flooding concerns and problems that have cross jurisdictional implications and /or origin			Flood		
K370	MP4	Chaska SW	antidegradation of lakes and wetlands	Wetlands	Specific policy	All the City's lakes and wetlands will be managed for antidegradation.			Wetlands		

K371	MP4	Chaska SW	Stormwater infiltration	Stormwater	Specific policy	The City will promote stormwater infiltration where feasible to reduce runoff volume and increase groundwater recharge			Y	Stormwater	Groundwater
K372	MP4	Chaska SW	Impaired waters	TMDL and impaired waters	Specific policy	The City will participate in the TMDL Studies of impaired waters within the City and adopt and enforce all requirements determined necessary to meet TMDLs applicable to the City.				Impaired.TMDL	
K373	MP4	Chaska SW	Prevent flooding	Flooding and stormwater	General goal	Prevent flooding from surface flows while reducing, to the greatest extent practicable, the public capital expenditures necessary to control excessive volumes and rates of runoff.			Y	Stormwater	Flood
K374	MP4	Chaska SW	Trunk storm sewer capacity	Stormwater	Specific policy	Trunk storm sewers that serve as elements of the trunk system shall be designed with capacity for 100-year ponded outflows plus 10-year directly connected flows. Channels and ravines that serve as elements of the trunk system shall be designed with capacity for 100-year ponded outflows plus 100-year directly connected flows. The City's freeboard requirements are applied to the 100-year elevations of these channels and ravines.			Y	Stormwater	Steep slopes
K375	MP4	Chaska SW	Overland overflow routes and surface storage volume	Stormwater	Specific policy	In addition to the 10-year and 100-year ponded flow primary capacity, the conveyance system shall provide capacity in excess of the 100-year event in the form of overland overflow routes or adequate surface storage volume. This surface storage volume consists of storage in street low points, within ditches, or in other transient ponding areas.				Stormwater	
K376	MP4	Chaska SW	Detention ponds	Stormwater	Specific policy	Detention ponds must be designed with capacity for the critical 100-year event. At a minimum, detention ponds must maintain existing flow rates for the 2-, 10-, and 100-year critical events. Definition: The 100-year critical event is the 100-year event that produces the highest water level among the 24-hour, 7.3-inch rainfall event or the 10-day, 7.2-inch snowmelt runoff event.				Stormwater	
K377	MP4	Chaska SW	Peak flow from new and redevelopment areas	Stormwater	Specific policy	The net 100-year peak flow per acres from new development and redevelopment areas must meet the calculated City average of 0.2 cfs/acres. Alternative standards may be required by the City Engineer in areas where this requirement may warrant a lesser (or higher) standard for resource protection.			Y	Stormwater	Development
K378	MP4	Chaska SW	All drainage system designs shall incorporate the entire area tributary to the system.	Stormwater	Specific policy	All drainage system designs shall incorporate the entire area tributary to the system.				Stormwater	
K379	MP4	Chaska SW	All drainage regional system analyses and designs shall be based on proposed full development land use patterns.	Stormwater	Specific policy	All drainage regional system analyses and designs shall be based on proposed full development land use patterns.			Y	Stormwater	Development
K38	CP1	Scott	Improve understanding	Flood Management	Specific Action	Improve understanding of flooding risks				Flood	
K380	MP4	Chaska SW	drainage or feasibility studies to consider entire watershed impact	intercommunity drainage	Specific policy	All drainage studies or feasibility studies, whether by a watershed organization or municipality, leading to projects in a subwatershed with an intercommunity drainage issue, shall consider the impact of the project on the entire watershed area and shall consider the total intercommunity project cost.	X				
K381	MP4	Chaska SW	intercommunity drainage issues	intercommunity drainage	Specific policy	Except in emergencies, no solutions or partial solutions to intercommunity drainage issues shall be implemented without prior completion of a feasibility study of options and adoption of a preferred option by the applicable watershed organization(s).	X				
K382	MP4	Chaska SW	Freeboard placement	Stormwater ponds	Specific policy	For ponds with a suitable outlet, freeboard will be 2 feet above the HWL, determined by modeling the 100-year critical event. Emergency overflows must be a minimum of 1 foot below the lowest ground elevation adjacent to a structure.				Stormwater	
K383	MP4	Chaska SW	Freeboard placement	Stormwater ponds	Specific policy	Adjacent to channels, creeks, and ravines, freeboard will be 2 feet to the 100-year critical event elevation.			Y	Stormwater	Steep slopes
K384	MP4	Chaska SW	Development and redevelopment discharge rates	Stormwater	Specific policy	Development and redevelopment projects must not exceed existing rates of discharge for the 2-, 10-, and 100-year events. Wherever feasible, the City will look for reductions over existing discharge rates for development and redevelopment projects.			Y	Stormwater	Development
K385	MP4	Chaska SW	Downstream stormwater system	Stormwater	Specific policy	The City will review developments and manage its stormwater system so that development, redevelopment, and other infrastructure projects do not overtax the existing downstream stormwater system.				Stormwater	
K386	MP4	Chaska SW	Wetland protection	Wetlands	Specific policy	Wetlands and waterbodies identified on the system maps, included as Appendix G, will be protected according to standards and requirements outlined in this LSWMP and according to other applicable local, state, and federal regulations				Wetlands	
K387	MP4	Chaska SW	Minimize stormwaer pollutants	Stormwater	Specific policy	The use of BMPs will be required to help minimize pollutants in stormwater runoff. The City has adopted the CCWMO rules and policies regarding controlling construction site runoff control and waste management for all construction and land disturbances throughout the City for purposes of implementing BMPs for site development.				Stormwater	
K388	MP4	Chaska SW	Stormwater pond treatment volume	Stormwater	Specific policy	New water quality ponds will be designed and constructed to provide a water quality treatment volume equivalent to the runoff from a 2.5-inch rainfall event, or the requirements of the NPDES construction site permit, whichever leads to higher treatment capacity. In some cases, other BMPs will be used in conjunction with water quality ponds. In such cases, the performance of the water quality system shall be no less than the performance of a single pond designed under the 2.5-inch criterion. Given this criterion, in general, under no circumstances shall overall treatment of a development or redevelopment site fall below 50 percent removal for phosphorus and 80 percent removal for total suspended solids. More restrictive water quality requirements may supersede for specific waterbodies (e.g., lakes and wetlands).				Stormwater	

K389	MP4	Chaska SW	Runoff abstraction	Stormwater	Specific policy	Runoff abstraction (infiltration, evapotranspiration, capture and reuse) and minimization of impervious surfaces should be considered in all projects that involve stormwater management. The City will endeavor to obtain as much infiltration as possible from existing impervious surfaces when these are included in a project where infiltration is required.		Stormwater		
K39	CP1	Scott	Lack of coordination	Optimize Public Investment	Specific Action	Foster on-going communication and coordination with other agencies and jurisdictions		Cooperation		
K390	MP4	Chaska SW	New pond design	Stormwater ponds	Specific policy	Newly constructed ponds shall include an outlet design allowing for extended detention of the 1- to 5-year rainfall event. The modeled hydrograph duration for pond discharge should extend a minimum of 24 hours for events within the 1- to 5-year range.		Stormwater		
K391	MP4	Chaska SW	Outlet skimming	Stormwater ponds	Specific policy	Outlet skimming will be required in all ponds. Pond outlet structures shall be designed to provide skimming up to the calculated peak water level using a 10-year, 24-hour event. Policy 3.7: The City will share water quality data and analysis with watershed management organizations (WMOs), watershed districts, and other cities. Policy 3.8: Water quality retrofits in areas with no current water quality treatment will be performed in conjunction with redevelopment and City restoration projects, as appropriate.		Stormwater		
K392	MP4	Chaska SW	Wetland alteration	Habitat and recreation	Specific policy	The neighborhood and regional benefits to wildlife habitat and aesthetics should be considered in any proposal to alter or eliminate wetlands, understanding that wetland elimination without mitigation is precluded by state law and understanding that even mitigated wetland impacts must meet strict sequencing guidelines.		Wetlands		
K393	MP4	Chaska SW	Coordination with MnDNR	Development of water and wetlan	Specific policy	The City will seek to coordinate with the MnDNR regarding development of MnDNR public waters and public water wetlands. Notwithstanding ordinance provisions, both existing and future, that control development of shoreland areas, the City will seek MnDNR comments on development proposals adjacent to MnDNR public waters and public water wetlands		Development		
K394	MP4	Chaska SW	Preserve or restore aesthetics and habitat	Habitat and recreation	Specific policy	Water resources shall be maintained in such a manner as to preserve or restore their intrinsic aesthetic qualities and wildlife habitat. Policy 4.5 Water resources impacted for recreation and fish and wildlife habitat shall be restored when feasible.		Natural Resource Protection		
K395	MP4	Chaska SW	Stormwater education	Stormwater education	Specific goal	Provide information and education either directly or in cooperation with other entities concerning urban stormwater management and the problems pollutants cause if allowed to enter into our water resources for all stakeholders, including City Staff, City Council, Planning Commission, developers, and the public.	Y	Stormwater	Cooperation	
K396	MP4	Chaska SW	Stormwater pollution education program	Stormwater education	Specific policy	Enact an education program based on the following objectives to reduce stormwater pollution: 1. Raise awareness of the problem and solutions; 2. Promote community stewardship of the lakes, creeks, and wetlands; 3. Recognize responsible parties and actions to date; and 4. Merge feedback into program execution.		Stormwater		
K397	MP4	Chaska SW	Cooperate with WMO's and SWCD to enhance education	Stormwater education	Specific policy	Cooperate with the WMOs and the Carver Soil and Water Conservation District (SWCD) to broaden the amount of information and resources available for education. Each entity has valuable expertise on specific issues, such as erosion and sediment control and river management issues.	Y	Stormwater	Sediment.Erosion	Cooperation
K398	MP4	Chaska SW	Groundwater	Groundwater	Specific goal	Maintain and improve groundwater quality, promote groundwater recharge, and prevent flooding from subsurface flows.	Y	Flood	Groundwater	
K399	MP4	Chaska SW	Wellhead protection	Groundwater	Specific policy	To the extent that wellhead protection plans identify areas of groundwater recharge that require protection, the City shall work with the Minnesota Department of Health (MDH) and neighboring communities in developing adequate protection measures.		Groundwater		
K4	CP1	Scott	Agricultural practices	LAND USE AND GROWTH MANAG	General goal	Agricultural land uses should be encouraged to utilize best management practices and observe conservation practices that prevent erosion and preserve natural resources. Reason: Agriculture is an intensive land use because it has the potential for significant impacts on storm water conveyance systems, ground water resources and air quality. Agriculture is a necessary land use for society but can be accomplished with reduced adverse impacts by adhering to recognized best management practices. Failure to do so can destroy the long-term productivity of the land and contaminate ground water resources for future generations, resulting in flooding, erosion problems, and air pollution.	Y	Flood	Sediment.Erosion	
K40	CP1	Scott	Lack of collaboration	Optimize Public Investment	Specific Action	Promote collaborative decision making		Cooperation		
K400	MP4	Chaska SW	vulnerable recharge areas	Groundwater	Specific policy	Surface water management improvements located in probable recharge areas and areas of high vulnerability to chemical or petroleum spills shall be designed to promote groundwater protection. Practically, this means infiltration shall not be considered in developments that include the potential for these types of spills.		Groundwater		
K401	MP4	Chaska SW	Lake and wetland inventory and classification	Water quality	Specific policy	The City will continue performing a phased inventory of its wetlands and lakes to determine their functions and values and develop corresponding management standards that protect or enhance the City's wetlands.		Wetlands		
K402	MP4	Chaska SW	Share information	Water quality	Specific policy	The City will share information collected on its waterbodies with the WMOs.		Cooperation		
K403	MP4	Chaska SW	Wetland Conservation Act enforcement	Wetlands	Specific policy	Act as the local government unit responsible for enforcing the most current version of the Wetland Conservation Act.		Wetlands		
K404	MP4	Chaska SW	Wetland disturbance	Wetlands	Specific policy	Discourage wetland disturbance. Wetlands must not be drained or filled, wholly or partially, unless replaced by restoring, enhancing, or creating wetland areas of an equal public value, as permitted by the Wetland Conservation Act. Wetland sequencing will be strictly followed where the City protects wetlands as follows: 1. First priority is to avoid the impact; 2. Where the impact cannot be avoided, then the impact must be minimized; and 3. Where the impact cannot be avoided, then the impact must be mitigated.		Wetlands		

K405	MP4	Chaska SW	Wetland credits	Wetlands	Specific policy	Up to one-half acre of “debit” wetland (filled or drained) will be allowed to be replaced through wetland “credit” in a bank which is located outside of Chaska’s City limits. State and County governments are exempt from this policy (M.S. 103G.222 (e)).					Wetlands		
K406	MP4	Chaska SW	Wetland buffer	Wetlands	Specific policy	Restrict clearing and grading within close proximity of the wetland boundary to provide for a protective buffer strip of natural vegetation to promote the interception of sediment and nutrients. In the event that grading occurs within the wetland buffer, native plant materials shall be reestablished as a buffer strip.					Sediment.Erosion		
K407	MP4	Chaska SW	Wetland assessment	Wetlands	Specific policy	Require that a wetland assessment be prepared for any project that includes a wetland that is currently not classified. The most current version of the Minnesota Routine Assessment Methodology for evaluating wetland functions and values is the required method of assessment.					Wetlands		
K408	MP4	Chaska SW	Wetland restoration	Wetlands	Specific policy	The City has identified wetlands that have a high potential for restoration and is looking for opportunities to work with landowners to enhance or restore these and other wetlands that, if restored, will provide rate control and water quality benefits to downstream receiving waters.					Wetlands		
K409	MP4	Chaska SW	Streams and ravines with excessive erosion	Streams and ravines	Specific goal	Protect and stabilize streams and ravines with unnatural or excessive erosion within the City.				Y	Sediment.Erosion	Steep slopes	
K41	CP1	Scott	Inconsistency of controls	Optimize Public Investment	Specific Action	Maintain Consistency of the county’s official controls related to water resources			X				
K410	MP4	Chaska SW	Creek and ravine assessment	Streams and ravines	Specific policy	The City has completed assessment of a select number of ravines and creeks as part of this LSWMP. The City will look for opportunities to expand the assessment of ravines and creeks as funding becomes available.					Steep slopes		
K411	MP4	Chaska SW	Ravine and creek stabilization	Streams and ravines	Specific policy	The City will look for opportunities to stabilize ravines and creeks that are experience unnatural or excessive erosion. A focus will be on ravines/creeks identified on the Water Resource Map in Appendix G, the Priority Project Implementation Plan in Table 6-1, as well as those that discharge to priority waterbodies. Priority waterbodies are considered lakes, high quality wetlands, and MnDNR waterways and basins.				Y	Sediment.Erosion	Steep slopes	
K412	MP4	Chaska SW	Construction site sediment	Erosion and Sediment Control	Specific goal	Prevent, to the greatest extent possible, sediment from construction sites from entering the City’s surface water resources and control the erosion from drainageways within the City.					Sediment.Erosion		
K413	MP4	Chaska SW	Construction sediment control ordinance, rules and policies	Erosion and Sediment Control	Specific policy	The City will maintain a partnership with the Carver SWCD for the enforcement of an Erosion and Sediment Control Ordinance as outlined in its NPDES permit. In addition, the City has adopted, in Section 5.3.2.2, Carver County Watershed Management Organization rules and policies regarding construction site runoff control and waste management for all construction and land disturbances throughout the City for purposes of implementing BMPs for site developme					Sediment.Erosion		
K414	MP4	Chaska SW	Ravine erosion	Erosion and Sediment Control	Specific policy	The City will identify eroding ravine areas, prioritize stabilization projects, and identify funding sources for project implementation.				Y	Sediment.Erosion	Steep slopes	
K415	MP4	Chaska SW	Surface water system	Surface water system managemer	Specific goal	Operate and manage the City’s surface water system consistent with best current practices and the City’s NPDES MS4 Permit.			X				
K416	MP4	Chaska SW	System deficiency prioritization	Surface water system managemer	Specific policy	Projects to correct existing deficiencies, to the extent they are identified, will be prioritized as follows: 1. Projects intended to reduce or eliminate flooding of structures in known problem areas. 2. Projects intended to improve water quality in the City’s priority waterbodies. 3. Projects intended to retrofit water quality treatment into developed areas. 4. Projects intended to reduce maintenance costs. 5. Projects intended to improve wetlands.					Flood		
K417	MP4	Chaska SW	Projects on city lands	Surface water system managemer	Specific policy	The City will follow best practices on its own lands and for its own projects including street reconstruction projects – in accordance with the NPDES construction site permit and the City’s NPDES MS4 Permit.			X				
K418	MP4	Chaska SW	Regional stormwater ponds	Stormwater ponds	Specific goal	This LSWMP recommends a regional stormwater pond approach by consolidating individual ponds that would normally be constructed in each subdivision or development into central facilities when feasible					Stormwater		
K419	MP4	Chaska SW	Opportunities for collaboration with CCWMO	Coordination	Specific action	Implementation projects identified within that plan that may provide opportunities for collaboration include (project references and page numbers are from the CCWMO Water Management Plan) ** See pg 104 if this is of interest				Y	Cooperation	CIPs.Projects	
K42	CP1	Scott	Redundancy	Optimize Public Investment	Specific Action	Minimize Redundancy			X				
K420	MP4	Chaska SW	Lano Ravine	Ravine	CIP	Lano Ravine The Lano Ravine east of TH212 and north of Chaska Boulevard (CR61). It discharges to a culvert under Chaska Boulevard, and runoff from that point is conveyed to Chaska Lake. It is uncertain when the ravine began eroding; however, erosion in recent years has been significant, resulting in a significant washout upstream of the culvert under Chaska Boulevard. TH212 was built in the Lano Ravine watershed around 2008 and increased the drainage area to the ravine from 26 to 116 acres. A study was completed in 2018 which assessed the existing conditions of the ravine and the hydrologic changes within the watershed area as a result of the TH212 improvements and identified seven restoration options, three of which were recommended for more in-depth review and design. Study results concluded that increased duration of runoff, combined with saturated, sandy soils, likely has led to the increase in erosion that has been observed. Additional review and follow-up field investigation indicated that erosion continues to migrate towards Chaska Boulevard, and at some point may threaten the stability of the roadway. CL CCWMO 2023-2024 $1,300,000-1,650,000	2023 to 2024	1,300,000 - 1,650,000		Y	Sediment.Erosion	Steep slopes	CIPs.Projects

K421	MP4	Chaska SW	Beise Ravine	Ravine	CIP	Beise Ravine (LCC-R1) Land use in the 98 acres of area that drain to this ravine, which ultimately discharges to Chaska Creek, is in the process of being developed. Much of the ravine bottom contains large natural fieldstone that has created a stable bottom. The erosion occurring in the ravine is resulting from concentrated flows eroding the toe of slope, causing slope failure. In the areas without a rock bottom and within the steeper segments, there is head-cutting, lowering the stream bottom and causing erosion at the toe of slope and side slope failure. Stormwater management practices have been implemented in the upstream residential development and will reduce peak flows to the ravine. As a result, we anticipate the currently stable sections of the Beise channel will remain so, and the restoration approach should focus on the unstable segments rather than the entire ravine. The total length of the ravine is 3,000 linear feet; however, the entire ravine does not require stabilization. For the construction and professional services, we estimate that 60% of the ravine (1,800 LF) will require improvements. LCC CCWMO 2028-2029 $650,000	2028 to 2029	$650,000	Y	Stormwater	Sediment.Erosion	Steep slopes	CIPs.Projects	
K422	MP4	Chaska SW	Lake Grace - West Ravine	Ravine	CIP	Lake Grace – West Ravine An eroding ravine is located along the western shoreline of Lake Grace, a nutrient impaired lake. The upstream portions of the ravine receive runoff from Edgewater Townhomes to the north and a stormwater retention pond to the south. The ravine falls 50 vertical feet over its 800-foot length before flowing into Lake Grace. A ravine study will first be conducted. The study will determine the causes of erosion, estimate the sediment contribution from the ravine, develop stabilization options, and provide a cost range for the alternatives and a cost estimate for the chosen option. UEC CCWMO 2030 $75,000	2030	$75,000	Y	Stormwater	Sediment.Erosion	Steep slopes	CIPs.Proje	Impaired.T
K423	MP4	Chaska SW	Seminary Fen Ravine C-2 Study and assessment	Ravine	CIP	Seminary Fen Ravine C-2 Study and Restoration This 800-foot ravine is within bluffs located north of the Fen and is highly prone to erosion due to sandy soils, groundwater discharges, naturally steep slopes, and surface water flows. A ravine assessment will be conducted. The ravine assessment will determine the causes of erosion, estimate the sediment contribution to the Fen from the ravine, develop stabilization options, and provide cost estimates for a potential restoration project. Project design and restoration will follow recommendations of the assessment. CH LMRWD 2020-2022 $60,000	2020 to 2022	$60,000	Y	Sediment.Erosion	Groundwater	Steep slopes	CIPs.Proje	Trout.Fen
K424	MP4	Chaska SW	Seminary Fen Ravine C-3 Study and assessment	Ravine	CIP	Seminary Fen Ravine C-3 Study and Restoration This ravine is in the bluffs located north of the Fen and is highly prone to erosion due to sandy soils, groundwater discharges, naturally steep slopes, and surface water flows. A ravine assessment will be conducted. The ravine assessment will determine the causes of erosion, estimate the sediment contribution to the Fen from the ravine, develop stabilization options, and provide cost estimates for a potential restoration project. Project design and restoration will follow recommendations of the assessment. CH LMRWD 2023-2025 $60,000	2023 to 2025	$60,000	Y	Sediment.Erosion	Groundwater	Steep slopes	CIPs.Proje	Trout.Fen
K425	MP4	Chaska SW	Seminary Fen Wetland Area A and B Resotration	Ravine	CIP	Seminary Fen Wetland Area A and B Wetland Restoration The Seminary Fen is a 600-acre calcareous fen wetland complex. It is one of the rarest types of wetlands in the US. It is characterized by a substrate of peat and a constant supply of upwelling groundwater from bedrock aquifers of cold, oxygen-poor groundwater that is rich in calcium and magnesium bicarbonates. The Fen supports dozens of rare, threatened, and special concern plant and animal species and is one of the Twin Cities Metropolitan Area's last known naturally-reproducing trout streams. It is one of the most significant natural areas in the metro area and is part of the MnDNR Scientific and Natural Areas program. Historic ditching partially drains portions of the wetland. The project will restore the hydrology and vegetation to 21 acres of wetland as part of this project. The cost estimate includes survey, design, construction and vegetative restoration and vegetative maintenance for 5 years. The City may want to consider doing this project as a wetland bank and obtaining the resulting wetland credit. The cost estimate to do the project as a wetland bank has been included. CH LMRWD 2026-2027 $500,000	2026 to 2027	$500,000	Y	Groundwater	Steep slopes	CIPs.Projects	Trout.Fen
K426	MP4	Chaska SW	East Chaska Creek Ravine (EC-R2-Tributary)	Ravine	CIP	East Chaska Creek Ravine (EC-R2 tributary) A tributary ravine, approximately 4,600 feet in length, to East Chaska Creek (EC-R2) is unstable and eroding. Stormwater discharge from development to the north and east contributes significant flows during large storm events. Stormwater BMPs would be beneficial to control runoff rate and volume. A desktop analysis will be performed to provide the initial assessment and ranking of all the stream segments. Following the initial ranking, up to five sites will be further assessed in the field, and cost estimates of proposed improvements will be developed. EC CCWMO 2027-2028 $40,000	2027 to 2028	$40,000	Y	Stormwater	Steep slopes	CIPs.Projects	

K427	MP4	Chaska SW	Liberty Heights Ravine (LCCR4)	Ravine	CIP	Liberty Heights Ravine (LCCR4) The ravine, approximately 1,700 feet in length, is a tributary of Chaska Creek in the Liberty Heights development that includes two branches that combine into one drainageway before reaching the creek. A portion of the drainage area is treated via ponding; however, portions of the area remain untreated. Downstream of where the channels combine, a 36-inch storm sewer discharges to the channel. Downstream of this discharge, there are a number of isolated erosion sites that have resulted primarily from toe erosion causing slope failure along outside bends of the channel. At the time of the inventory, there was only one area that appeared to have an unstable bottom that potentially would require a rock riffle or drop to stabilize. Most of the stream channel would benefit from reestablishment and protection of the toe of slope on the eroding outside bends of the channel. The woods and steep slopes make access to the eroding sites difficult without disturbance to the portions of the channel that do not require stabilization. A ravine study will be completed. The ravine study will determine the causes of erosion, estimate the sediment contribution from the ravine, develop stabilization options, and provide cost estimates for a potential restoration project. Project design and restoration will follow recommendations of the assessment. LCC CCWMO 2029 $75,000		2029	$75,000	Y	Sediment.Erosion	Steep slopes	CIPs.Projects	
K428	MP4	Chaska SW	Chaska Creek Bluff Stabilization	Ravine	CIP	Chaska Creek Bluff Stabilization Bluffs and steep slopes along the east side of Chaska Creek are comprised of sandy soils and are prone to erosion. A desktop analysis will be performed to provide the initial assessment and ranking of all the stream segments. Following the initial ranking, up to five sites will be further assessed in the field, and cost estimates of proposed improvements will be developed. LCC CCWMO 2030 $40,000		2030	$40,000	Y	Sediment.Erosion	Steep slopes	CIPs.Projects	
K429	MP4	Chaska SW	CL-R1 Ravine An unstable ravine section drains to Chaska Creek in Subdistrict CL-5.1	Ravine	CIP	CL-R1 Ravine An unstable ravine section drains to Chaska Creek in Subdistrict CL-5.1. A ravine study will be conducted. The ravine study will determine the causes of erosion, estimate the sediment contribution from the ravine, develop stabilization options, and provide cost estimates for a potential restoration project. Project design and restoration will follow recommendation of the assessment. HS CCWMO 2023-2024 $75,000	2023 to 2024		$75,000	Y	Sediment.Erosion	Steep slopes	CIPs.Projects	
K43	CP1	Scott	Insufficient resources	Optimize Public Investment	Specific Action	Pool and share resources			X					
K430	MP4	Chaska SW	East Chaska Creek Tributary Culverts	Erpsopm	CIP	East Chaska Creek Tributary There are several culverts at public trail stream crossings where streambank instability and erosion are present both upstream and downstream of the culvert crossings. The culverts pose additional concerns as restriction points during high flows that are prone to blockage with debris, which can increase flood concern to upstream areas. The project(s) propose to remove three culverts and replace them with bridges, along with streambank restoration to stabilize eroding sections. These projects are typically constructed by the Chaska Public Works Department. So, the cost estimate assumes this is a designbuild project and a standard bid package is not necessary. The cost per site will increase if this is not a design-build project, and bid/quote plans need to be developed. EC CCWMO 2023-2024 $120,000	2023 to 2024		$120,000	Y	Flood	Sediment.Erosion	CIPs.Projects	
K431	MP4	Chaska SW	Harvest West Ravine Opportunities for stabilization	Ravine	CIP	Harvest West Ravine Opportunities for stabilization efforts in an unstable 1,000-foot ravine that is tributary to Chaska Creek are possible in conjunction with the upcoming residential development within the watershed. Stormwater runoff rate control requirements for the housing development will be beneficial. A ravine study will also be completed. The ravine study will determine the causes of erosion, estimate the sediment contribution to the downstream waterbodies from the ravine, develop stabilization options, and provide cost estimates for a potential restoration project. Project design and restoration will follow recommendations of the assessment. LCC CCWMO 2021-2022 $60,000	2021 to 2022		$60,000	Y	Stormwater	Sediment.Erosion	Steep slopes	CIPs.Projects
K432	MP4	Chaska SW	Other Creek and Ravine Restoration Opportunities	Ravines and Creeks	CIP	Other Creek and Ravine Restoration Opportunities Due to the unique geology and topography within the City of Chaska, there are many creeks and ravines in the City that have not been inventoried or identified on the priority project list. Only a select number of creeks and ravines that are actively eroding and discharge to MN DNR Protected Waters, Scientific and Natural Areas, or other priority resources have been identified and specifically identified for restoration and stabilization potential. As City development progresses, and additional information becomes apparent, additional creek and ravine restoration and stabilization opportunities may arise which have a high priority ranking. A desktop analysis will be performed to provide the initial assessment and ranking of all the stream segments. Following the initial ranking, up to five sites will be further assessed in the field, and cost estimates of proposed improvements will be developed. All Areas CCWMO/LMRWD 2020-2040 $50,000	2020 to 2040		$50,000	Y	Unique.Sensitive.h	Steep slopes	CIPs.Projects	
K433	MP4	Chaska SW	Wetland Restoration/Enhancement Opportunities	Wetlands	CIP	Wetland Restoration/Enhancement Opportunities Wetland restoration/enhancement sites were identified during the field inventory and are located on the Water Resource Map and described in Appendix D. Typically, wetlands that were identified for restoration/enhancement had either a hydrologic impact that could easily be rectified or a plant community that was of Exceptional to High quality. The areas with Exceptional to High quality native plant populations could, with some minor management, have their ecological integrity enhanced and exotic species minimized. Wetlands with high restoration potential are described in Appendix D. Priority wetland restoration sites are those that involve hydrologic restoration and may provide other benefits such as reducing flows to receiving waters, improving corridor connections, and providing valuable habitat if restored. A concept plan and cost estimate for up to eight of the top sites will be prepared. All CCWMO 2020-2040 $150,000	2020 to 2040		$150,000	Y	Corridors	CIPs.Projects		

K434	MP4	Chaska SW	Stormwater Retrofits	Stormwater	CIP	Stormwater Retrofits There are several areas within the City where stormwater is either untreated or untreated to current design standards prior to discharge. Areas that discharge to lakes impaired for excessive nutrients (Hazeltine, Jonathan, Grace, and McKnight) have a high priority for these types of projects. Opportunities to retrofit/install stormwater BMPs that will result in additional nutrient and sediment removal in area should be investigated. An assessment will be performed that ranks potential retrofits based on estimated cost and pollutant removal. UEC CCWMO 2020-2040 $50,000	2020 to 2040	$50,000	Y	Stormwater	Sediment.Erosion	CIPs.Projects	Impaired.TMDL
K435	MP4	Chaska SW	Upper East Creek Stream Restoration (Upstream from Big Woods Lake)	Stormwater	CIP	Upper East Creek Stream Restoration (Upstream from Big Woods Lake) East Chaska Creek, upstream from Big Woods Lake, poses an opportunity for culvert removal and stream restoration near Lyman Boulevard in conjunction with 82nd Street Reconstruction. Additional benefits within this drainage area include stormwater rate control and volume reduction and erosion repair around convert outlets. Initial work would involve a study to evaluate existing conditions and develop rate control, water quality, and stream restoration options. EC CCWMO 2022-2024 $50,000	2020 to 2024	$50,000	Y	Stormwater	Sediment.Erosion	CIPs.Projects	
K436	MP4	Chaska SW	82nd Street Water Quality Improvement Opportunities	Water Quality	CIP	82nd Street Water Quality Improvement Opportunities As Carver County plans for the reconstruction of 82nd street, opportunities may arise for projects that have a water quality benefit in conjunction with road reconstruction. Projects that would benefit this drainage area include wetland restoration, stream restoration, nutrient reduction projects, and stormwater volume control project. Initial work would involve a study to evaluate existing conditions and develop water quality and wetland improvement options. UEC CCWMO 2021-2022 $50,000	2021 to 2022	$50,000	Y	Stormwater	CIPs.Projects		
K437	CP7	Ci-Shakopee	Surface and groundwater systems	Natural Resource protection	General goal	. Ensure the surface and groundwater management system protects city and natural resources cost effectively				Groundwater			
K438	CP7	Ci-Shakopee	Connections to Minnesota River	Economy	Specific action	» Develop stronger connections to the Minnesota River and trail network			Y	Increase River Use	CIPs.Projects		
K439	CP7	Ci-Shakopee	Leverage Minnesota Valley State Trail	Economy	Specific action	Leverage the Minnesota Valley State Trail by enticing trail users (hikers, bikers, snowmobilers) into downtown Shakopee by providing services and facilities for them			Y	Increase River Use	CIPs.Projects		
K44	CP1	Scott	Limited Public Awareness	Optimize Public Investment	Specific Action	Engage Volunteers		X					
K440	CP7	Ci-Shakopee	Trail connecting River and downtown	Economy	Specific action	Create a "Riverwalk" loop connection between the Minnesota River and downtown businesses with a better connection from Downtown to Huber Park, the riverfront and the Minnesota Valley State Trail » Encourage the development of shops, restaurant			Y	Increase River Use	CIPs.Projects		
K441	CP7	Ci-Shakopee	Provide recreational amenities	Economy	Specific action	Promote the boat ramp and provide recreation amenities for cyclists, boaters, canoers and kayakers				Increase River Use			
K442	CP7	Ci-Shakopee	Incentivize river recreation-based businesses	Economy	Specific action	Incentivize river recreation-based businesses such as outfitters and equipment rental shops				Increase River Use			
K443	CP7	Ci-Shakopee	Acquire properties in floodplain	Floodplain Management	Specific action	Strategically acquire properties in the floodplain for preservation and potential riverfront park opportunities				Flood			
K444	CP7	Ci-Shakopee	Public access points	Public access	Specific action	» Provide additional public access to river for canoe and kayak recreation				Navigation.boating			
K445	CP7	Ci-Shakopee	Rural land development	Land Use	Specific action	Encourage conservation subdivisions to conserve open space				Development			
K446	CP7	Ci-Shakopee	Rural land development	Land Use	Specific action	Protect environmentally sensitive areas			Y	Unique.Sensitive.h	Development		
K447	CP7	Ci-Shakopee	Rural land development	Land Use	Specific action	Coordinate land uses with the SMSC				Development			
K448	CP7	Ci-Shakopee	Rural land development	Land Use	Specific action	Preserve rural character				Development			
K449	CP7	Ci-Shakopee	Rural land development	Land Use	Specific action	Preserve open space				Development			
K45	CP1	Scott	Soil health	Resiliency	Specific Action	Prioritizing the protection and improvement of soil health				Natural Resource Protection			
K450	CP7	Ci-Shakopee	Suburban Edge Residential	Land Use	Specific action	» Protect wetlands and lagoons				Wetlands			
K451	CP7	Ci-Shakopee	Suburban Edge Residential	Land Use	Specific action	» Preserve public access to the water				Navigation.boating			
K452	CP7	Ci-Shakopee	Suburban Edge Residential	Land Use	Specific action	» Preserve scenic vistas and views from the water's edge as well as from the water				Natural Resource Protection			
K453	CP7	Ci-Shakopee	Suburban Edge Residential	Land Use	Specific action	» Cluster development to preserve open space				Open and Green			
K454	CP7	Ci-Shakopee	West End development	Land Use	Specific action	» Establish permanent preserved greenways and the ridge area			Y	Development	Corridors		
K455	CP7	Ci-Shakopee	West End development	Land Use	Specific action	» Preserve woodlands and other connecting habitat				Development			
K456	CP7	Ci-Shakopee	Restore wetlands	Groundwater and wetlands	General action	» Restore wetlands to promote groundwater recharge				Groundwater			
K457	CP7	Ci-Shakopee	Protect water quality	Stormwater Water quality	Specific action	Maintain or improve the quality of water in lakes, streams and rivers within or immediately downstream of Shakopee with proactive stormwater and runoff policies and practices				Stormwater			
K458	CP7	Ci-Shakopee	Protect wildlife habitat	Habitat and recreation	Specific action	» Protect and enhance recreational facilities and fished wildlife habitat throughout Shakopee				Natural Resource Protection			
K459	CP7	Ci-Shakopee	101 and 169 are barriers to trail connection and access to the river	Trails	Specific issue					Trails			
K46	CP1	Scott	Habitat stability	Resiliency	Specific Action	Prioritizing the establishment of year round living vegetative cover				Vegetation			
K460	CP7	Ci-Shakopee	Target environmentally sensitive areas	Parks and Trails	Specific goal	» Target the most beautiful, unique, historically significant and/or environmentally sensitive areas for growth when purchasing/allocating land for parks				Unique.Sensitive.high value			
K461	CP7	Ci-Shakopee	Encourage vegetation that supports the ecology	Parks and Trails	Specific goal	» Encourage native, drought resistant, edible and pollinator friendly landscapes on park properties				Vegetation			
K462	CP7	Ci-Shakopee	Enhance landscaping to support ecology	Parks and Trails	Specific goal	Enhance landscaping, trees and natural settings in existing active parks to provide shade, interest and ecological benefits				Vegetation			
K463	CP7	Ci-Shakopee	Regional and state trails	Parks and Trails	Specific goal	Participate as a leader or stakeholder in regional and state trail systems planning efforts				Trails			
K464	CP7	Ci-Shakopee	contiguous access to public spaces along the rive	Parks and Trails	Specific goal	Coordinate with MnDNR and surrounding communities to provide contiguous access to public spaces along the river				Trails			
K465	CP7	Ci-Shakopee	Protection of the Minnesota River	Natural Resource protection	Specific goal	The Minnesota River: A high-quality river environment provides an important opportunity for human engagement and a crucial requirement for many native flora and fauna. A functional riverine ecosystem depends on healthy streams, wetlands and floodplains. Protecting and rehabilitating these elements will strengthen the overall system and improve quality of life for humans and nature alike.			Y	Public engagement	Flood		

K466	CP7	Ci-Shakopee	Public experience impacted by water quality	Public access	Specific goal	Parks and recreation: Where possible, existing and new facilities should allow people to engage the natural world. Additionally, the enjoyment of water resources is impacted by the quality of water and the health of wetland, riverine and lake-based ecological systems.			Public engagement.education			
K467	CP7	Ci-Shakopee	Impacts of development on natural resources	Development	Specific issue	Community character: There exists widespread concern that continued development will diminish Shakopee's community character. In particular, this concern includes the farmlands and rural area south of Highway 169 and the city's lakes and wetlands, the quality of which is especially susceptible to development.			Development			
K468	CP7	Ci-Shakopee	Environmentally-sensitive area	Natural Resource protection	Specific issue	Environmentally-sensitive areas: Of particular concern are the high bluffs overlooking the Minnesota River, which feature environmentally-sensitive steep slopes; contiguous open space, which serve as wildlife corridors; and wetlands, rivers, streams and lakes.		Y	Unique.Sensitive.h	Corridors	Steep slopes	
K469	CP7	Ci-Shakopee					X					
K47	CP1	Scott	Limited vegetative diversity	Resiliency	Specific Action	Maximizing vegetative diversity			Vegetation			
K470	CP7	Ci-Shakopee	Identify and follow best practices for surface water preservation and remediation	Water Resource preservation	Specific policy	Continue to preserve and restore rivers, streams and wetlands to provide floodwater retention, groundwater recharge, nutrient assimilation, wildlife habitat, shoreline protection and safe drinking water		Y	Flood	Groundwater		
K471	CP7	Ci-Shakopee	Identify and follow best practices for surface water preservation and remediation	Stormwater	Specific policy	Continue to improve existing drainage infrastructure and promote use of alternative stormwater design solutions such as rain gardens, pervious hardscaping and on-site stormwater treatment			Stormwater			
K472	CP7	Ci-Shakopee	Identify and follow best practices for groundwater use and protection	Groundwater	Specific policy	Assess the vulnerability of groundwater resources, estimate dates of resource exhaustion and plan for mitigation			Groundwater			
K473	CP7	Ci-Shakopee	Identify and follow best practices for groundwater use and protection	Groundwater	Specific policy	Partner with Shakopee Public Utilities to identify and protect groundwater recharge areas and vulnerable aquifers			Groundwater			
K474	CP7	Ci-Shakopee	Identify and follow best practices for groundwater use and protection	Water quantity	Specific policy	» Create a watering ordinance, water-wise landscaping ordinance and guidance, and WaterSense purchasing program			Groundwater			
K475	CP7	Ci-Shakopee	Minnesota's Minimal Impact Design Standards	Stormwater	Specific policy	Consider adopting and using Minnesota's Minimal Impact Design Standards (MIDS) to address site stormwater runoff and pollution			Stormwater			
K476	CP7	Ci-Shakopee	Coodinate with adjacent jurisdictions	Coordination	Specific policy	Coordinate water resource planning and protection efforts with adjacent jurisdictions			Cooperation			
K477	CP7	Ci-Shakopee	Identify and follow best practices for wildlife and vegetation management	Invasive species	Specific policy	Develop a plan to minimize invasive and exotic plants and animals			Invasives			
K478	CP7	Ci-Shakopee	Identify and follow best practices for wildlife and vegetation management	Habitat and corridors	Specific policy	Update plan to preserve wildlife habitat and travel corridors			Corridors			
K479	CP7	Ci-Shakopee	Conservation easement program	habitat	Specific policy	Continue to work with partners to develop a conservation easement program for preserving wildlife habitats			High value easements			
K48	CP1	Scott	management of public ditches	Public Drainage	Specific Action	Facilitate a vision for management of selected public ditches as agricultural drainage benefits decline			Agriculture			
K480	CP7	Ci-Shakopee	Habitat fragmentation	Habitat	Specific policy	Develop policies to prevent habitat fragmentation and altering of high-quality natural areas	X					
K481	CP7	Ci-Shakopee	Natural resource inventory	Natural Resources	Specific policy	Conduct a Natural Resource Inventory and Assessment	X					
K482	CP7	Ci-Shakopee	Woodlands, bluffs and slopes	Natural resources protection	Specific policy	Continue to protect existing woodlands, bluffs and steep slopes			Steep slopes			
K483	CP7	Ci-Shakopee	Open space plans	Coordination	Specific policy	Coordinate open space plans with adjacent jurisdictions			Open and Green			
K484	CP7	Ci-Shakopee	Incorporate environmentally-responsible practices into land subdivision and development regulations	Development	Specific policy	Consider impacts to native threatened or special-concern species when reviewing land use development			Development			
K485	CP7	Ci-Shakopee	Incorporate environmentally-responsible practices into land subdivision and development regulations	Development	Specific policy	Encourage roadway design to follow existing contours of landscape			Development			
K486	CP7	Ci-Shakopee	Incorporate environmentally-responsible practices into land subdivision and development regulations	Development	Specific policy	Curtail development that disturbs natural corridors or environmentally-sensitive areas that have been identified		Y	Unique.Sensitive.h	Development	Corridors	
K487	CP7	Ci-Shakopee	Incorporate environmentally-responsible practices into land subdivision and development regulations	Development	Specific policy	Adopt or amend city codes and ordinances to support sustainable and environmentally protective land use development			Development			
K488	CP7	Ci-Shakopee	Incorporate environmentally-responsible practices into land subdivision and development regulations	Development	Specific policy	Incorporate protection of priority natural resource areas through the subdivision and development process			Development			
K489	CP7	Ci-Shakopee	Incorporate environmentally-responsible practices into land subdivision and development regulations	Development	Specific policy	Adopt a conservation design policy and use a conservation design tool in negotiating development agreements		Y	Development	Low Impact Devel		
K49	CP1	Scott	Altered Landscape	Natural Corridors	General goal	Encourage developments to fit the natural landscape through appropriate design and ensure the protection and enhancement of natural physical features such as floodplains, lakes, wetlands, vegetation, hydric soils, and steep slopes.		Y	Flood	Corridors	Steep slopes	
K490	CP7	Ci-Shakopee	Incorporate environmentally-responsible practices into land subdivision and development regulations	Development	Specific policy	Incorporate woodland best management practices addressing protection of wooded areas into zoning ordevelopment review			Development			
K491	CP7	Ci-Shakopee	Incorporate environmentally-responsible site design practices into plan approval and review processes	Development	Specific policy	» Consider site density, placement and buffer requirements to minimize land disturbance and reduce on-site erosion from new greenfield development		Y	Development	Low Impact Devel	Sediment.Erosion	
K492	CP7	Ci-Shakopee	Incorporate environmentally-responsible site design practices into plan approval and review processes	Development	Specific policy	Continue to require low-impact development requirements, such as on-site stormwater management techniques and tree replacement for new development		Y	Stormwater	Development	Low Impact Devel	

K493	CP7	Ci-Shakopee	Adopt and implement plans and policies to protect parks and transitional natural areas	Corridors	Specific policy	Refine urban forestry plan for street tree planting and management			Corridors			
K494	CP7	Ci-Shakopee	Adopt and implement plans and policies to protect parks and transitional natural areas	Corridors	Specific policy	Continue to preserve natural resources in areas in or adjacent to parkland			Corridors			
K495	CP7	Ci-Shakopee	Adopt and implement plans and policies to protect parks and transitional natural areas	Corridors	Specific policy	Continue to strategically acquire natural space and corridors for future parkland			Corridors			
K496	CP7	Ci-Shakopee	Adopt and implement plans and policies to protect parks and transitional natural areas	Corridors	Specific policy	Review and refine city-wide natural resources corridor system			Corridors			
K497	CP7	Ci-Shakopee	Cultivate opportunities for engagement with the natural world	Public engagement	Specific policy	Develop low-impact trail systems that balance community connections with wildlife corridor protection		Y	Public engagement	Corridors		
K498	CP7	Ci-Shakopee	Encourage and conduct environmental education and outreach initiatives	Public education	Specific policy	» Educate the public on environmentally-responsible alternatives to traditional landscape practices (ex. Herbicide and pesticide use as well as sustainable, native alternatives to traditional lawns and landscape vegetation)			Public engagement	education		
K499	CP7	Ci-Shakopee	Encourage and conduct environmental education and outreach initiatives	Public education	Specific policy	Support or develop outreach tools and activities to promote water quality initiatives, residential stormwater management, recycling and composting, etc.		Y	Stormwater	Public engagement	education	
K5	CP1	Scott	Feedlots	LAND USE AND GROWTH MANAG	General goal	New or expanding feedlots resulting in over 500 animal units or more shall be regulated to minimize impacts on existing residences and the environment. Reason: Large feedlots present the potential for greater impacts to the environment than traditional smaller labor intensive operations. Feedlots and resulting manure management present increased concerns for ground water protection, air quality, storm water runoff, insect control, and public health. These intensive land uses should be controlled to prevent adverse impacts that are detrimental to society and the long-term economy of the area.			Agriculture			
K50	CP1	Scott	Artificially drained hydric soils	Natural Corridors	Specific action	Encourage artificially drained hydric soils to revert to natural conditions and the restoration of wetlands using the Public Value Incentive Program.			Corridors			
K500	CP7	Ci-Shakopee	Demonstration projects	Public education	Specific policy	Support or establish demonstration projects for environmental remediation and enhancement			Public engagement	education		
K501	CP7	Ci-Shakopee	Invasive species	Public education	Specific policy	Provide materials for identifying invasive animal and plant species with instructions on what to do if spotted		Y	Invasives	Public engagement	education	
K502	CP7	Ci-Shakopee	Invasive species	Public education	Specific policy	» Support or host events to promote awareness of invasive species and best practices for preventing their expansion		Y	Invasives	Public engagement	education	
K503	CP7	Ci-Shakopee	Public spaces	Stormwater	Specific policy	Mitigate stormwater using on-site techniques such as bioswales, rain gardens and pervious pavers			Stormwater			
K504	CP7	Ci-Shakopee	Public spaces	Habitat	Specific policy	Where appropriate, select native vegetation for turfgrass, flowers, shrubs and trees			Vegetation			
K505	CP7	Ci-Shakopee	flood preparedness	Flooding	Specific policy	Develop a flood preparedness strategy to address more frequent and severe flooding			Flood			
K506	CP2	Co-Carver	agriculture	Land use	General goal	Maintain the viability of the agricultural economy;			Agriculture			
K507	CP2	Co-Carver	Natural resources	Land use	General goal	Conserve natural and historic resources;	X					
K508	CP2	Co-Carver	Urban and rural development	Land use	General policy	The County's fundamental land use policy position is that most urban developments should occur within the municipalities of the County and that the area outside of the municipalities remains rural in character with agriculture as the principal land use.			Development			
K509	CP2	Co-Carver	Natural resource and corridors	Land use	General policy	Local government jurisdictions are encouraged to collaborate with the County and other agencies to preserve, protect and/or restore natural resource areas and corridors within city growth areas.		Y	Corridors	Cooperation		
K51	CP1	Scott	Development on slopes	Natural Corridors	Specific action	Development on slopes identified as potential problem areas due to erosion or slope stability concerns shall be restricted or prohibited. Methods of controlling erosion or unstable slopes shall be indicated on all development requests		Y	Development	Corridors	Sediment.Erosion	
K510	CP2	Co-Carver	Natural feature and systems protection	Development	General policy	Lakes, wetlands, streams, bluffs, and other sensitive natural features shall be protected from the adverse impacts of construction and development. Land use changes and development should be designed so as to minimize disturbance of natural systems. Building sites should remain in their natural state to the greatest extent possible. •		Y	Unique.Sensitive.h	Development		
K511	CP2	Co-Carver	Natural drainage	Land use	General policy	Natural drainage should be used to the greatest extent possible.	X					
K512	CP2	Co-Carver	Erosion and sedimentation from construction	Development	General policy	Measures shall be taken to prevent erosion and sedimentation during and after construction including meeting all state and federal standards and the requirements of the County Water Plan and Rules.			Sediment.Erosion			
K513	CP2	Co-Carver	Protect natural resources for the future	Natural resource protection	General goal	Protect and preserve the natural features within the County and ensure these natural features are sustained for the future.			Natural Resource Protection			
K514	CP2	Co-Carver	Impacts of natural disasters	Flooding	Specific goal	Minimize the potential impact of natural disasters and identify areas which may be at higher risk to potential damage.			Flood			
K515	CP2	Co-Carver	Conservation easement program		Specific policy	The County will offer Townships the ability to select a conservation incentive land use option to help promote the permanent conservation of natural amenity areas.			High value easements			
K516	CP2	Co-Carver	Natural resources in planning projects	Development	General policy	The County will consider potential impacts to natural resources while evaluating or planning potential projects. The County will reference applicable zoning regulations and applicable plans, including the Carver County Groundwater Plan, CCWMO Water Plan and MCWD Water Management Plan.			Groundwater			
K517	CP2	Co-Carver	Upland natural resources are essential to maintaining the function and quality of surface water resources	Upland habitat	General goal	Preserve and restore aquatic, wetland and associated upland habitats in a watershed context.			Wetlands			

K518	CP2	Co-Carver	. Most potential contamination threats to surface water and groundwater are human-caused, thus preventing contamination can start with educational efforts	Public education	General goal	To provide those living, working, and recreating in Carver County with the knowledge, skills, and motivation required to assure protection and improvement of the county's water resources.		Y	Public engagement	Groundwater		
K519	CP2	Co-Carver	Preserve natural resources	Natural resource protection	General goal	Use methods consistent with existing laws to preserve natural areas, parklands, lakes and streams; in recognition that citizens of Carver County have a his- tory of placing a high value on the natural resources found throughout the county.			Unique.Sensitive.high value			
K52	CP1	Scott	Habitat restoration	Natural Corridors	Specific action	Promote the use of native grasses, forbes, shrubs, and trees in development site restoration			Corridors			
K520	CP2	Co-Carver	Seamless trail system	Parks and trails	Specific goal	Fostering a fully integrated and seamless system of regional, local, state, and federal parks, trails, and conservation lands			Trails			
K521	CP2	Co-Carver	Public amenity	Parks and trails	General goal	To provide residents with parks and natural areas for recreational uses, protection of the natural environment and geographical characteristics of the County, as visual/physical buffering of land development, and as a means to maintain the sense of place, ambiance, appearance, and cultural and natural history of the County.		Y	Natural Resource F	Trails		
K522	CP2	Co-Carver	Regional connections	Parks and trails	Specific goal	To provide residents with a high quality and interconnected trail and bikeway system for recreation, fitness, and transportation and as a means to tie parks and open spaces together with local communities. To provide connections with the greater regional trail system.			Open and Green			
K523	CP2	Co-Carver	MINNESOTA RIVER BLUFFS AND RAVINES Regional park SEARCH AREA	Parks and trails	Specific	The Minnesota River Bluffs and Ravines search area is located south of the City of Carver and extends along the bluff and ravine system of the Minnesota River in San Francisco Township. This search area provides unique opportunities for a regional park facility, including the potential to operate a regional facility adjacent to or within the Minnesota River Valley and in close proximity to land that is owned and managed by the Minnesota Department of Natural Resources and the US Fish & Wildlife Service		Y	Unique.Sensitive.h	Increase River Use	Steep slopes	
K524	MP16	Carver County WR	Impaired waters	Surface Water Quality	Specific goal	Impaired waters that are close to the state standard will be delisted during the life of the plan. Determinations of what is close to the standard will be based on the characteristics of the waterbody and the impaired parameter and will be made on an ongoing basis.			Impaired.TMDL			
K525	MP16	Carver County WR	Impaired waters	Surface Water Quality	Specific goal	Other impaired waters will show a stable or improving trend			Impaired.TMDL			
K526	MP16	Carver County WR	Impaired waters	Surface Water Quality	Specific goal	Unlisted lakes will show a stable or improving trend			Impaired.TMDL			
K527	MP16	Carver County WR	Impacts on water resources	Stormwater	Specific goal	To manage the volume and flow of stormwater runoff to minimize the impacts of land use change on surface water and groundwater resources within the watershed.		Y	Stormwater	Groundwater		
K528	MP16	Carver County WR	Groundwater Resource Protection	Groundwater	Specific goal	To preserve and protect groundwater resources within the watershed			Groundwater			
K529	MP16	Carver County WR	Protect water resources through education	Public education	Specific goal	To provide those living, working, and recreating in the CCWMO with the knowledge, skills, and motivation needed to make positive behavior changes that protect surface water and groundwater resources.		Y	Public engagement	Groundwater		
K53	CP1	Scott	compatible land use	Natural Corridors	Specific action	Establish compatible land use patterns that relate to the county's environmental features.			Corridors			
K530	MP16	Carver County WR	Coordination with Partners	Coordination	Specific goal	To work with partners to identify and implement efficient solutions to water resource problems.			Cooperation			
K531	MP16	Carver County WR	Evaluating Effectiveness & Progress	Resource assessment	Specific goal	To collect data and use the best available science to identify problems and evaluate the effectiveness of solutions.			Monitoring			
K532	MP16	Carver County WR	Regulatory standards to protect water resources	Water Resource preservation	Specific policy	The CCWMO will continue to apply the regulatory standards described in the Water Resource Management Ordinance for erosion and sediment control, stormwater management (rate, volume, water quality), wetland protection, floodplain management, and topsoil management with the goal of preserving and improving surface water and groundwater resources and managing flood risk.		Y	Stormwater	Flood	Sediment.Erosic	Groundwater
K533	MP16	Carver County WR	Water resources project list	Water Resource preservation	Specific policy	The CCWMO will annually review the project list (see Table 5-x) and potential project list (Table 5-x). The CCWMO will prioritize projects based on methodology described in Chapter 5, which considers the following factors: - Benefit to a priority water body - Project-specific water quality benefits - Project-specific volume control benefits - Relationship to impaired waters - Educational benefits - Partnership opportunities - Cost-benefit factors			Impaired.TMDL			
K534	MP16	Carver County WR	Cost share programs	Water Resource preservation	Specific policy	The CCWMO will operate cost share programs designed to help with the implementation of small-scale projects that help protect and improve surface water and groundwater resources. Cost share programs reduce barriers to implementation by providing funding and technical assistance and can encourage behavior change			Groundwater			
K535	MP16	Carver County WR	Coordination with Partners	Coordination	Specific policy	The CCWMO will partner with cities, state agencies, and other entities to identify, fund, and implement projects that meet the goals of this plan			Cooperation			
K536	MP16	Carver County WR	Monitoring	Resource assessment	Specific policy	The CCWMO will continue to monitor lakes, streams, wetland areas, stormwater BMPs, groundwater, and other resources as needed to track trends over the long term and to comply with TMDL studies and Implementation Plans.		Y	Stormwater	Monitoring	Groundwater	Impaired.TMDL
K537	MP16	Carver County WR	Program effectiveness	Resource assessment	Specific policy	The CCWMO will use data to evaluate the performance of programs, projects, and best management practices.	X					
K538	MP16	Carver County WR	Coordinate monitoring	Resource assessment	Specific policy	The CCWMO will coordinate monitoring efforts with other entities to identify and fill data gaps, promote efficiency, and increase data availability.			Monitoring			
K539	MP16	Carver County WR	Coordinate monitoring invasive species with partners	Resource assessment	Specific policy	The CCWMO will partner with other entities and stakeholders to monitor the extent of aquatic invasive species (AIS) within the watershed.		Y	Monitoring	Invasives		
K54	CP1	Scott	Natural vegetation and areas preservation	Natural Corridors	Specific action	Promote the preservation of natural vegetation including prairies, woodlands, and wetlands as a design consideration for new subdivisions and developments and encourage preservation of high quality natural areas using the Public Value Incentive Program.			Corridors			

K540	MP16	Carver County WR	Education as tool to protect water resources	Education	Specific policy	The CCWMO recognizes and supports education as a key to the protection of surface water and groundwater resources. The CCWMO will develop, approve and maintain an education plan that outlines education efforts and is reviewed annually.			Y	Public engagement	Groundwater		
K541	MP16	Carver County WR	Targeted campaigns	Education	Specific policy	The CCWMO will create campaigns for specific target audiences to encourage behavior changes that protect surface water and groundwater resources.			Y	Public engagement	Groundwater		
K542	MP16	Carver County WR	Education program effectiveness	Education	Specific policy	The CCWMO will track information on participation and engagement in educational programs. The information will be used to evaluate the effectiveness of different education strategies.				Public engagement.	education		
K543	MP16	Carver County WR	Feasibility studies	Water Resource preservation	Specific policy	The CCWMO will continue to develop feasibility and other studies to evaluate options to protect, manage, and improve surface water and groundwater resources.				Groundwater			
K544	MP16	Carver County WR	TMDLs	Impaired waters	Specific policy	The CCWMO will develop or partner in the development of TMDLs and Implementation Plans for listed impaired waters within the CCWMO, with the final goal of EPA approval for TMDL Studies for all listed impaired waters within the watershed.				Impaired.TMDL			
K545	MP16	Carver County WR	Effective Communication	Coordination	Specific policy	The CCWMO will communicate regularly and effectively with partners, state agencies, and other entities to make programs more effective.				Cooperation			
K546	MP16	Carver County WR	Plan amendment	Plans	Specific policy	The CCWMO will maintain an up-to-date plan document by periodically amending the plan to incorporate newly completed studies, update the project list, etc.		X					
K547	MP16	Carver County WR	Innovative BMPs	Pollution	Specific policy	The CCWMO will investigate and demonstrate applicable new and innovative BMPs which have the potential to reduce pollutants to water bodies.		X					
K548	MP16	Carver County WR	BMP monitoring and effectiveness	Stormwater	Specific policy	Establish stormwater BMP monitoring sites for intensive monitoring to review efficiencies of specific BMP type. Data will be used to update County Stormwater Ordinances.			Y	Stormwater	Monitoring		
K549	MP16	Carver County WR	Stormwater workshop	Stormwater	Specific policy	CCWMO will host an annual stormwater workshop designed to educate developers, local officials, planners, engineers and decision makers about stormwater BMPs and new methods and developments in stormwater research.				Stormwater			
K55	CP1	Scott	building permit enforcement	Natural Corridors	Specific action	Require that all building permits and subdivisions comply with Minnesota Department of Natural Resources floodplain standards and shoreland statutes.			Y	Flood	Corridors		
K550	MP16	Carver County WR	Homeowner workshops	Water Resource preservation	Specific policy	The CCWMO will provide seminars and workshops for homeowners on topics including shorelines, sustainable landscaping, and raingardens.				Public engagement.	education		
K551	MP16	Carver County WR	Behaviors that protect water resources	Water Resource preservation	Specific policy	The CCWMO will identify behaviors that protect water resources. The CCWMO will research each behavior and select behaviors with the following qualities for campaigns: highest impact, highest probability of citizens adoption, and least amount of current participation.				Public engagement.	education		
K552	MP16	Carver County WR	Locating and prioritizing gullys	Gullys	Specific policy	The CCWMO will identify gully locations within the watershed and use monitoring and other data to prioritize areas for restoration.			Y	Monitoring	Steep slopes		
K553	MP16	Carver County WR	Wetland restoration	Wetlands	Specific policy	The CCWMO will further pursue restoration of the highest priority sites identified in the wetland restoration prioritization. The CCWMO will work toward restoring wetlands in cooperation with existing programs through agencies such as the Board of Water and Soil Resources, U.S. Fish and Wildlife Service, Soil and Water Conservation District, and Reinvest in Minnesota, or through regional stormwater planning by the LGU.			Y	Stormwater	Cooperation		
K554	MP16	Carver County WR	East Chaska Creek Chain of Lakes SWA Implementation	Stormwater	CIP	East Chaska Creek Chain of Lakes SWA Implementation. 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. East Chaska Creek East Chaska Creek Chain of Lakes (Priority 2) Stormwater Retrofit City of Chaska 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 $200,000 $50,000	2020 to 2029	$200,000	Y	Stormwater	Cooperation	CIPs.Projects	
K555	MP16	Carver County WR	Stream restorations	Water resource restoration	CIP	Stream Restorations. Restore stream reaches that have been altered by human activities to a more natural/stable state. Restoration practices may include remeandering, reconnection to floodplains, reconnection to historical stream beds, abandoning maintenance schedules, and other BWSR approved practices. Watershed wide Watershed wide Stream Restoration SWCD; NRCS; CROW; DNR; Army COE 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 $500,000 $100,000	2020 to 2029	$500,000	Y	Flood	CIPs.Projects		
K556	MP16	Carver County WR	Bank stabilization	Erosion	CIP	Bank Stabilization. Stabilize eroded and degraded streambanks to reduce erosion into streams. The CCWMO will prioritize projects that project infrastructure and utilize natural armoring to stabilize banks. Watershedwide Watershedwide Bank Stabilization 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 $300,000 $150,000	2020-2029	$300,000	Y	Sediment.Erosion	CIPs.Projects		
K557	MP16	Carver County WR	Elimination of direct discharge SSTS	Pollution	CIP	SSTS Direct Discharge Incentives. In 2007, the County Board established a cost share program to accelerate the elimination of direct discharge SSTS. The program offers direct incentives and low-interest loans to landowners to fix these systems. Watershedwide Watershedwide SSTS upgrades Environmental Services Dept. 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 $600,000 $600,000 Replacement of direct discharge SSTS will be complete in the Bevens and Carver Creek Subwatershed in 2019 and then focus will shift to the South Fork Crow River and East and West Chaska Creek.	2020 to 2029	$600,000	Y	CIPs.Projects	Natural Resource Protection		

K558	MP16	Carver County WR	Stormwater Retrofits in Untreated Urban Areas	Stormwater	CIP	Stormwater Retrofits in Untreated Urban Areas. Collaborate with cities, business, and other landowners to implement stormwater retrofits practices in areas with minimal or no stormwater treatment that improve water quality in priority waterbodies. Untreated areas have been identified in local water plans. Watershedwide Watershedwide Stormwater Retrofit Local Partners 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 $400,000 $200,000	2020 to 2029	$400,000	Y	Stormwater	Cooperation	CIPs.Projects
K559	MP16	Carver County WR	Turf to Prairie/Forest Initiative	Habitat	CIP	Turf to Prairie/Forest Initiative. Restore large areas of managed turf grass to prairie/forest to conserve groundwater and improve the quality of stormwater runoff. Watershedwide Watershedwide Prairie Restoration Cities 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 $100,000 $50,000	2020 to 2029	$100,000	Y	Stormwater	Groundwater	CIPs.Projects
K56	CP1	Scott	storm water storage	Natural Corridors	Specific action	Promote restoration and utilization of natural storm water storage areas for wildlife, aesthetics, and storm water management				Corridors		
K560	MP16	Carver County WR	Wetland Restoration	Wetlands	CIP	Wetland Restoration. Restore priority wetland restoration areas as identified in the wetland restoration area prioritization. Watershedwide Watershedwide Wetland Restoration Cities, SWCD, US Fish and Wildlife Service, BWSR 2022-2023 2024-2025 2026-2027 2028-2029 $50,000 $50,000	2022 to 2029	$50,000	Y	CIPs.Projects	Wetlands	
K561	MP16	Carver County WR	Carver Creek Floodplain Reconnection	Floodplains	CIP	Carver Creek Floodplain Reconnection. Reconnect a degraded and historically ditched section of Carver Creek to its floodplain to reduce bank degradation and soil loss. Carver Creek Carver Creek Stream Restoration City of Carver, US Fish and Wildlife Service, SWCD 2022-2023 $100,000 $50,000	2022 to 2023	$100,000	Y	Flood	CIPs.Projects	
K562	MP16	Carver County WR	Carver Creek Gully Stabilization	Erosion and gullys	CIP	Carver Creek Gully Stabilization. Stabilize a large gully on Carver Creek in Dahlgren Township (Section 26). Carver Creek Carver Creek (Priority 2) Bank Stabilization SWCD, NRCS 2024-2025 $40,000 $10,000	2024 to 2025	$40,000	Y	Sediment.Erosion	Steep slopes	CIPs.Projects
K563	MP16	Carver County WR	Dahlgren Road Stormwater Retrofit	Stormwater	CIP	Dahlgren Road Stormwater Retrofit. 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. Carver Creek Timber Creek Stormwater Retrofit Dahlgren Township, City of Carver 2022-2023	2022 to 2023	unknown	Y	Stormwater	CIPs.Projects	
K564	MP16	Carver County WR	East Chaska Creek Chain of Lakes Reclamation - Phase 1	Water quality	CIP	East Chaska Creek Chain of Lakes Reclamation - Phase 1. 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 Hazeltine Lake. East Chaska Creek East Chaska Creek Chain of Lakes (Priority 2) Lake Restoration City of Chaska 2024-2025 $200,000 $75,000	2024 to 2025	$200,000	Y	CIPs.Projects	Impaired.TMDL	
K565	MP16	Carver County WR	East Chaska Creek Chain of Lakes Reclamation - Phase 2	Water quality	CIP	East Chaska Creek Chain of Lakes Reclamation - Phase 2. 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. East Chaska Creek East Chaska Creek Chain of Lakes (Priority 2) Lake Restoration City of Chaska 2026-2027 $225,000 $75,000	2026 to 2027	$225,000	Y	CIPs.Projects	Impaired.TMDL	
K566	MP24	Hennepin NR	Protect and restore lakes, rivers and streams	Water Resource protection	Specific action	Track the quality of the county's water resources. To assess long-term trends in the quality of the county's water resources, the county will use available data to track annual conditions on 50 reference lakes. To avoid duplication of monitoring efforts, the county will use data collected by watersheds, cities and other groups. The county will also monitor the state's impaired waters list and resulting Total Maximum Daily Load (TMDL) studies, which set pollutionreduction goals needed to restore waters. This information will be shared with the county board, partners and the public to increase awareness of the status of our water resources and to guide decisions.			Y	Monitoring	CIPs.Projects	Impaired.TMDL
K567	MP24	Hennepin NR	Work with partners to implement water quality restoration and protection projects to improve impaired water resource	Impaired waters	Specific action	Work with partners to implement water quality restoration and protection projects to improve impaired water resources. To remediate impaired waters and support local leads on TMDLs, the county provides technical and financial assistance to partners to implement best management practices. These practices capture and filter stormwater to slow and reduce runoff, reduce erosion and sedimentation, preserve and establish native vegetation and vegetative buffers, and enhance wildlife habitat.			Y	Stormwater	Sediment.Erosion	Impaired.TMDL
K568	MP24	Hennepin NR	Provide technical assistance and education to residents, municipalities, watershed management groups and other county departments to protect and restore our water resources.	Assessments	Specific action	Conducting area-wide assessments regarding water quality, wetlands, erosion and floodplain issues. The county also undertakes specific watershed and resource-based assessments to identify and prioritize the implementation of best management practices that protect and restore water resources.			Y	Flood	Sediment.Erosion	
K569	MP24	Hennepin NR	Reduce the impacts of stormwater runoff through the implementation of best management practices.	Stormwater	Specific action	The county will promote the implementation of low-impact development and green infrastructure for newly developed and redeveloped properties, agricultural best practices, wetland restorations and innovative stormwater management practices where applicable.			Y	Stormwater	Low Impact Devel	
K57	CP1	Scott	Require buffers	Natural Corridors	Specific action	Require natural vegetative buffer areas along all bluffs, lakes, wetlands, creeks, and drainageways.				Corridors		
K570	MP24	Hennepin NR	Reduce the impacts of stormwater runoff through the implementation of best management practices.	Stormwater	Specific action	The county will also continue to research and implement state-of-the-art methods of applying chloride to reduce water pollution while maintaining safe roads.				Stormwater		
K571	MP24	Hennepin NR	Support planning and education efforts to protect groundwater resources.	Groundwater	Specific action	To effectively protect and improve groundwater resources, the county will support cooperative planning efforts that will evaluate existing data, identify additional data needs, and assess the susceptibility of our surface and groundwater resources to current and projected levels of groundwater withdrawal, contamination and other threats.			Y	Cooperation	Groundwater	
K572	MP24	Hennepin NR	Support planning and education efforts to protect groundwater resources.	Groundwater	Specific action	Through the Hennepin Natural Resource Partnership, the county will provide a forum for partner engagement in groundwater issues to improve related decision-making processes and build a strong base of support for groundwater protection by encouraging communication and dialogue.				Groundwater		

K573	MP24	Hennepin NR	Support planning and education efforts to protect groundwater resources.	Groundwater	Specific action	The county will continue to work with the Minnesota Department of Natural Resources, the Minnesota Department of Health and the Metropolitan Council to assist local communities in identifying groundwater protection needs and integrating groundwater issues with other local planning efforts, such as growth management plans			Groundwater			
K574	MP24	Hennepin NR	work with partners to improve the understanding of groundwater and surface water interactions	Groundwater	Specific action	The county will work with partners to improve the understanding of groundwater and surface water interactions and its influence on the county's groundwater-dependent natural resources. The county will also explore opportunities to collaborate with partners to promote water conservation messages.		Y	Cooperation	Groundwater		
K575	MP24	Hennepin NR	Advocate for the cleanup of contaminated sites with the potential to significantly impact groundwater resources.	Groundwater	Specific action	Using the county's Geographic Information System, staff will evaluate the locations of contaminated sites with the goal of identifying contaminated sites that may pose significant risks to groundwater resources. Although the regulatory authority for the protection of groundwater rests with the Minnesota Pollution Control Agency and the Minnesota Department of Health, the county will work with state regulatory agency staff, municipalities, and, where necessary, landowners to advocate for the cleanup of sites that pose a high risk to the environment and/or human health			Groundwater			
K576	MP24	Hennepin NR	Identify the highest-quality wetlands to ensure their protection and determine impacted wetlands suitable for restoration.	Wetlands	Specific action	The county will work with partners to conduct a thorough analysis of the function and environmental benefits of the wetlands in the county. This analysis will help set priorities for protecting the highest-quality wetlands and identifying and restoring wetlands that provide the biggest benefit to impaired waters.		Y	CIPs.Projects	Impaired.TMDL		
K577	MP24	Hennepin NR	Pursue the creation and restoration of wetlands to establish wetland banking credits, mitigate losses and remediate impaired waters within the county.	Wetlands	Specific action	To bolster the availability of mitigation credits within Hennepin County, the county will identify, evaluate and pursue wetland restoration and funding opportunities on county-owned properties and tax-forfeited lands		Y	CIPs.Projects	Impaired.TMDL		
K578	MP24	Hennepin NR	Prioritization of Identified restoration opportunities	Wetlands	Specific action	the county will evaluate identified wetland restoration opportunities on county properties, tax-forfeited lands and other available sites to determine those that should be prioritized based on their functions to help address water quality and quantity impairments.		Y	CIPs.Projects	Impaired.TMDL		
K579	MP24	Hennepin NR	Identify, protect and restore the best remaining natural areas and corridors.	Corridors and natural areas	Specific action	Every acre in the county has been identified and classified with respect to its value as a natural area and habitat, laying the groundwork for long-term protection and restoration of natural areas and important corridors or greenways that facilitate the growth and movement of wildlife and native vegetation between natural areas. Formally designating the best remaining natural areas and corridors would better position the county and partners to leverage funds for their protection and enhancement. The county will continue to maintain an interactive Natural Resources Map that assists local governments in managing growth and protecting their natural resources and green spaces.			Corridors			
K58	CP1	Scott	Wetland restoration	Natural Corridors	Specific action	Promote restoration of upland and wetland areas (see also Goal #VIII-2 for wetland restoration and protection.			Corridors			
K580	Map3	Hennepin NR Map		Habitat	Specific action				Open and Green			
K581	MP24	Hennepin NR	Promote the establishment of conservation easements to protect natural areas.	Natural resource protection	Specific action	, the county does not have a formal program to actively pursue and fund conservation easement opportunities. The county will explore options for establishing a board-adopted conservation easement program that provides guidance for the consideration of potential easement properties as opportunities arise via tax-forfeiture, capital projects or private landowner inquiries		Y	High value easeme	CIPs.Projects		
K582	MP24	Hennepin NR	Work with partners to preserve, enhance and expand urban green spaces.	Green space	Specific action	Through the county's work identifying and mapping critical habitats and wildlife corridors and the facilitation of the Hennepin Natural Resource Partnership, the county will continue to collaborate with partners to encourage the incorporation of green spaces, sustainable landscaping practices and establishment and maintenance of tree canopies in developing and redeveloping areas.		Y	Low Impact Devel	Corridors	Cooperation	
K583	MP24	Hennepin NR	Develop and implement sustainable landscaping guidelines and practices for county-funded projects and properties. Sustainable landscaping focuses on creating outdoor spaces that are	Sustainablility	Specific action	The county will promote the sustainable use of water and land, conserve soils and vegetation, support natural ecosystem functions and lessen maintenance costs and needs by incorporating sustainable landscaping principles in county projects and properties.			Development			
K584	MP24	Hennepin NR	Work with partners and landowners to implement sustainable landscaping and low-impact development practices in developed and redeveloping areas	Development	Specific action	The county will support landscapes that serve an ecological function by working with partners through the Hennepin Natural Resources Partnership and by providing technical and financial assistance to incorporate low-impact development and sustainable landscaping practices into development and redevelopment projects.		Y	Development	Low Impact Devel		
K585	MP24	Hennepin NR	Prevent the introduction and spread of invasive species.	Invasive species	Specific action	The county works to prevent the spread and promote the control of invasive species by participating on regional and statewide invasive species task forces and by educating the public on the actions they need to take. The county will utilize state funding, as available, to enhance efforts to prevent the spread of invasive species, such as using the state's Aquatic Invasive Species Prevention Aid to construct decontamination stations, assist in watercraft inspections and enhance enforcement			Invasives			
K586	MP24	Hennepin NR	Control and prevent the spread of noxious weeds.	Noxious weeds	Specific action	The county assists in administering and enforcing the state's noxious weed laws and rules and provides education, training and outreach for professional and private land managers. The county inspects county right-of-ways for noxious weeds and works with cities to respond to complaints.	X					

K587	MP24	Hennepin NR	Assist partners in identifying high-priority areas where soil erosion, sedimentation and related water quality degradation is occurring.	Erosion and sedimentation	Specific action	The county will offer to help partners, including watershed districts, water management organizations, cities and landowners, identify the types and locations of high-quality soils, prime farmlands and erodible soils. The county will then work with partners to set priorities for conservation planning and implementation, install best management practices, stabilize shorelines and establish vegetation buffers, and leverage outside funding sources such as the Natural Resources Conservation Services Fund.					Sediment.Erosion			
K588	MP24	Hennepin NR	Facilitate collaboration and coordination among natural resource management groups.	Coordination	Specific action	To provide a forum for a more holistic approach to natural resource management, the county has convened a group of representatives from watershed districts, water management organizations, cities, county departments and state and regional natural resource agencies. The Hennepin Natural Resources Partnership promotes collaborative land and water management efforts on issues transecting political and hydrologic boundaries, encourages sharing of resources and information, increases opportunities to leverage resources and provides a venue to address countywide policy issues.					Cooperation			
K589	MP24	Hennepin NR	Collaborate with partners to research and promote innovative solutions to address regional issues and meet common goals.	Innovation	Specific action	The county will work with partners, including other governmental units, nonprofit organizations and educational institutions, to research, implement and promote innovative solutions to regional issues.					Cooperation			
K59	CP1	Scott	Protect sensitive areas	Natural Corridors	General goal	Protect environmentally sensitive areas characterized by hydric soils, steep slopes, tree massing, wetlands, lakes, floodplains, and shorelands from degradation				Y	Unique.Sensitive.h	Flood	Corridors	Steep slopes
K590	MP24	Hennepin NR	Collaborate with partners to deliver environmental education.	Education	Specific action	The county works with partners to deliver environmental education, allowing the county to leverage resources, expertise and community connections. The county will implement additional efforts to engage youth in hands-on, outdoor educational experiences and service-learning projects. The county will also focus on reaching new and diverse audiences through peer-to-peer outreach and culturally appropriate educational materials.					Cooperation			
K591	MP24	Hennepin NR	Work with partners to leverage resources to implement projects and programs that meet common natural resource management goals.	Financial resources	Specific action	In an effort to lessen the burden on local taxpayers, the county will seek partners to jointly pursue grant funds on projects and programs that address common natural resources issues, needs and goals.					Cooperation			
K592	CP1	Scott	Blakeley Bluffs Ravine Stabilization Phase	Ravine Erosion	CIP	Assess and address ravine erosion on three county parcels within the future Blakeley Bluffs Park Reserve. Preliminary review suggests projects totaling in the $100,000 range. This project is likely to qualify for Clean Water Funding, requring a 25% local match. Funding: $75,000 Clean Water and $25,000 County Levy. The construction portion of this project is dependent on receiving the Clean Water grant. 2020	2019 & 2020		30,000 & 100,000	Y	Sediment.Erosion	Steep slopes	CIPs.Projects	
K593	CP1	Scott	Blakeley Bluffs Land Acquisition	Bluffs	CIP	Land purchase of a property in the Blakeley Bluffs Park Reserve. The project may also include an appraisal, survey, demolition, and boundary signs. NOTE: 75% of the funding would be provided through the Regional Park Acquisition Opportunity Grant Program, with the 25% local match eligible for reimbursement in future Regional Park CIP allocations. 480,000 2019		2019	$480,000	Y	Unique.Sensitive.h	CIPs.Projects		
K594	CP1	Scott	Minimize impacts of development on natrual resources	Development	General goal	Support and encourage clustered developments that respect the overall planned density for the area and that minimize the impact of development on the environment and significant natural features.					Low Impact Devel			
K595	CP1	Scott	Green innovative techniques for development	Development	Specific policy	Encourage innovation in subdivision design and housing development through the use of devices such as the cluster unit development concept, sustainable development practices (low impact development, best management practices, etc.), environmentally friendly building (green roofs, energy efficient materials, LEED certified construction, etc.), and development techniques that conserve land and increase value, provided desired densities can be maintained.					Low Impact Devel			
K596	MP23	Scott WR	The Scott County Local Water Plan (SCLWP) incorporates by reference the June 2015 Amended LMRWD Plan's Land & Water Resource Inventory and acknowledges the Nine Goals forming the foundation of all actions to be taken by the LMRWD during the life of the Plan:	Recreational Boating		Goal 8: Commercial and Recreational Navigation: To maintain and improve navigation and recreational use of the Lower Minnesota River					Navigation.boating			
K597	CP1	Scott	The Ports of Savage is a nationally prominent port for the shipment of grain and other commodities and provides the only commercial navigation access to the Minnesota River in the metropolitan area.	Navigation	Specific issue	The TH 13 Corridor at the Ports of Savage is a high funding priority for SCALE. This corridor is considered the highest transportation priority for SCALE and is considered a multi-modal corridor serving regional and global markets. The productivity of the Ports will be limited if TH 13 cannot efficiently serve them.					Navigation.boating			
K598	CP1	Scott		Recreational Boating		There are four boat launches onto the Minnesota River between Shakopee and Jordan and one canoe access near Belle Plaine.					Navigation.boating			
K599	CP1	Scott	Provide a diversity of natural resource based outdoor education and recreational opportunities that are accessible and affordable to all residents.	Recreational Boating		Prioritize water based recreation (swimming, fishing, boating).					Navigation.boating			
K6	CP1	Scott	Regional trail connection	Parks and trails	Specific Project	Prepare Master Plan for regional trail connection from New Prague to the Minnesota River				Y	Increase River Use	CIPs.Projects		
K60	CP1	Scott	Protect sensitive areas	Natural Corridors	Specific action	Use the Natural Area Corridors map of high and medium priority natural resource areas for guiding land use development decisions.				Y	Unique.Sensitive.h	Corridors		

K600	CP7	Ci-Shakopee	Minnesota Valley State Trail t is underused: lack of signage to help users find the trail, barriers to crossing Highway 101 to get to it, lighting, safety and visibility concerns, and difficulty accessing the water with boats or kayaks.	Recreational Boating				Navigation.boating
K61	CP1	Scott	Protect sensitive areas	Natural Corridors	Specific action	Require developers to identify environmentally sensitive natural resources, which may be impacted by their development.	Y	Unique.Sensitive.h Corridors
K62	CP1	Scott	Protect sensitive areas	Natural Corridors	Specific action	Promote the use of concentrated and cluster development concepts to encourage protection of natural features and prime agricultural land.	Y	Unique.Sensitive.h Corridors
K63	CP1	Scott	Protect sensitive areas	Natural Corridors	Specific action	Ensure the proper protection and preserve high priority environmentally sensitive areas to ensure long-term protection using a suite of tools, from the Public Value Incentive Program to acquisition of conservation easements from willing landowners	Y	Unique.Sensitive.h High value easemer Corridors
K64	CP1	Scott	Protect sensitive areas	Natural Corridors	Specific action	Promote the protection and management of woodland resources	Y	Unique.Sensitive.h Corridors
K65	CP1	Scott	Protect sensitive areas	Natural Corridors	Specific action	Coordinate with and promote programs by the Scott SWCD and watershed organizations that protect environmentally sensitive areas.	Y	Unique.Sensitive.h Corridors
K66	CP1	Scott	Protect sensitive areas	Natural Corridors	Specific action	Follow the bluff protection standards established by the SWMO and the LMRWD.	Y	Unique.Sensitive.h Corridors
K67	CP1	Scott	Establish corridors that link and protect natural areas	Natural Corridors	General goal	Establish natural resource corridors that link and protect natural open spaces and environmentally sensitive areas, to retain the rural character of Scott County and provide for wildlife corridors.	Y	Unique.Sensitive.h Corridors
K68	CP1	Scott	Establish corridors that link and protect natural areas	Natural Corridors	Specific action	Provide incentives through the Public Value Incentive Program for developments to preserve natural resource areas (common areas, conservation easements, or part of lots) to serve as open space, natural environment areas, and to define rural residential areas.	Y	High value easeme Corridors
K69	CP1	Scott	Establish corridors that link and protect natural areas	Natural Corridors	Specific action	Coordinate with townships, cities, Three Rivers Park District, Watershed Management Organizations, Scott SWCD and DNR to acquire and manage high value natural resources that serve as open space, natural environment areas, and help define rural residential areas.	Y	Unique.Sensitive.h High value easemer Corridors
K7	CP1	Scott	Create Blakeley Bluffs reserve	Parks and trails	Specific Project	Blakeley Bluffs Park Reserve Total Planned Size: 2,440 acres To Be Acquired: 1,855 acres over the next 50 years	Y	Unique.Sensitive.h CIPs.Projects
K70	CP1	Scott	Limited Public Awareness	Public Investment	General goal	Increase the awareness of the value and importance of natural resources, their protection, restoration, and stewardship		Public engagement.education
K71	CP1	Scott	Limited Public Awareness	Public Investment	Specific action	Inform landowners on the proper application and rates of herbicides, pesticides, and phosphorous fertilizers on lawns to prevent runoff to wetland areas and to prevent contamination of ground water and surface water resources.		Public engagement.education
K72	CP1	Scott	Limited Public Awareness	Public Investment	Specific action	Inform landowners on the control of invasive/exotic plant species in lakes, greenways, and natural areas and open spaces.	Y	Invasives Public engagement. Corridors
K73	CP1	Scott	Limited Public Awareness	Public Investment	Specific action	Implement a volunteer program for open space maintenance and citizen stewardship activities.		Public engagement.education
K74	CP1	Scott	Limited Public Awareness	Public Investment	Specific action	Inform landowners on the importance of habitat and natural communities management (e.g., lakescaping for wildlife and water quality, stream riparian vegetation management, woodland management, and prairie management).		Public engagement.education
K75	CP1	Scott	Limited Public Awareness	Public Investment	Specific action	To reduce public cost, support natural resource protection alternatives available through conservation organizations and natural environment programs.		Public engagement.education
K76	CP1	Scott	Limited Public Awareness	Public Investment	Specific action	Provide technical assistance for landowners interested in natural resources stewardship.		Public engagement.education
K77	CP1	Scott	Limited Public Awareness	Public Investment	Specific action	Support the Scott Clean Water Education Program (SCWEP) by the Scott SWCD		Public engagement.education
K78	CP1	Scott	Greenways and green infrastructure	Natural Corridors	General goal	Work to establish a regionally-focused land use and transportation planning process that will ensure the preservation and management of both "green infrastructure" (i.e., Natural Area Corridors) and "gray infrastructure" (i.e., highways, bridges).		Corridors
K79	CP1	Scott	Greenways and green infrastructure	Natural Corridors	Specific action	Promote a seamless transportation and greenway system encompassing trails, transitways, and all functional classes of roadways.		Corridors
K8	CP1	Scott	Preservation of qualities of Blakeley Bluffs and Minnesota River Valley area	Parks and trails	Specific Project	Preservation of the scenic, natural and cultural qualities of the Blakeley Bluffs and Minnesota River Valley area;	Y	Natural Resource F Trails
K80	CP1	Scott	Greenways and green infrastructure	Natural Corridors	Specific action	Consider Natural Area Corridors in the placement, design, and construction of transportation infrastructure.		Corridors
K81	CP1	Scott	Greenways and green infrastructure	Natural Corridors	Specific action	Coordinate with the Scott SWCD and SWMO to create wetland banks and prioritize local replacement.		Corridors
K82	CP1	Scott	Protect and preserve agriculture	Agricultural Resource	General goal	Protect and preserve agricultural uses and the economic viability of farming operations.		Agriculture
K83	CP1	Scott	Protect and preserve agriculture	Agricultural Resource	Specific action	The preservation of agricultural uses and operating farms within the agricultural areas shall be a priority in all planning and development decisions. Coordinate with the U of M Extension Service where appropriate. Reason: Maintaining expansive farming areas is an important element of the County's 2040 Vision. Prime agricultural land is a resource that should be protected at a priority reflective of its relative benefit to society.		Agriculture
K84	CP1	Scott	Protect and preserve agriculture	Agricultural Resource	Specific action	Limit residential development in the areas planned for long-term agriculture to very low densities that preserve the majority of the land for agricultural purposes. Reason: Residential development in long-term agricultural areas should be limited due to the importance of agriculture on the local economy and the lack of necessary infrastructure to handle new growth.		Agriculture

K85	CP1	Scott	Protect and preserve agriculture	Agricultural Resource	Specific action	Support local, state, and federal programs designed to assist farming operations, support conservation and natural resource management programs, and provide educational and public informational services. These programs include enrollment in the Agricultural Preserves and Green Acres programs. Reason: Agriculture is a local industry that provides jobs and taxes for residents. Conservation programs protect natural and water resources that enable agriculture to be sustainable.			Agriculture	
K86	CP1	Scott	Protect and preserve agriculture	Agricultural Resource	Specific action	Promote a locally-based food production system by preserving small lot farms used for fruit and vegetable production; supporting public institutions in purchasing food grown within the County; assisting in improving connections between local food producers and consumers; and assisting local governments in developing strategies that will promote a locally-based food production system.			Agriculture	
K87	CP1	Scott	Protect and preserve agriculture	Agricultural Resource	Specific action	Periodically engage a farmer advisory group to form recommendations regarding maintaining the viability of farming and preserving farmland in Scott County. The group should consist of farmers from a variety of farming operations within Scott County. Reason: Receiving input from the farmer advisory group will help position the County to develop and implement policies that support farmers and their farming operations to ensure agriculture remains a viable industry.			Public engagement.education	
K88	CP1	Scott	Agricultural impacts	Agricultural Resource	General goal	Encourage agricultural land uses to operate in a manner that is consistent with this Plan's goals and policies for water and natural resources and parks, trails, and open space.			Agriculture	
K89	CP1	Scott	Agricultural impacts	Agricultural Resource	Specific action	Agricultural land uses should be encouraged to utilize best management practices and observe conservation practices that prevent erosion and preserve natural resources. Reason: Agriculture is an intensive land use because it has the potential for significant impacts on storm water conveyance systems, ground water resources and air quality. Agriculture is a necessary land use for society but can be accomplished with reduced adverse impacts by adhering to recognized best management practices. Failure to do so can destroy the long-term productivity of the land and contaminate ground water resources for future generations, resulting in flooding, erosion problems, and air pollution.	Y	Flood	Sediment.Erosion	
K9	CP1	Scott	Spring Lake Regional Trail connecting parks and trails	Parks and trails	Specific Project	Spring Lake Regional Trail - a "destination trail" connecting Spring Lake Regional Park in Prior Lake to Lagoon Park in Jordan (a future hub of regional trails), the Minnesota Valley State Trail, and a future Carver County regional park along the Minnesota River bluffs	Y	Increase River Use	CIPs.Projects	
K90	CP1	Scott	Agricultural impacts	Agricultural Resource	Specific action	New or expanding feedlots resulting in over 500 animal units or more shall be regulated to minimize impacts on existing residences and the environment. Reason: Large feedlots present the potential for greater impacts to the environment than traditional smaller labor intensive operations. Feedlots and resulting manure management present increased concerns for ground water protection, air quality, storm water runoff, insect control, and public health. These intensive land uses should be controlled to prevent adverse impacts that are detrimental to society and the long-term economy of the area.			Agriculture	
K91	CP1	Scott	Agricultural impacts	Agricultural Resource	Specific action	Explore opportunities through the University of Minnesota's Resilient Communities Program or similar student-led research programs to address items such as identifying methods to diversifying agricultural land with perennial crops.			Agriculture	
K92	CP1	Scott	Agricultural impacts	Agricultural Resource	Specific action	Coordinate with Scott SWCD and the watershed management organizations to provide technical and financial assistance to assist landowners and farmers with protecting and improving the health of their soils, and protect their land from excessive erosion.			Sediment.Erosion	
K93	CP1	Scott	Protect farming from encroachment	Agricultural Resource	General goal	Protect active farming operations from the encroachment of conflicting residential land uses through the use of clustering.			Agriculture	
K94	CP1	Scott	Protect farming from encroachment	Agricultural Resource	Specific action	Clustering of residential development shall be limited to areas where it can be demonstrated that it does not conflict with agricultural uses. Reason: Clustering of residential uses into areas, which are less productive and which do not conflict with the primary land use, provides for some economic support to farmers who have land less suitable for farming. It also provides a residential living option to satisfy this relatively small market need.			Agriculture	
K95	CP1	Scott	Protect farming from nuisance violations	Agricultural Resource	General goal	Support the protection of farming from nuisance violations when conflicts between agricultural uses and residential development occur.			Agriculture	
K96	CP1	Scott	Protect farming from nuisance violations	Agricultural Resource	Specific Action	When nuisance complaints and conflicts occur between agricultural practices and land uses, agriculture—because of its long and vital economic benefits and historical roots—will be considered to be the prevailing land use. Reason: Farming remains a vital industry in parts of central and southwestern Scott County. While growth continues in the unincorporated areas, responses from previous planning surveys indicated residents support the longevity of agricultural practices and protection of farmers' rights from new developments.			Agriculture	
K97	CP1	Scott	Protect farming from nuisance violations	Agricultural Resource	Specific Action	Encourage townships to adopt Right-to-Farm ordinances based on state regulations. Nuisance violations related to non-agricultural operations shall not be protected by Right-to-Farm ordinances. Reason: To protect farmers from nuisance complaints and help sustain agricultural uses, Right-to-Farm ordinances have been established throughout the state and nation. These ordinances prevent neighboring property owners from filing nuisance complaints based on conventional agricultural operations.			Agriculture	

K98	CP1	Scott	Preserve and protect non-metallic mineral deposits.	AGGREGATE RESOURCE	Specific Action	Identify significant deposits of aggregate materials (includes sand, gravel, silica sand, crushed rock and limestone), and where appropriate, consider preservation and protection for future access and resource-based activities that provide for a diverse, regional, and sustainable economy and environment.			Natural Resource Protection			
K99	CP1	Scott	Preserve and protect non-metallic mineral deposits.	AGGREGATE RESOURCE	Specific Action	Encourage aggregate resources to be extracted prior to development of an aggregate-rich site. Reason: Due to increasing demand and shrinking supply of construction grade resources, aggregates should be removed from a site before development occurs.	X					
L1	A1	Gully	Active gullies are present throughout the District	Erosion, sedimentation, sediment	General	Suggests recommendations for further study. Mitigation was not mentioned. Additional work will be done 2021 to complete assessment of the entire LMRWD.			Sediment.Erosion			
L10	MP1	Trout Streams Gap A	UNNAMED #4 (NASS CREEK): Storm sewer inflows and beaver activity warm stream temperatures beyond acceptible trout habitat.	Trout habitat	General	In its present condition, the stream does not warrant consideration for management as a trout stream.			Trout.Fen			
L11	MP1	Trout Streams Gap A	UNNAMED #7: no longer designated as a trout stream because of poor habitat, including elevated water temperatures and low baseflow. It also is subject to excessive runoff from developed areas	Trout habitat	General	Periodic assessment visits are suggested to determine whether the stream conditions have improved sufficiently to warrant further consideration as a trout stream.		Y	Development	Trout.Fen		
L12	MP1 / A	Seminary Fen / Assu	These two resources are intimately connected and are almost entirely dependent on the sustained discharge of groundwater. Both resources have shown signs of decline. Understanding this complex resource may help our understanding of similar resources throughout the LMRWD.	Trout habitat / Fen viability	General	Both resources appear to be almost entirely dependent on reliable discharge of groundwater. Domestic and other competing groundwater withdrawals may be a threat to these resources.		Y	Groundwater	Trout.Fen		
L13	Mon1	Sediment	High Island Creek identified as the greatest contributor of TOTAL sediment load to the Minnesota River. The lower Minnesota River, adjacent to the LMRWD, appears to be a depositional area for much of the sediment from upstream.	Erosion, sedimentation, sediment	General	Not applicable			Sediment.Erosion			
L14	A5	Fens Analysis	Quarry Island (Gun Club Lake North) Fen has been damaged by roadway construction and other development.	Fen viability	General	Perform vegetation assessment to determine whether it harbors plant community consistent with a viable fen.		Y	Development	Trout.Fen		
L15	A5	Fens Analysis	Fort Snelling Fen (Gun Club Lake) Fen threatened by nearby development and competing water use.	Fen viability	General	Continue monitoring the water levels and fen vegetation.		Y	Monitoring	Development	Trout.Fen	
L16	A5	Fens Analysis	Nicols Meadow Fen is highly disturbed, threatened by competing water use and invasive plants.	Fen viability	General	Continue monitoring the water levels and fen vegetation.		Y	Monitoring	Invasives	Trout.Fen	
L17	A5	Fens Analysis	Black Dog Lake Fen complex has been degraded by a variety of outside pressures.	Fen viability	General	Reduction of nearby water withdrawals might benefit the fen, but recovery is uncertain.			Trout.Fen			
L18	A5	Fens Analysis	Savage Fen complex is surrounded by residential, commercial, and industrial land use, with some agricultural land uses. It faces ongoing pressure from development and competing water uses.	Fen viability, SNA	General	Continue monitoring the water levels and fen vegetation.		Y	Monitoring	Development	Trout.Fen	
L19	A5	Fens Analysis	Seminary Fen is thought to have some of the finest fen features, including a prominent peat dome and an excellent community of native fen plant species. Competing water withdrawals appear to be a threat to the fen viability.	Fen viability, SNA	General	Continue monitoring the water levels and fen vegetation.		Y	Monitoring	Trout.Fen		
L2	A3	Trout Geomorpholo	Assumption, Eagle, and Ike's creek all have viable trout habitat with some channel stability issues. Kennally's and unnamed streams have serious habitat limitations including inadequate flow.	Trout habitat	General	Streams assessed generally were found to have good trout habitat, but there were signs of channel degradation that warrant remedial measures.			Trout.Fen			
L20	MP3	Lakes	Brickyard Clayhole Lake is a water-filled excavation that has been considered for mangement as a trout fishery. Runoff from significant parts of the watershed have been diverted elsewhere.	Trout lakes	General	Lake does not appear to reliably maintain thermal stratification which could provide the cold water needed by trout.			Trout.Fen			
L21	MP3	Lakes	Courthouse Lake is a water-filled excavation that is manged as a trout fishery. Runoff from significant parts of the watershed have been diverted elsewhere.	Trout lakes	General	Lake routinely develops thermal stratification providing the cold water that is needed by trout. Managed by the MNDNR as a put-and-take trout fishery.			Trout.Fen			
L22	MP3	Lakes	Quarry Lake was a limestone quarry that has been allowed to fill with groundwater from springs. It is being considered for mangement as a trout fishery.	Trout lakes	General	Little information was available for this newly appropriated resource. MNDNR will determine how to manage this potentially viable trout fishery. Additional monitoring is recommended.		Y	Monitoring	Groundwater	Trout.Fen	

L23	A2	Stability	Gullying, landslides, erosion of streambank and lake shorelines caused by steep slopes and unstable soils. Map of identified sites shows where 1. management required, 2. further study needed, 3. monitoring recommended, and 4. no further action needed.	Erosion Control	General	Implement monitoring program; Evaluate effectiveness of mitigation; increase public awareness.		Y	Monitoring	Sediment.Erosion	Steep slopes	
L24		0 Lower Minnesota Ri	Total Maximum Daily Load issues affecting the quality of the lower Minnesota River watershed.	Water Quality	General	Not applicable			Impaired.TMDL			
L25		0 Lower Minnesota Ri	Low flow Dissolved Oxygen TMDL	Water Quality	Specific	Decrease the amount of phosphorus that reaches the river and increase the amount of flow. Focused on wastewater treatment plants. Other sources including septic systems, stormwater (MS4), and increasing infiltration versus runoff to enhance baseflow.		Y	Stormwater	Impaired.TMDL		
L26	CP11	Ci-Savage	The plan addresses future land use, housing, parks and natural resources, water and sewer systems, and transportation. It was found deficient in many water-resources issues that need to be addressed. Wetland plan is based on a plan developed in 2000.	Planning: land use	General				Development			
L27	CP11	Ci-Savage	Savage Fen complex.	Planning: land use	Specific	The City of Savage asserts its authority over the protection and management of the fen.			Trout.Fen			
L28	CP11	Ci-Savage	Eagle Creek trout stream.	Planning: land use	Specific	Plan specifies maintenance of a buffer along the creek, augmentation of ground cover and trees, reduction of runoff to the creek, and addition of environmentally consitent cultural amenities.			Trout.Fen			
L29	CP11	Ci-Savage	Boiling Springs	Planning: land use	Specific	Not applicable			Natural Resource Protection			
L3	A4	Trout Habitat	Assumption, Eagle, and Ike's creek all have viable trout habitat with some channel stability issues. Kennally's and unnamed streams have serious habitat limitations including inadequate flow.	Trout habitat	General	Streams assessed generally were found to have good trout habitat, but there were signs of channedl degradation that warrant remedial measures.			Trout.Fen			
L30	CP11	Ci-Savage	Water Resource Management Plan (WRMP), completed by WSB and Associates, Inc. in 2007 and updated by the City in 2011.	Planning: land use	General	Goals and policies: 1. Minimize public capital expenditures needed to correct flooding and water quality problems. 2. Protect and improve surface and groundwater quality. 3. Prevent erosion of soil into surface water systems. 4. Promote groundwater recharge. 5. Protect and enhance fish and wildlife habitat and water recreational facilities. 6. Secure benefits associated with the proper management of surface and groundwater.		Y	Flood	Sediment.Erosion	Groundwater	
L31	CP11	Ci-Savage	Water Supply	protect natural resources	Specific	Precautions are being taken to ensure the protection of these natural resources. The water being withdrawn from the Prairie du Chien and Jordan aquifers do have an impact on the Savage Fens; therefore, developing future wells in the above aquifers may not be a viable option.			Trout.Fen			
L32	Map1	Plant and rare speci	Location of rare plants and rare animals for Carver, Hennepin, and Scott Counties combined.	Planning: land use	General	Not applicable	X					
L33	CP13	Ci-Bloomington	Infrastructure and facilities improvements. Other issues more ephemeral and related to policies, practices, and partnerships.	Planning	General	Not applicable	X					
L34	MiscP2	Bloomington Capitol	Improvement Plan	Planning: CIP	General	Infrastructure improvements. Near term 2018-22: transportation and storm sewer. Mid term 2023-27: transportation and water supply. Ongoing: transportation, water supply, storm sewer, address NPDES and TMDL concerns.				0		
L35	MP10	Bloomington SW	Coordination of resource management	Planning	General	Address changing climate as it relates to increased runoff. Implement turbidity load reductions for So. Mississippi turbidity TMDL. Address gully erosion issues. Find ways to reduce groundwater use.		Y	Sediment.Erosion	Groundwater	Steep slopes	Impaired. TMDL
L36	MP10	Bloomington SW	Water Quantity and Flooding	Planning	General	Address changing climate as it relates to increased runoff. Update hydrologic and hydraulic models. Consider changes to impervious surfaces. Maintain warning system.			Flood			
L37	MP10	Bloomington SW	Water Quality	Planning	General	Implement chloride and turbidity load reducations working with other entities.			Impaired.TMDL			
L38	MP10	Bloomington SW	Erosion and Sedimentation	Planning	General	Enforce the City's existing erosion-control ordinance and inspections. monitor and repair, as needed, erosion-control measures. Remove sediment deltas at storm sewer inlets and outlets. Continue implementation of the City's MS4 SWPPP. Continue to enforce the City's steep-slope ordinance. Determine areas at risk of future erosion to assist in planning for maintenance and repair projects. Continue ongoing review and improvement of the City's erosioncontrol inspection program for new development and redevelopment.		Y	Monitoring	Sediment.Erosion		
L39	MP10	Bloomington SW	Groundwater	Planning	General	Collaborate with the City's Utilities department to find opportunities for water conservation and reuse.		Y	Cooperation	Groundwater		
L4	MP1	Trout Streams Gap A	OVERVIEW: The greatest knowledge gap is whether the streams can maintain flow compatible with sustainable trout habitat. Competition for groundwater resources appears to be the greatest threat to trout habitat in most streams.	Trout habitat	General	Determine whether declining or non-existent stream trout are the result of reduced groundwater discharge or some other habitat issue.		Y	Groundwater	Trout.Fen		
L40	MP10	Bloomington SW	Wetlands	Planning	General	Continue inspecting outlets as required per the MS4 permit (20% per year). Implement programs, studies, and capital improvements outlined in the implementation section of this LSWMP that target the protection of wetlands.			Wetlands			

L41	MP10	Bloomington SW	Recreation, Habitat, and Natural Areas	Planning	General	Non-specific efforts related to control of invasive species, flotsam, and nuisance birds.							Invasives			
L42	MP10	Bloomington SW	Enhance Public Participation, Information, and Education	Planning	General	Encourage yard-waste management, sweep streets twice per year, communication with land owners. Safe use of the lower Minnesota River will be deferred to the LMRWD.							Public engagement.education			
L43	Mon5	Lower Minnesota Ri	This report focuses on lakes and tributaries, not the mainstem of the river.	Water Quality	General	Dramatic improvements on the landscape are still needed to bring waters to attainment of water quality standards. Efforts must continue to manage point source contributions from urban sources including industry and wastewater treatment plants but also must reign in unregulated non-point sources from agricultural and urban contributors. Continued cooperation is necessary from all stakeholders to improve conditions on the landscape for the betterment of Minnesota.						Y	Cooperation	Impaired.TMDL		
L44	Mon5	Lower Minnesota Ri	High Island Creek identified as the greatest contributor of total suspended solids and total phosphorus.	Water Quality	General	Variability in streamflows related both to land management and climate change are continually impacting stream corridors and stream bank stability.							Corridors			
L5	MP1	Trout Streams Gap A	BLACK DOG CREEK: Creek has been modified from its original alignment and does not appear to provide a viable trout habitat.	Trout habitat	General	Black Dog Creek is not a viable trout fishery in its present state. Resources to manage trout fisheries are better spent elsewhere unless the hydrology of the stream is changed.							Trout.Fen			
L6	MP1	Trout Streams Gap A	EAGLE CREEK: Supports a viable trout habitat that is much reduced from historical levels.	Trout habitat	General	Determine whether reduced trout populations are the result of reduced groundwater discharge or some other effect on habitat such as limited spawning habitat and creek size.						Y	Groundwater	Trout.Fen		
L7	MP1	Trout Streams Gap A	IKE'S CREEK: contains good habitat for trout. Recently stocked with trout, but it is not known why the native population had been wiped out. Many areas near the creek are desirable for development so pressure from nearby land use could be a consideration. Groundwater sustainability also is an issue.	Trout habitat	General	Understand the groundwater supply to Ike's Creek. Assure that habitat is not degraded by development that threatens to encroach on the resource.						Y	Development	Groundwater	Trout.Fen	
L8	MP1	Trout Streams Gap A	KENNALEY'S CREEK: Competition for groundwater resources appears to be the greatest threat to trout habitat in the creek.	Trout habitat	General	Determine whether declining or non-existent stream trout are the result of reduced groundwater discharge or some other effect on habitat.						Y	Groundwater	Trout.Fen		
L9	MP1	Trout Streams Gap A	UNNAMED #1 (HARNACK CREEK): The creek and its channel have been altered by nearby construction and does not currently support a trout fishery.	Trout habitat	General	Determine whether declining or non-existent stream trout are the result of reduced groundwater discharge or some other effect on habitat.						Y	Groundwater	Trout.Fen		
D1	MP2	Dredge Material	LS Marine Operating Costs:The District has an agreement with LS Marine to operate the Site. Annual LS Marine Site operating costs are estimated based on the agreement.	Dredge	CIP		2021-2022		$10,000	X						
D2	MP2	Dredge Material	Erosion Control and General Site Maintenance:The District is responsible for maintaining the existing erosion control features and completing general Site maintenance, as required.	Dredge	CIP			2021	$10,000	X						
D3	MP2	Dredge Material	Updated Topographic Survey:A topographic survey of the Site is needed to accurately determine the amount of material at the Site and to estimate the remaining storage capacity of the Site.	Dredge	CIP			2021	$15,000	X						
D4	MP2	Dredge Material	Culvert Cleanout:The culvert at the Site entrance needs cleaning to remove debris.	Dredge	CIP			2021	$10,000	X						
D5	MP2	Dredge Material	Vernon Avenue Maintenance:Vernon Avenue needs maintenance to allow for construction vehicle access to the Site.	Dredge	CIP			2021	$25,000	X						
D6	MP2	Dredge Material	Engineering Design/Permitting Support: On an annual basis, the District requires engineering design/permitting support for on-going O&M of the Site.	Dredge	CIP		2021-2022		$20,000	X						
D7	MP2	Dredge Material	Program Management:The District will manage the implementation of the grant funding and complete the reporting and documentation tasks as required by BWSR.	Dredge	CIP		2021-2022		$10,000	X						
D8	MP2	Dredge Material	Program Close Out:The District will submit the documentation, as required by BWSR, to close out the grant.	Dredge	CIP			2022	$3,000	X						

APPENDIX B - STAKEHOLDER WORKSHOP MEETING SUMMARY NOTES

Summary

PROJECT NAME: Lower Minnesota River Corridor Management Plan

Date: December 16, 2021

Start Time: 9:00 a.m.

End Time: 11:00 a.m.

Location: Teams meeting

PROJECT GOAL: To develop a shared vision for the Lower Minnesota River Corridor by further developing the themes and subthemes identified in the planning documents.

PROJECT OBJECTIVES:

- Identify shared public values that form the basis of the project
- Engage and garner support from the stakeholders about the opportunities the development of the Corridor Management Plan can provide
- Create a greater understanding of the Lower Minnesota River Corridor and its landscape
- Describe a desired future for the river and discuss how change in the surrounding landscape can help attain this future
- Suggest a structure or framework by which the vision can be implemented
- Develop methods to resolve conflicts between human investments and river dynamics in the most economically and ecologically sustainable manner.

INVITEES: See Teams attendance log attached.

HOSTS: Linda Loomis - Naiad Consulting and Lower Minnesota River Watershed District

Della Schall Young and Rebecca Haug - Young Environmental Consulting Group, LLC

AGENDA/SUMMARY

1. **Welcome**

   Linda welcomed the stakeholders to the meeting and project.

2. **Introductions and agenda review**

   Della informed stakeholders that the meeting was being recorded and that the recording would be shared after the meeting with the attendees and others who were not able to attend the meeting. She then asked everyone to introduce themselves in the chat and provide their understanding of the project.

3. **Project overview**

   - Introduce the project, planning process and how the information will be used in the future
   - Present the survey results

Della provided an overview of the project including an introduction to the project, the goals and objectives, the research that was completed though public document review, as well as the outreach and engagement process that will lead to a Lower Minnesota River Corridor Management Plan. She then presented the survey statistics indicating that there were over 80 people invited to participate, 33 responses were received. Based on her experience, Della surmised that the response rate indicates a high level of interest in the Lower Minnesota River Corridor.

Following the survey statistics, Rebecca and Della presented the survey results as shown on the attached slides. District questions (and associated responses) center around what the District should focus on that would best that would best influence perspective on water and natural resources. Community questions (and associated responses) center around how local communities might rank those responses in terms of importance. For each section surveyed, Rebecca provided the context slide and Della presented the survey results and asked the attendees to provide additional input.

People

Outreach and education ranked highest for the District focus. Coordination, recreation, and outreach and education all came in close together as far as community ranking.

- Tyler Winter, MCES (Metropolitan Council Environmental Services) expressed his interest in Environmental Justice concerns. He noted his perception of disparity regarding park amenities and access to the MN River for marginalized populations. He mentioned the need for ADA compliant access and easier fishing opportunities.
- Krista Spreiter, Mendota Heights, through the chat, indicated the need for cultural history, indigenous community involvement, and recreational opportunities for the river.

Infrastructure

Land use ranked highest for the District focus which was found interesting since the District has very little statutory authority over land use. Drainage ranked highest for community ranking with land use coming in second.

- Ted Suss, Friends of the MN River Valley discussed where he lives in Redwood County, in corn and soybean country, and how drainage projects in the upper and middle MN River have the goal to push more water in the river versus providing any water storage. He noted the need to look for upstream opportunities to mitigate these issues. Della indicated the District Managers have been interested in upstream impacts and are working on how to manage those.
- Steve Gurney, City of Bloomington indicated the need to get the legislature more involved in regulation and asked if the District does any lobbying. Della and Linda Loomis both indicated the District does have a Legislative liaison. Linda also indicated they are trying to work with Representative Paul Torkelson, Senator Ingebrigtsen, and Representative Rick Hansen on upstream issues and how to receive legislative funding to remediate those issues. Upland water storage and soil health are key issues for the District. Other District concerns include upstream agriculture and remediation. The District hopes to participate more in the One Watershed One Plan developments. There is District involvement in both the Lower Minnesota River East and Lower Minnesota River West planning process.
- Scott MacLean, MPCA (Minnesota Pollution Control Agency) stated the importance of being involved the One Watershed One Plan process.

Water

- Stormwater ranked highest for the District focus. Stormwater, lakes, and floodplain ranked highest but closely followed by groundwater and wetlands for community ranking. It was surprising that groundwater was ranked low for the District, as so many of the resources are groundwater dependent; fens and trout streams.Joe Mulcahy, MCES (Metropolitan Council Environmental Services) stated the Lower Minnesota River Watershed District does not have much authority over groundwater which could be why the survey results did not put it at a high priority. Della noted that the District is taking steps to be heard on more issues regarding groundwater resources.
- Tyler Winter, MCES (Metropolitan Council Environmental Services) indicated that groundwater is important for specific things like fens, but feels that more importance is placed on groundwater for through the communities' perspective due to use utilization as drinking water.
- Vanessa Strong, Scott WMO (Watershed Management Organization) brought up that the wet years we have had have not caused concerns for groundwater, but this year's drought increased the community interest in groundwater.
- Tyler Winter, MCES (Metropolitan Council Environmental Services) discussed the State threatened fish species, Black Buffalo and Paddlefish, that have been found in the Minnesota River. These fish species need a large river habitat but are not getting the attention they need.
- Vanessa Strong, Scott WMO expressed concern with climate change and the need for direction from the state to incorporate climate change at the local level. Della indicated that she shows how the climate is changing and provides ways to mitigate the changes for the future, without identifying these issues as climate change. Vanessa also stated that the legislature needs to make access to the river a priority as well as fund upstream projects and the need to fund projects that are in plans.
- Paul Moline, Carver County and Carver WMO echoed what Vanessa said and not focusing on climate change but focusing on what is being done and tracking and monitoring. There is a need to move forward but not necessarily on developing Climate Action Plan.

Funding

Grants and legislative support ranked highest for both the District and community focus, however utility fees were not far behind grants and legislative support for community focus.

- Vanessa Strong, Scott WMO expressed the importance to work on legislative priorities to improve access for partners to utilize funding for upstream projects and projects that are listed in existing plans.
- Ted Suss, Friends of the MN River Valley indicated there is a need to change the drainage laws and require water storage and consideration for downstream impacts. LMRWD should work with legislature to require upstream projects to do more for water quality.

Threats

- Threats that ranked with over a 50% response rate included climate change, TMDL's and impaired waters, and erosion. Threats ranking between 20% and 49% included flooding, invasive species, and ideology and environmental regulations. Landfills came in under 10% in rank.Tyler Winter, MCES indicated the need to focus on rare species like the Black Buffalo and Paddlefish.

4. **Next Steps**

- Paul Moline, Carver County and Carver WMO asked about the extent of the planning area, if it only includes the District or a broader area. Della indicated that the priority is the District, then the Lower Minnesota River Watershed and then the overall Minnesota River watershed. The area will be looking at what can directly be affected and then at a higher level to include legislative action for efforts in the greater Minnesota River Watershed.
- Joe Mulcahy, MCES asked if this will be an update to the Watershed Plan. Della stated that it will be an update but will be easier than the previous plan. This will be focused on a framework to be used by the partners and will include implementation activities. Linda stated that this will help when lobbying.

a. Outreach and Engagement

Della went over the below timeline and next steps for the project. She also stated that a summary of the meeting along with the recording will be sent out. Email reminders will also be sent out for each of the Focus Group Discussions. The goal is to have a final draft by the end of April.

- **Focus Group Discussions**
  - **Threats: January 20, 2022, from 10 a.m. to 12 p.m.**
  - **Water: February 17, 2022, from 10 a.m. to 12 p.m.**
  - **People, Funding, and Infrastructure: March 3, 2022, from 10 a.m. to 12 p.m.**
- **Open House – March 16, 2022**

b. Documentation

- **Release preliminary draft - March 14 – April 1, 2022**
- **Release draft final – April 29, 2022**

5. **Conclusion/Thank You**

Linda thanked the stakeholders for attending the meeting and looks forward to continuing to work with everyone.

Participants

- Della Young, Young Environmental
- Leslie Stovring, Eden Prairie
- Rebecca Haug, Young Environmental
- Ted Suss
- Tyler Winter, Met. Council
- Scott MacLean, MPCA
- Jennie Sirota (TO)
- Bryan Spindler, MPCA
- Jordan Donatell, MPCA
- John Gorder. Mendota Heights
- Kirby Templin, Shakopee
- Ryan Pinkalla (Guest)
- Brian Vlach,
- Jack Distel, Bloomington
- Vanessa Strong,
- Bob Bean, Bolton and Menk and Carver
- Joe Mulcahy, Met. Council
- Jesse Carlson, Savage
- Paul Moline, Carver SWCD
- Steve Gurney, Bloomington
- Krista Spreiter, Mendota Heights
- Linda Loomis, LMRWD
- Charlie Howley, Chanhassen

APPENDIX C - THREATS FOCUS GROUP MEETING SUMMARY NOTES

Summary

PROJECT NAME: Lower Minnesota River Corridor Management Plan

Date: January 20, 2022

Start Time: 10:00 a.m.

End Time: Noon

Location: Teams meeting

PROJECT GOAL: To develop a shared vision for the Lower Minnesota River Corridor by further developing the themes and subthemes identified in the planning documents.

PROJECT OBJECTIVES:

- Identify shared public values that form the basis of the project
- Engage and garner support from stakeholders about the opportunities the development of the Corridor Management Plan can provide
- Create a greater understanding of the Lower Minnesota River Corridor and its landscape
- Describe a desired future for the river and discuss how a change in the surrounding landscape can help attain this future
- Suggest a structure or framework by which the vision can be implemented
- Develop methods to resolve conflicts between human investments and river dynamics in the most economically and ecologically sustainable manner

INVITEES: Below

HOSTS: Linda Loomis – Naiad Consulting and Lower Minnesota River Watershed District

Della Schall Young – Young Environmental Consulting Group, LLC

AGENDA/SUMMARY

Meeting Objective: Evaluate specific practices, activities, and actions responsible for the top three prioritized threats (TMDL and Impaired Waters, Erosion, and Climate Change) facing the Minnesota River system and the lower Minnesota River specifically.

1. **Introductions, Agenda Review, and Breakout Group Instructions**

   Della led the group through introductions and the agenda. She outlined the project goal and objectives and explained that the approach for the day's meeting changed from breakout sessions to one large group session that will cover all topics.

2. **Threats to Impaired Water Resources**

   Della set up the group with a mural function to lead the group discussion pertaining to the questions below. There was some difficulty with the program, so some attendees used the chat function for the activity.

- What practices, activities, and actions are responsible for impaired water resources?
    - Issues identified include the following:
        - Agricultural drainage
        - Legacy nutrient loading
        - Urbanization
        - Lawn compaction
        - Deicing
        - Mass grading
        - Poor agricultural practices
        - Decreasing water storage capacity
        - Bluff and floodplain development
        - Large extent of stream alterations
        - Altered hydrology
        - Geologic conditions
        - Aging drainage systems
        - Wetland loss
        - Floodplain loss
        - Shoreland loss
        - Lack of resources to address issues
        - Loss of buffers
        - Climate change
        - Increased frequency and intensity of precipitation
        - Lawn management practices
        - Dredging alters hydrology
        - Thoughts from the WRAPS executive summary included the following:
            a. Streambank erosion
            b. Cropland runoff
            c. Phosphorous contributions
            d. E. coli contributions

Della then explained the next activity and asked for the group to suggest practices to help mitigate the issues related to impaired water resources. Responses discussed are presented below.

- What conventional and out-of-the-box practices should the LMRWD implement (or partner with other organizations to implement) to mitigate the threat?
    - Legacy nutrient loading
        a. Channel stabilization
        b. Floodplain restoration
        c. Wetland improvement
        d. Lakes and wetlands internal loading controls such as alum

- Altered hydrology
    a. Restore connectivity between the river channel and floodplain/floodplain lakes
    b. Terry Jeffery, Riley Purgatory Bluff Creek Watershed District, listed several potential solutions to altered hydrology. He noted that holding and slowing water is important. He offered the following potential solutions:
        i. Extended detention and infiltration to improve baseflow conditions
        ii. Move away from the curve number method towards the hydro-modification approach
        iii. Mimic hydrology or move to flow duration curves
- Floodplain loss
    a. Restore easy-to-fix farm tiled wetlands
- Loss of buffers
    a. Establish a minimum buffer rule
- Improve soil health

- Ted Suss, concerned citizen and member of Friends of the Minnesota Valley, mentioned a solution that could be applied to several issues listed, including that the LMRWD needs to take a leading role in demanding full consideration of downstream impacts and to insist on more water storage that could be incorporated into drainage improvement projects. Ted and a group of concerned citizens are working on upstream issues to mitigate river impacts. He hopes the LMRWD will involve district area state representatives in the solutions.
- Tyler Winter of the Metropolitan Council said upstream needs to stop sending too much water downstream.
- Bryan Spindler of the MPCA shared information from the MPCA WRAPS comprehensive sources. He said impairments are interrelated, which highlights the issue of not focusing on one sole issue.
- Linda Loomis of the LMRWD mentioned slowing down the water. Solutions to manage water seem to focus on getting water off the landscape as fast as possible, which is what is leading to many of these issues.
- Leslie Stovring of Eden Prairie noted the lack of resources to address issues as they occur in activity one. Della mentioned during this section of the meeting the wealth of expertise and resources in this group and asked for their potential ideas for solutions to this issue. Della noted collaboration as one possible fix. Leslie mentioned the concern that the funds for necessary projects might not exist. Della said these meetings have the potential to pull those limited resources together to address the various issues.

3. Threats to Erosion

Della directed the group to go through the same exercise as above and brainstorm solutions to help mitigate the issues related to erosion. Linda led the session discussion. Responses discussed are presented below.

- What practices, activities, and actions are responsible for erosion?
    - Pattern tiling
    - Buffer removal
    - Urbanization
    - Landscaping
    - Lawn care practices
    - Belief that roadside sections must be urbanized with curb and gutter
    - Large cul-de-sac radius
    - Increased runoff from increased impervious surface, including lawn and turf
    - Geology
    - Decreased water storage
    - Conflicting land use interests
    - Increases in agricultural drainage
    - Focus on stormwater pollutant treatment at the detriment of volume
    - Lack of resources and funding
    - Buffers
    - Water management on private property stormwater and irrigation
    - Consider erosion in flat areas of the watershed
    - Concentration of flows created by development
    - Removal of helpful vegetation in buffer areas
    - Research into alternatives for soil management for buffer vegetation
    - Soil management and soil health
    - Construction and poor erosion and sediment control BMP design, placement, and maintenance
    - Streambank stability
    - Buckthorn because it is invasive and restricts undergrowth, leaving exposed soils

The group continued to the next step by suggesting practices to help mitigate the issues related to erosion. Responses discussed are presented below.

- What conventional and out-of-the-box practices should the LMRWD implement (or partner with other organizations to implement) to mitigate the threat?
    - Increases in agricultural drainage
        a. Improved agricultural practices
        b. Developers are required to account for stormwater management, and agricultural drainage should be considered in the same way.
    - Water management on private property stormwater and irrigation
        a. Residents see erosion on the bluff and think it is natural even though it might be water that is not being managed on their own properties.
            i. Need education
            ii. Need funding to assist landowners

iii. Provide incentives

iv. Change behavior from out of sight, out of mind (disposing yard waste over bluff line)

1. What are the educational pieces that can be developed out of this? *action item*
2. People need to value the resource, so it is not seen as their personal trashcan.
3. Misinformation to residents about the proper disposal options for yard waste.

- Consider wind erosion in flat areas of the watershed
  a. Improved agricultural practices
- Soil management and soil health
  a. Improved agricultural practices
  b. Incentivize farmers
  c. Increased education
- Address buckthorn because it is invasive and restricts undergrowth, leaving exposed soils:
  a. Manage vegetation through continued monitoring and removal.
  b. Using goats for vegetation management was discussed, but goats tend to eat the "good" vegetation first and buckthorn last. Buckthorn still needs to be treated so new sprouting is managed.
  c. Solutions for buckthorn management need to be evaluated, and any secondary issues identified.

The group continued to the next step by suggesting practices to help mitigate the issues related to erosion. Responses discussed are presented below.

4. **Next Steps**

Tyler Winter of the Metropolitan Council suggested the group take a field trip to the river as the best way to view and appreciate the Minnesota River. LMRWD will coordinate with Tyler on fleshing out this proposal.

Della reiterated that she hopes the group had ample opportunity to discuss their thoughts on threats and solutions to mitigate. Young Environmental will review the thoughts generated and will send a survey to participants to continue this discussion.

- **Focus Group Discussions**
  - **Water: February 17, 2022, from 10 a.m. to 12 p.m.**
    - **Due to conflicts, this date may be pushed to March 3, 2022.**
  - **People, Funding, and Infrastructure: March 3, 2022, from 10 a.m. to 12 p.m.**

5. Conclusion/Thank You

Linda thanked the stakeholders for attending the meeting and for conducting a good discussion. The LMRWD continues to develop working relationships with upstream groups. Linda said she appreciates this group advocating for the Minnesota River and looks forward to continuing to work with everyone.

Participants

- Bob Bean, Bolton and Menk and Carver
- Brian Vlach, Three Rivers Park District
- Bryan Spindler, MPCA
- Della Young, Young Environmental
- Jack Distel, Bloomington
- Jesse Carlson, Savage
- Joe Mulcahy, Metropolitan Council
- Joe Seidl, Chanhassen
- Jordan Donatell, MPCA
- Kirby Templin, Shakopee
- Krista Spreiter, Mendota Heights
- Leslie Stovring, Eden Prairie
- Linda Loomis, LMRWD administrator
- Stacy Boone, Shakopee Mdewakanton Sioux Community
- Steve Gurney, Bloomington
- Ted Suss, concerned citizen and member of Friends of the Minnesota Valley
- Terry Jeffery, Riley Purgatory Bluff Creek Watershed District
- Theresa Kuplic, LMRWD CAC
- Tyler Winter, Metropolitan Council
- Vanessa Strong, Scott County

APPENDIX D - WATER FOCUS GROUP MEETING SUMMARY NOTES

Agenda

PROJECT NAME: Lower Minnesota River Corridor Management Plan

Date: July 13, 2022
Start Time: 10:30 a.m.
End Time: 12:00 p.m.
Location: Teams meeting

PROJECT GOAL: To develop a shared vision for the Lower Minnesota River Corridor by further developing the themes and subthemes identified in the planning documents.

PROJECT OBJECTIVES:

- Identify shared public values that form the basis of the project.
- Engage and garner support from stakeholders about the opportunities that the development of the Corridor Management Plan can provide.
- Create a greater understanding of the Lower Minnesota River Corridor and its landscape.
- Describe a desired future for the river and discuss how a change in the surrounding landscape can help ensure this future.
- Suggest a structure or framework by which the vision can be implemented.
- Develop methods to resolve conflicts between human investments and river dynamics in the most economically and ecologically sustainable manner.

INVITEES: Stakeholders

HOSTS: **Linda Loomis**—Naiad Consulting and Lower Minnesota River Watershed District

Della Schall Young, Meghan Litsey, and Madeline Seveland—Young Environmental Consulting Group, LLC

AGENDA \ NOTES:

Meeting Objective: To build upon previous work from the Threats workshop, discuss water subthemes, and identify where work is needed and the role of the Lower Minnesota River Watershed District.

1. **Introductions and agenda review**

   Linda thanked the stakeholders for their time and contributions and expressed her appreciation for their partnership.

2. **Review project timeline, threats workshop summary, and water subthemes**

   Della reviewed the overall timeline for the project, highlighting what has been completed to date and next steps. She summarized the results from the Threats focus group meeting that was held in January 2022.

   The group answered two poll questions:

   a. Which of these threats are the most urgent to address?

      - The top two responses included streambank and drainage area health and altered hydrology

b. Which threat is the easiest to mitigate or address?

- The top response was people.

Della reviewed how the themes from the Threats discussion affect the water subthemes and explained the breakout group activity.

3. **Breakout groups**

a. Discuss how each of these threats specifically impacts each water subtheme.

- Floodplains
  - Altered Hydrology
    - Disconnection of the floodplain from the water bodies. It's more of a straight shot than spreading out, and causes a lot of downcutting in the stream channels.
    - Because of the modification of floodplains, development has been able to go in there.
    - You can develop the areas where you previously could not have.
    - Results in increased flooding and maybe higher levels of flooding.
    - Loses storage of upstream areas.
    - Everything goes faster.
    - In the MN River, the floodplain is used and accessed more. More water is coming down, so you are using the floodplain.
    - Water is faster than it used to be.
    - The agricultural water is still being shot downstream and high intensities too.
  - Urbanization and Development
    - Urban development has come a long way—not super concerned with urban development regulations.
    - Cities are doing a better job of managing the water—currently the city no longer has control over what individual property owners do.
    - Getting the water to the river faster is an issue for the floodplains.
- Groundwater
  - Altered Hydrology
    - Intense storms and infiltration
  - People
    - Unrealistic or unnatural expectations

        - Introduction of pollutants via infiltration (land use practices)
        - Lack of understanding of groundwater (can't see the groundwater)
    - Urbanization and Development
        - Increase in impervious surface means more runoff and less infiltration
        - Changing groundwater levels impact infrastructure
        - Introduction of pollutants via infiltration (regulatory requirements)
    - Streambank and Drainage Area Health
        - Stream loss and baseflow impacts
    - Climate change, geology, and history
        - Drought restrictions affecting water use
- Surface Waters
    - Altered Hydrology
        - Flashing (water)
        - Impaired biology
        - Increased volumes
        - Increased sediment and nutrient pollution
        - Erosion
        - Increased drainage—water going through faster
    - People
        - Bacteria and nutrient loading from pet waste
        - Geese
        - Yard waste
        - Intensive use—people want to get the most out of being adjacent, mowing right up to the edge
        - Landscape modification
        - Clearing steep slopes
        - Invasive species
        - Watershed disconnection—altering localized hydrology (streambanks)
        - People want to divert their stormwater over the cliff
- Stormwater

- Altered Hydrology
  - Localized flooding
  - Increased flows
  - Impacts to infrastructure
  - Static water levels (dynamic water levels have been lost)
  - Changes to residency time
  - Impacts on wildlife
  - Designs based on 10-year storms (storm sewer)—many storms exceed this
  - Water quality impacts
- Urbanization and Development
  - Water quality impacts
- Streambank and Drainage Area Health
  - Stability, erosion
  - Water quality impacts
  - Agricultural retention (upstream of the LMRWD)
  - Cutting off natural hydrology patterns; altered drainage

b. Discuss policies, programs or actions that mitigate the threats and protect water.

- Groundwater
  - Altered Hydrology
    - Investment in new technology (e.g., adaptive flow management)
    - More support and better facilitation of regional facilities that would provide infiltration and treatment
  - People
    - Minimize water use through policy and education
  - Urbanization and Development
    - Limit use on dense areas via strategic planning

4. **Breakout group presentations**

   Each group summarized their discussion from the breakout groups.

5. **Large-group discussion**

   A few of the participants clarified their responses from the breakout group discussions.

6. **Next steps**

Della explained that we didn't have enough time to discuss policies, programs, or actions to mitigate threats and protect water resources. Young Environmental will revisit existing planning documents for policies, programs and actions that have been implemented by the stakeholders and identify opportunities for enhancements. This information is important to collect because it will inform the next focus group discussion on people, infrastructure, and funding.

a. Focus session on People, Infrastructure, and Funding, planned for August 17, 2022, from 10:00 a.m. to 12:00 p.m.

b. Open house and activity in September 2022.

7. Conclusion/Thank You

Della concluded the meeting by encouraging the group to submit their ideas for projects, policies, programs, or actions to mitigate threats and protect water resources.

Linda thanked the group again for their time.

Participants

- Bob Bean, Bolton & Menk, and Carver
- Curt Coudron, Dakota County
- Jack Distel, Bloomington
- Brittany Faust, MPCA
- John Gorder, Eagan
- Kirby Templin, Shakopee
- Theresa Kuplic, LMRWD CAC
- Linda Loomis, LMRWD administrator
- Lori Haak, Eden Prairie
- Joe Mulcahy, Metropolitan Council
- Rod Rue, Eden Prairie
- Jesse Carlson, Savage
- Bryan Spindler, MPCA
- Stacy Boone, SMSC

APPENDIX E - OPEN HOUSE SUMMARY NOTES

Agenda/Summary

PROJECT NAME: Lower Minnesota River Corridor Management Plan

Date:	September 7, 2022
Start Time:	2:00 p.m.
End Time:	6:00 p.m.
Location:	Fort Snelling State Park

PROJECT GOAL: To develop a shared vision for the Lower Minnesota River Corridor by further developing the themes and subthemes identified in the planning documents.

PROJECT OBJECTIVES:

- Identify shared public values that form the basis of the project
- Engage and garner support from stakeholders about the opportunities the development of the Corridor Management Plan can provide
- Create a greater understanding of the Lower Minnesota River Corridor and its landscape
- Describe a desired future for the river and discuss how a change in the surrounding landscape can help attain this future
- Suggest a structure or framework by which the vision can be implemented
- Develop methods to resolve conflicts between human investments and river dynamics in the most economically and ecologically sustainable manner

HOSTS: Linda Loomis—Naiad Consulting and Lower Minnesota River Watershed District

Della Schall Young, Meghan Litsey, and Madeline Seveland —Young Environmental Consulting Group, LLC

AGENDA/NOTES

Open House Objective: To review the plan framework and stakeholder input gathered during focus groups.

1. **Welcome**

   Linda and Della welcomed attendees and reviewed the project timeline and work completed thus far.

   Madeline presented the open house logistics. Attendees were invited to tour four posters describing the project's goals, timeline, and feedback gathered during the previous focus group discussions on water, threats, people, funding, and infrastructure. Attendees were invited to provide additional feedback to help further the plan's framework.

2. **Poster Review**

   Attendees toured four posters and offered comments and feedback to help further the plan's framework. Below is a summary of the feedback received on each of the posters.

Looking Ahead

- **10 years from now, long after the Corridor Management Plan has been competed, what change or impact do you hope to see within the LMRWD?**
    - Improved public use of the river and a more positive view from the public on the Minnesota River.
        - Comment: "Agree"
    - Improved water quality!
        - Comment: "Agree"
    - Active ownership + stewardship by stakeholders, especially youth/young adults.
        - Comment: "Agree"

Threats

- **What are additional threats and mitigation strategies that could be included with this list?**
    - **Additional threats**
        - Responsibility for river blockages and emergency removal of woody debris blocking the river. Summer 2022 - trees built up at bridge downtown Shakopee and nothing happened to remove blockage for a long time.
        - Indifference - need to create a sense of ownership in general public
            - Comment added "I very much agree with [the above statement]"
        - Lack of clear accountability (legislation favoring business over ecology) for pollution/water use.
        - Development pressures increasing land value and changing civic priorities.
        - Landfills expansion in the floodplain is a threat to surface waters and groundwater.
        - Droughts impact all the waters. Dry land increases runoff. Lack of needed floods change the biodiversity. Mega storms are a counterbalance to drought which alters hydrology.
    - **Additional strategies**
        - LMRWD should join efforts to oppose drainage (ag) expansions that do not incorporate water storage in the watershed being drained.
        - LMRWD should intervene on behalf of downstream property owners negatively impacted by ag drainage projects.
        - Encourage more water holding areas, both urban and ag areas, to prevent runoff/pollution.
        - Mitigation strategies for water also help during droughts.

Waters

- **What programs, policies, or actions protect these waters from each threat?**
    - **Surfaces waters**
        - Comp plan (from threat of altered hydrology).
        - Drought leads to more water use (from the threat of climate change)
        - Landfills expansion in the floodplain is a threat
        - Droughts (see threats)
    - **Groundwater**
        - Monitoring population growth and urban sprawl with development and groundwater usage (from threat of altered hydrology).
        - Drought leads to more water use.
        - Droughts (see threats)

- **Stormwater**
  - Make sure new development puts into their plans BMPs and green infrastructure (from threat of altered hydrology).
  - Droughts – dry land increase runoff
- **Floodplains**
  - Increasing buffer zones for dwellings (from threat of urbanization and development).
  - Droughts – land of needed floods change biodiversity.

People

- **What are additional actions and audiences to focus on?**
  - Promotion of erosion control practices (landowner, property manager, general public, developers, builders, business owners, etc.). Understanding of why erosion control is important.
  - Promotion of educational opportunities on water and land management to decrease water runoff.
  - Grow your own advocates by engaging PreK-12 kids in meaningful experiences with natural/water (in/on boats, plant ID, macroinvertebrate sampling, etc.).
  - Community based and youth-based citizen science projects and conservation service projects.
    - Engage community in ownership

Funding

- **What are additional ways to enhance funding?**
  - No comments
- **How can LMRWD position itself to receive federal funding?**
  - No comments

Infrastructure

- **How do you balance development and natural resources in upstream areas?**
  - Make sure added population can be incorporated in a way that keeps groundwater levels healthy.
  - We need riparian restoration/preservation easements to ensure at least to corridor of the river is mildly protected from urban pollution.
- **What practices and programs will be needed to mitigate the impacts of climate change?**
  - We need to engage farmers in the discussions on how to reduce agricultural impacts such as runoff – topsoil reduction in the form of river sediment.
  - Need to engage farmers and urban areas to be more concerned about water runoff. Control pollution and silt runoff.
  - We need options for renters to incentivize environmental improvements to their rented property.

3. **Canoe trip of the Minnesota River**

   Attendees joined Wilderness Inquiry for a canoe trip on the Minnesota River.

4. **Dinner and continuation of the open house**

   Following the canoe trip, attendees regrouped for dinner and a continuation of the open house.

A final comment was emailed to the LMRWD after the event: "The Minnesota River needs stakeholders that are invested enough to advocate for it. The corridor management plan should do everything possible to create stakeholders. I promise you, there is not a more maligned or disdained natural feature in Minnesota than the Minnesota River. That has to change before we can effect change in the river."

Participants

- Joseph Barisonzi, Friends of Minnesota Valley, Isaac Walton League of America / Green Crew
- Ted Suss, Friends of Minnesota Valley, Isaac Walton League of America
- Judy Bergland, LMRWD Citizens Advisory Committee
- Theresa Kuplic, LMRWD Citizens Advisory Committee
- Jennie Sirota, Shakopee Mdewakanton Sioux Community
- Tyler Winter, Metropolitan Council Environmental Services
- Brittany Faust, Minnesota Pollution Control Agency
- Tom Crawford, Friends of Minnesota Valley, Isaac Walton League of America
- Lori Haak, City of Eden Prairie
- Ryan Ruzek, City of Mendota Heights
- Steve Christopher, Board of Water & Soil Resources
- Lauren Salvato, LMRWD Board
- Kimberly Musser, Water Resources Center, Minnesota State University Mankato