

## CHAPTER 4: NATURAL RESOURCES

This section of the City of Savage Comprehensive Plan summarizes five important planning documents: 2000 Comprehensive Wetland Protection and Management Plan, 2001 Natural Resources Inventory, 1995 Alternative Urban Areawide Review, 2019 Water Resource Management Plan, and the Natural Resources Procedures and Goals. Copies of these studies are available from the City of Savage.

### COMPREHENSIVE WETLAND PROTECTION AND MANAGEMENT PLAN

The City of Savage Comprehensive Wetland Protection and Management Plan was completed by WSB and Associates, Inc. in 2000.

The following is an overview of the document. Wetlands provide many benefits and, as such, are important resources to a community. They provide critical habitat for many types of birds, mammals, amphibians, reptiles, invertebrates, and plants. Wetlands can also act to improve water quality and provide water quantity control by storing water during storm events. Wetlands allow for groundwater interactions, whether it be recharge or discharge. Additionally, wetlands provide aesthetic value, nature observation areas, and areas for education and scientific research. Because of the importance of wetlands and the role wetlands play within a community, they must be considered during development review and city-wide planning in order to balance the protection of these wetlands and development and growth of the city.

The City of Savage Comprehensive Wetland Protection and Management Plan (CWPMP) has been developed to be in conformance with MN Rules 8420.0650 and meets the requirements of the Wetland Conservation Act (WCA). This Plan has been developed through input of a Technical Panel and citizen input (see Appendix A of CWPMP). The CWPMP was adopted by ordinance and is used in conjunction with the City of Savage Water Resource Management Plan (2019) and the Comprehensive Plan.

The City of Savage CWPMP provides a comprehensive approach for the protection and management of wetlands within the City and allows the City to have control over the rules of governing decisions about these wetlands. The CWPMP provides the City with an approach that could not be utilized by only following the Wetland Conservation Act. This CWPMP provides the City greater control and flexibility over

wetland protection and management, designates regional wetland mitigation sites, and provides management strategies for different types of wetlands.

Section II of the CWPMP provides a glossary of frequently used terms within the Plan and within the water resource profession. While the purpose of this glossary is to provide information to the user of this Plan, it is not a comprehensive resource.

Section III of the CWPMP provides an introduction to the CWPMP. It includes a description of the existing resources, a discussion of the development within the City, provides an overview of current natural resources protection measures, and outlines the intent of the Plan. The CWPMP encompasses all wetlands within the City with the exception of the Savage Fen. The CWPMP excludes the Savage Fen because of its ecological significance and that it is protected under Minnesota State Statute 103G.223.

Section IV of the CWPMP provides a listing of the objectives of the Savage CWPMP.

Section V of the CWPMP discusses the regulatory framework for wetlands. This section provides details of the role of the City as the Local Government Unit (LGU) for the Wetland Conservation Act and also provides a brief overview of other agency jurisdiction over wetlands, including the Department of Natural Resources (DNR), U.S. Corps of Engineers, the Minnesota Pollution Control Agency (MPCA), and the Watershed Districts.

The methods used to inventory and classify the wetlands within the City of Savage are contained in Section VI of the CWPMP. The Minnesota Routine Assessment Method (MnRAM) version 2.0 was used to identify the functions and values of the wetlands. This section also outlines the Circular 39 and Cowardin method of wetland classification. Wetlands within Savage were classified using both methods. No wetlands were delineated as part of these procedures.

Section VII of the CWPMP provides the results of the wetland inventory and assessment. Approximately 300 wetlands were evaluated as part of this Plan. These wetlands range in size from 200 square feet to over 150 acres. Wetland Types 1, 2, 3, 4, 5, 6, 7, and 8 are represented within the City of Savage. These wetlands are located within nature preserves such as Murphy-Hanrehan Park Reserve to areas that have been greatly impacted, such as gravel pits. Detailed maps of wetland locations are included as well.

Based on Circular 30 methods, the inventory of wetlands in the City of Savage resulted in the following distribution of wetland types within the City (listed at right):

Detailed information about each wetland is included in Appendix C of the CWPMP. A computer database of the wetland information has also been developed and is available at Savage City Hall.

the

<b>Wetland Type</b>	<b>Number of Wetlands</b>
Type 1	4
Type 2	25
Type 3	107
Type 4	54
Type 5	57
Type 6	6
Type 7	46
Type 8	2
<b>Total:</b>	<b>301</b>

Section VIII of the CWPMP discusses wetland protection and management strategies utilized by the City of Savage. These strategies include general protection and management practices such as public education, wetland delineation, and water quality protection. Also included in this section are the management

categories for each wetland within the City and the specific management strategies for each category.

Based on the functions and values of the wetlands, wetlands were placed within one of the following management categories:

**Preserve:** Wetlands that are placed into the Preserve category received high functions and values ratings based on MnRAM 2.0. All reference wetlands and those wetlands within Murphy-Hanrehan Park Reserve have been placed in this category.

**Manage 1:** Wetlands that are placed in the Manage 1 category received high functions and values ratings, but showed some evidence of more disturbance/degradation than Preserve Wetlands.

**Manage 2:** Wetlands that are placed in the Manage 2 category generally received moderate functions and values ratings. These wetlands generally had less diverse vegetation and had more evidence of disturbance than Manage 1 and Preserve wetlands.

**Manage 3:** Wetlands that are placed in the Utilize category received the lowest functions and values ratings. These wetlands had little diversity, been impacted by disturbance, and/or were too small to provide suitable wildlife habitat.

These categories allow the City of Savage to actively protect and manage wetlands within the City limits, plan for future development, and determine wetland needs.

Newly created wetlands will initially be placed in the management category of the wetland that they are replacing or as otherwise specified by the City Engineer.

Stormwater ponds were not evaluated as part of this Plan. Stormwater ponds were evaluated in 2018 as part of the 10 Year Storm Pond Maintenance Plan.

Section IX of the CWPMP outlines the implementation program. Section X provides information on enforcement, appeals, and the amendment procedure for this Plan. Section XI provides a list of references.

## NATURAL RESOURCES INVENTORY

The City of Savage Natural Resources Inventory was completed in January 2001. This report presents the Natural Resources Inventory for the City of Savage, which encompasses approximately 3,000 acres. The Study Area includes portions of the Minnesota River Bluff, Lower Credit River, and South Savage areas.

The inventory was designed to focus on the most natural area within the project area (those least disturbed by human activity). By using a variety of tools, including infrared aerial photographs, MN Natural Heritage Database, and others it was possible to identify areas suitable for field investigation. These sites were then visited during the late summer of 2000 to inventory plant species and classify natural communities.

The system used for the classification and ecological ranking of the identified communities is the same one used by the MN DNR, County Biological Survey (CBS). By using this system to identify natural areas, the city has a technically sound set of information that can be used, and easily interpreted by in the future. The Natural Resource Inventory Rank was arrived at by including both the Qualitative Rank and a Restoration Potential Rank.

The report includes sections dealing with Landscape History and Setting, Natural Community Types of the Study Area, and the natural community descriptions. Also included within this report are general recommendations for the general management recommendations for select natural community types, as well as specific recommendations for future management of individual natural communities, or geographic areas. These recommendations are made with private landowners and public land managers in mind, since each of us can play a positive role as stewards of the land. As a result, it will be important for this information to be shared with

residents of the city to help them make informed decisions about sound stewardship and compatible land use practices they can carry out on their property.

It is noted that Scott County has undertaken similar review and inventory of natural resources within the unincorporated areas and have mapped Natural Area Corridors and includes them in their 2040 Comprehensive Plan. Some of these corridors are extensions of natural areas within the City of Savage, such as Credit River, and offer opportunities for coordinated natural resource planning efforts.

Savage is fortunate to have the high quality natural resources present in the City today. Many cities have lost most if not all of their natural heritage, and must spend significant resources as they attempt to recreate natural areas. In addition, stewardship of these resources serves to provide the city and its residents a heightened sense of place: Home.

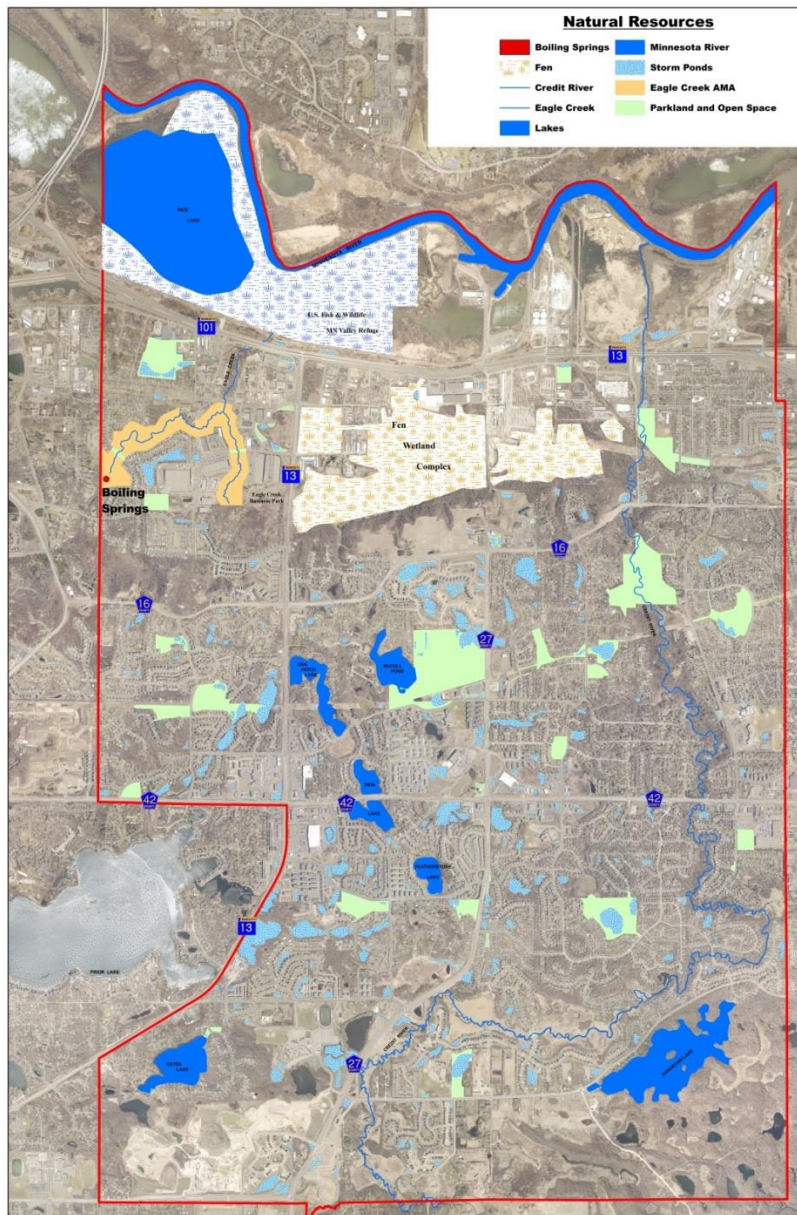
### NATURAL RESOURCES PROCEDURES AND GOALS

The city has established a Natural Resources Procedures and Goals plan to provide a framework for guiding natural resource management within Savage. The plan provides thoughtful strategies that will help manage natural resources in the city, including:

- **Management Procedures** for urban forestry, natural areas including parks and trails, turf management, maintenance of vegetation (weed control, city code), water, and wildlife.
- **Goals & Priorities** that utilizes best management practices (BMP's) for natural resources.
- **Educational resources and programs**
- **Community involvement and City partners/contacts**

Maintaining the City's natural resources, not just for the present but for the future, is a top priority and is dependent on awareness and involvement of both the public and City staff. The complete Natural Resources Operational Procedures and Goals plan can be viewed in Appendix A.

Figure 4-1: Natural Resources within Savage



### ALTERNATIVE URBAN AREA-WIDE REVIEW

A special environmental impact analysis called an Alternative Urban Areawide Review (AUAR) was completed in 1995 by the City of Savage for the 2,700 acres added to the MUSA in 1990 (Figure 4-1). Its intent was to identify the likely effects of urbanization on Eagle Creek, Boiling Springs and the Savage Fen Wetland Complex, and to identify actions needed to avoid, minimize or mitigate adverse effects on those and other



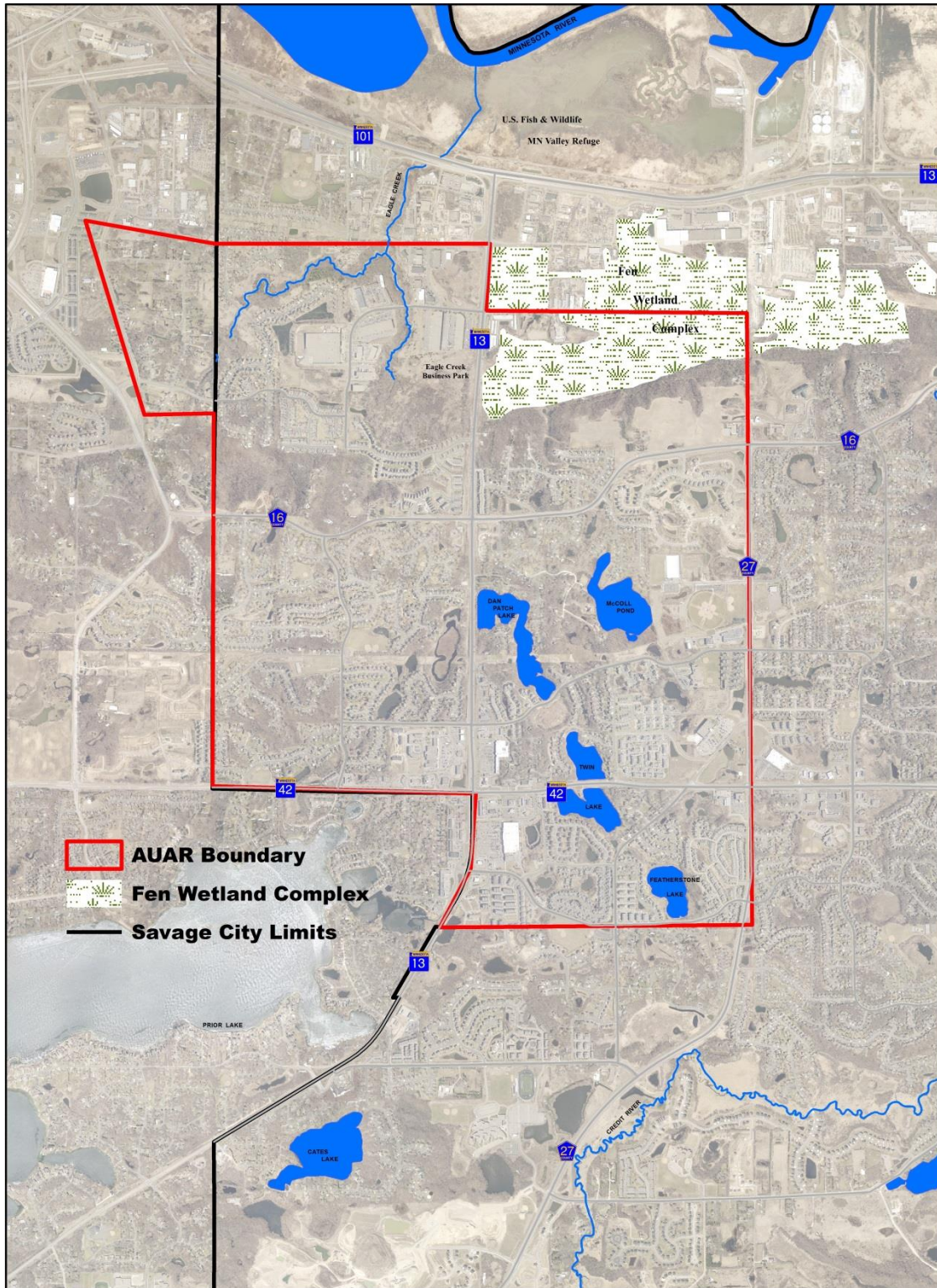
valuable natural resources. The City endorses the purpose, findings and protective promises of the AUAR.

One of the provisions of the AUAR was that future urban development and related actions in the City of Savage must be consistent with the development assumptions used in the AUAR. Development that is inconsistent with the requirements of the Mitigation Plan, or that could negatively impact Eagle Creek, Boiling Springs or Savage Fen Wetland Complex, will not be permitted. If development that is not consistent with the AUAR is proposed, its effects on these and other resources must be studied in a manner prescribed by State regulations for revisions to an AUAR. These measures include the appropriate notification of, and involvement of, citizens and public agencies and the adoption of suitable mitigation measures.

One of the key mitigation strategies for the Savage Fen Wetland Complex, Eagle Creek and Boiling Springs is the City's decision to reduce its reliance on the Prairie du Chein/Jordan aquifer, which supports these resources. Chapter 7 of this Comprehensive Plan discusses the details of alternative water sources within Savage and the City's strategy for implementing these strategies.

Elements of future growth outside the AUAR study area will require environmental review if any one of them individually exceeds the State's thresholds for mandatory environmental review. Development within the AUAR Study Area will not require further environmental review as long as it is consistent with this study's assumptions and mitigation measures.

Figure 4-2: Location of the Savage Fen Wetland complex and AUAR Study Area





### SAVAGE FEN WETLAND COMPLEX

The Savage Fen Wetland Complex is located in the City of Savage between the Minnesota River and the ancient River Warren bluffline and between TH 13 and Quentin Avenue (Figure 4-1). It is the largest calcareous fen in Minnesota, comprising of approximately 640 acres. This type of wetland is a rarity and contains some plant species found in few or no other locations. Its special characteristics are a product of the groundwater flowing through the upgradient aquifer and glacial till in this particular location.

The Wetland Conservation Act of 1991 identified calcareous fens for protection and requires the development of a fen management plan for any project that might cause adverse impacts to such wetlands. The Minnesota Department of Natural Resources (DNR) has the authority to approve such plans.

Planned land uses adjacent to the Savage Fen Wetland Complex include industry and businesses on the north, single-family housing on the east, wooded slope open space on the south, and TH 13 or industry on the west. Physical encroachment on the Savage Fen Wetland Complex by planned urban development is prohibited by the City of Savage. The City has identified the boundaries of the wetland complex and the calcareous fen portion of the complex on its zoning map, on a map within its surface water management plan, and by field staking. Structures and parking lots are required to be separated from the edge of the wetland complex by a grassy buffer area 50 feet in width.

Plans have been implemented that will attempt to protect this resource in the future.

### EAGLE CREEK

Eagle Creek is a state-designated trout stream fed by Boiling Springs, so named because its water bubbles and appears to boil from the bottom of a pond. Eagle Creek is a spring-fed, cold water stream conducive to habitat needs of Brown Trout and one of the few remaining streams of such character within the metropolitan area. Eagle Creek currently supports a population of self-reproducing brown trout and has a catch and release only regulation by the DNR. The City of Savage, through extensive investigation and concerns of citizens, has determined that Eagle Creek is a valuable asset to the community and should be preserved.

Planned land development near Eagle Creek is expected to be compatible with the preservation of the natural conditions of the creek. Surface water runoff has been

carefully regulated and controlled by a series of ponds and pipes that collect and convey surface water away from the creek then toward the Minnesota River.

A 200-foot strip of state-owned land has been created along both sides of both branches of Eagle Creek outside the banks. The land will be managed to retain its natural characteristics.

Planned land development near the west branch of Eagle Creek consists of single-family housing on parcels in the 11,000 to 15,000 square foot range and served by community sewer and water systems. An office-industrial park is established on both sides of the east branch of the creek.

Plans are implemented that will attempt to protect this resource in the future.

Residential and non-residential lots back up to the creek buffer in several locations. There are four bridges over the creek in Savage and one culvert in Shakopee.

Lot sizes and dimensions of this development are regulated by the two Cities' zoning ordinances including, in Savage, the Shoreland District and the Floodplain District.

The management concept for the Eagle Creek linear public open space will be to maintain it in its natural state to the extent possible:

- Prairie grasses are reintroduced
- Erosion sites are stabilized with indigenous groundcover
- Trees are planted along the stream bank to provide shade for trout and to stabilize the bank
- Unnatural debris is removed
- An "environmentally-friendly" walking path is established
- Small interpretive signs are installed
- Bridge design is consistent with the natural setting

## BOILING SPRINGS

Boiling Springs is a unique geologic feature that is influenced by groundwater discharge. The springs are significant not only in their geology but also their function in maintaining the flow and temperature of Eagle Creek. It's an environmental phenomenon in which a thin layer of clay forces cool groundwater to bubble or "boil" at the water's surface every few minutes – sometimes with greater vigor. Boiling

Springs is considered sacred by the Mdewakanton Sioux and continues to have spiritual significance today.

### WATER RESOURCE MANAGEMENT PLAN

The Water Resource Management Plan (WRMP), completed by WSB and Associates, Inc. in 2007 and amended by the City of Savage in 2011 and 2019, was developed to provide the City of Savage with direction concerning the administration and implementation of stormwater resource management activities within the City. This Plan meets the requirements for a local watershed management plan as required by the Metropolitan Surface Water Management Act and is in conformance with Board of Water and Soil Resources (BWSR) Rules Chapter 8410.

In addition to being in conformance with the above-stated laws, this Plan has also been developed to meet the needs, requirements, and direction outlined by the following list:

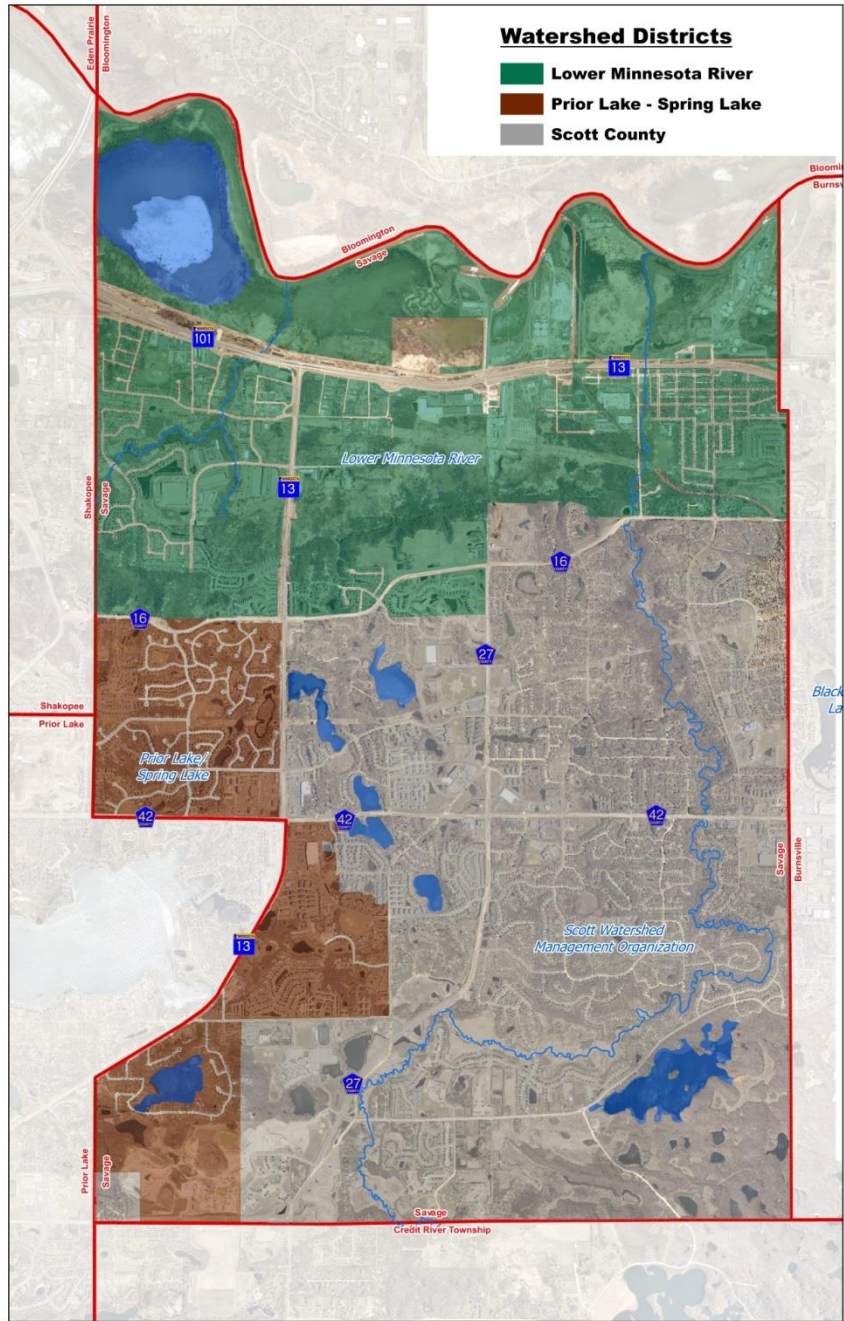
- Scott Watershed Management Organization Plan
- Lower Minnesota River Watershed District Plan
- Prior Lake – Spring Lake Watershed District Plan
- Black Dog Watershed Management Organization Plan
- State laws and rules concerning wetland management as outlined in the Wetland Conservation Act of 1991 and amendments
- State and federal rules regarding the need to secure a National Pollutant Discharge Elimination System (NPDES) permit
- Metropolitan Council Comprehensive Planning Requirements for Water Resources

This Plan incorporates the approaches and direction provided in the programs and documents listed above into a comprehensive Plan that can be consistently applied across the City.

To implement this Plan, a coordinated water resource management approach must be used. This approach uses the services of staff personnel within the City, as well as personnel associated with the various Watershed Districts and Watershed Management Organizations having jurisdiction over areas within the City. The Watershed Districts and Watershed Management Organizations having jurisdiction within the City are shown in Figure 4.3.

The primary implementation responsibility will lie with the appropriate staff members at the City. Assistance from the surrounding municipalities, Watershed Districts, and Watershed Management Organizations will also be expected.

Figure 4-3: Watershed Districts/Watershed Management Organizations





The City has entered into water resource-related agreements that govern how the City must manage its water resources. These agreements include agreements between the City and adjoining communities or agreements it may have with other governmental units or private parties. Listed below is a description of the water resource related agreements which the City has entered into.

- June 2011: Memorandum of Agreement with the Prior Lake Spring Lake Watershed District
- January 2008: Memorandum of Understanding with the Scott Watershed Management Organization
- April 2000: DNR Permit Authorizing Operation of Dan Patch/Twin Lake Lift Station
- Joint Powers Agreements with the City of Burnsville:
  - a. May 2007: Agreement regarding long term water purchase agreement with the City of Burnsville.
  - b. May 1990: Agreement regarding billing and construction of Chowen Avenue storm sewer with City of Burnsville.
  - c. January 1983: Agreement with City of Burnsville for Project 83LD-1A.
  - d. June 1983: Agreement with City of Burnsville and Sunset Pond area.

## INVENTORY

Section 3 of the WRMP identifies critical elements of the land and water resources inventory including:

- Climate and precipitation
- Geology
- Topography
- Surface water resource data
- Flood problem areas and existing flood insurance studies
- Water quality
- Floodplain and shoreland management
- Groundwater
- Soils
- Land use
- Public utilities services
- Public areas for water based recreation and access
- Fish and wildlife habitat
- Unique features

- Scenic areas
- Pollutant source locations within the City of Savage
- NPDES Phase II requirements

Inventory issues of greatest concern to the City and the undertaking of this comprehensive planning process include:

### **Topography/Drainage**

The majority of the City drains into the Minnesota River directly or through tributaries of the Minnesota River. The only exception is a small area in the west that drains into Prior Lake. The Credit River watershed is the largest watershed in the City followed by the Minnesota River watershed and Eagle Creek watershed. A major bluff generally following along McColl Drive separates the Prior Lake watershed and subwatersheds from Eagle Creek and Minnesota watersheds. Another smaller topographic element is present in the south separating Prior Lake watershed from the Credit River watershed. The many bluff areas and topographic changes provide challenges to development actions but create a scenic and diverse setting for residents.

The lowest point in the City occurs 700 feet above sea level at the Minnesota River. The highest elevation point in the City occurs in the Woodhill area, near the water tower located at 138th Street and Boone Avenue.

### **Potential Drainage/Surface Water Management Problems**

As part of the WRMP, a hydrologic model was created consisting of the seven major watersheds and 194 subwatersheds under the ultimate development scenario within Savage. In 2018 the drainage areas were updated as a part of the 10 Year Storm Pond Maintenance Plan. Figures included within the WRMP illustrate watershed, subwatershed and surface water flows and potential and identified drainage problems within the City. The identification of these issues led to the development of numerous goals and policies, as discussed in the WRMP.

### **Potential Pollutant Sources**

The location of possible pollutant sources within the City are identified within the WRMP as recognized by the Minnesota Pollution Control Agency. These areas include open and closed sanitary landfills, open dumps and Minnesota Hazard Waste Superfund Sites. It is noted that many of these sites have been cleaned up or are in the process of being cleaned up.

## WATER RESOURCE-RELATED PROBLEMS

The assessment of water related problems and corrective actions are identified in Section 4 of the WRMP and are summarized below. These problems were identified based on an analysis of the land and resource data collected to prepare this plan and through public input. Corrective actions have been recommended and have formed the basis for many of the goals and policies presented in the next section.

Major areas of concern are listed below:

- Lake and stream water quality problems.
- Flooding and storm water rate control concerns that are generated within the City and only affect areas within the City.
- Flooding and storm water rate control concerns between the City and adjoining communities.
- Impacts of storm water quantity or quality management practices on recreational opportunities.
- Impacts of storm water quality on fish and wildlife resources, and the impacts of soil erosion on water quality and quantity.
- General impact of land use practices and development on water resource issues.
- The adequacy of the existing regulatory controls, programs, and finances in terms of protecting the City's water resources and assuring that their intended uses can adequately be managed.
- Identification of potential problems anticipated to occur within the next 20 years based on growth projections and planned urbanization.
- The adequacy of existing technical and background information on systems in the City that are used to manage water resources.

Corrective actions including studies, capital improvements and programs have been initiated in response to these concerns and are listed in detail in the original text of the WRMP. The majority of corrective actions have provided the foundation for the goals and policies presented in the following section.

## GOALS AND POLICIES

As part of the WRMP, a number of goals, strategies, and policies for the management of stormwater were adopted. These goals and policies, identified in detail in Section 5 of the document, were developed to complement any county, regional, or state goals and policies. The goals are as follows:

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.

In order to achieve the City's goals for managing stormwater, four strategies, along with accompanying policies, were developed. These strategies and policies will assist the City in targeting its main audiences for the purposes of water resource management as follows:

### COOPERATION WITH OTHER AGENCIES

**Strategy:** Recognition that the City is not alone in managing water resources within its boundaries. There are a number of other local, state, regional, and federal agencies that also have rules and regulations related to stormwater management. Through this strategy, the City has recognized these other agencies' role in this endeavor and will cooperate and coordinate with these agencies as necessary.

The WRMP is in conformance with but does not restate all other agency rules that are applicable to water quality and natural resource protection. Rules, policies, permits and guidelines associated with the following organizations also provide guidance in managing water resources:

- Black Dog Watershed Management Organization  
[www.dakotacountyswcd.org/watersheds/blackdogwmo](http://www.dakotacountyswcd.org/watersheds/blackdogwmo)
- Prior Lake – Spring Lake Watershed District [www.plslwd.org](http://www.plslwd.org)
- Lower Minnesota River Watershed District [www.watersheddistrict.org](http://www.watersheddistrict.org)
- Scott Watershed Management Organization [www.co.scott.mn.us](http://www.co.scott.mn.us)
- Minnesota Department of Health [www.health.state.mn.us](http://www.health.state.mn.us)
- Minnesota Pollution Control Agency [www.pca.state.mn.us](http://www.pca.state.mn.us)
- Board of Water and Soil Resources [www.bwsr.state.mn.us](http://www.bwsr.state.mn.us) and the Wetland Conservation Act [www.bwsr.state.mn.us/wetlands/wca/index.html](http://www.bwsr.state.mn.us/wetlands/wca/index.html)
- Minnesota Department of Natural Resources [www.dnr.state.mn.us](http://www.dnr.state.mn.us)
- US Army Corps of Engineers [www.mvp.usace.army.mil](http://www.mvp.usace.army.mil)
- Minnesota Department of Agriculture [www.mda.state.mn.us](http://www.mda.state.mn.us)
- Scott County Soil and Water Conservation District [www.scottswcd.org](http://www.scottswcd.org)



While these other agency rules, policies, and guidelines are not restated in the WRMP, they are applicable to projects, programs, and planning within the City.

Further, the City of Savage is a Phase II NPDES MS4 community. The City previously submitted its SWPPP in conformance with MPCA regulations. The components of the SWPPP are integrated into the strategies outlined in this section. These documents are incorporated by reference, as they are anticipated to be updated and modified on a regular basis.

## EDUCATION

**Strategy:** The purpose of the education strategy is to foster responsible water quality management practices by educating residents, contractors, landowners, business owners, City Staff, City Council, and developers about proper water resource management. If these targeted audiences recognize their role in responsible water resource management in their homes, businesses, and practices, it is another means for the City to meet its goals. This education strategy has also been designed to be in conformance with the NPDES requirements.

### Policies:

- The City implements public education as part of the NPDES Phase II program.
- The City maintains its website for water resource management and SWPPP information.
- The City will create a Developer's Guide.
- The City supports the Citizen Assisted Monitoring Program (CAMP) for water quality monitoring.
- The City provides information newsletters, utility bill flyers, and mailings aimed at fostering responsible water quality management practices.
- The City will continue to implement education regarding proper disposal of household hazardous waste. This will include posters in key locations and flyers in utility bills.
- The City provides internal training for erosion and sediment control, BMP's, good housekeeping, and prevention pollution.
- The City will hold an annual public meeting to discuss the SWPPP and water resource management practices in conformance with the NPDES permit.
- The City will partner with various Watershed Districts, Watershed Management Organizations, and Scott County in water resource public education.

## OFFICIAL CONTROLS

**Strategy:** The policies developed in this strategy outline specific stormwater management elements that are required to be implemented through the development and/or permitting process. The regulation strategy is targeted at the public, developers, contractors, City Staff, and City Council. These policies are based off City Code and included in the city's Water Resource Management Plan.

### **Rate Control Policies:**

- Policies regarding rate control can be located in City Code Chapter 152, *Stormwater Management*, and in Section 5 of the Water Resources Management Plan.

### **Flood Control Policies:**

- Policies regarding flood control can be located in City Code Chapter 152, *Flood Plain Overlay District* and in Section 5 of the Water Resources Management Plan.

### **Water Quality Treatment Policies:**

- Policies regarding Water Quality Treatment can be located in City Code Chapter 152, *Stormwater Management*, and in Section 5 of the Water Resources Management Plan.

### **Infiltration/Volume Control Policies:**

- Policies regarding Infiltration/Volume Control can be located in City Code Chapter 152, *Stormwater Management*, and in Section 5 of the Water Resources Management Plan.

### **Wetlands Policies:**

- The City is the Local Government Unit (LGU) for the Wetland Conservation Act (WCA) and therefore requires any projects that impact wetlands to conform to the WCA, the City's Wetland Management Plan, and the City's Wetland Ordinance.
- The City encourages and will supply technical assistance to existing homeowners with properties adjacent to wetlands that were in existence prior to the adoption of the Wetland Management Plan (1999) to establish a 16.5 foot wetland buffer strip, unless a wider buffer is already in place.
- The City requires a 25-foot principal structure and 15-foot deck or patio setback plus buffer width from all wetlands.
- Wetland mitigation and buffer areas must be constructed and maintained in accordance with BWSR guidelines.
- Development must maintain hydrology to existing and newly created wetlands.

- All policies regarding Wetlands can be located in City Code Chapter 152, *Environmental Overlay Districts*, and in Section 5 of the Water Resources Management Plan.

**Groundwater Policies:**

- The City will review and consider incorporating the Scott County Groundwater Plan into ordinances.
- The City requires that the design, installation and inspection of individual sewage treatment systems shall be in conformance with State standards and enforced jointly with Scott County.

**Erosion and Sediment Control Policies:**

- Development and redevelopment are required to conform to the City's erosion control ordinance available on the City's website at [www.ci.savage.mn.us](http://www.ci.savage.mn.us). In addition to complying with the City's ordinance, development and redevelopment are required to conform to the Minnesota Pollution Control Agency's NPDES construction permit rules, which can be found at: <http://www.pca.state.mn.us/water/stormwater>.

Evidence of NPDES permit coverage shall be provided to the City prior to construction.

The most recent version of the City's Bluffland Ordinance is available on the City's web site at [www.ci.savage.mn.us](http://www.ci.savage.mn.us).

**Internal Operations**

**Strategy:** The City's internal operations can have a significant impact on water resource management. This strategy is targeted primarily at the City with some items targeted at the public and/or another agency. These policies are aimed at operation and maintenance activities associated with water resource management within the City. Internal operations can be located in Section 5 of the Water Resources Management Plan.

**IMPLEMENTATION**

Based on the information provided in the City Code, the City has developed a Water Resource Management Plan that reflects the needs and concerns of the City Council, City Staff, citizens, and the funding capabilities of the City. A prioritized listing of the studies, programs and capital improvements that have been identified to respond to the water resource needs within the City is outlined in Section 6 of the document.