

Chapter 1.0

Executive Summary

Cedar River Watershed District Watershed Management Plan Chapter 1: Executive Summary

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1.0 Executive Summary

The Cedar River Watershed District (CRWD) *Watershed Management Plan* (Plan) sets the vision, guidelines, and proposed tasks for managing the water resources within the boundaries of the CRWD. This Executive Summary summarizes the highlights of this first CRWD Plan, including introductory information, the CRWD vision and mission, goals, policies and implementation tasks.

1.1 Location and History

CRWD was established on April 25, 2007 in response to the Mower County Board of Commissioners petition to the State of Minnesota to address flooding and water quality issues in the watershed.

CRWD is located in southeast Minnesota, along the Iowa border, and covers approximately 434.7 square miles. Approximately 298.6 square miles are in Mower County, 69.4 square miles are in Dodge County, 59.1 square miles are in Freeborn County, and 7.6 square miles are in Steele County. Although the Cedar River watershed extends well into Iowa, only portions in Minnesota are included in the CRWD. **Figure 1-1** shows the location of the CRWD in relationship to the other watershed management authorities in Minnesota. **Table 1-1** lists the communities and townships that lie or partially lie within the CRWD.

Historically, the Sioux Indians controlled the area in CRWD until the Mendota Treaty in 1853. European settlement began in the 1850s and since that time the area has remained primarily agricultural. The largest city in the CRWD, Austin, grew as a railroad division center, a major agricultural shipping point and a center for the lumber trade. Currently, the largest employer in Austin is the Hormel Foods Corporation.

Table 1-1 Communities in Cedar River Watershed District

<u>Mower County</u>	<u>Mower County</u>	<u>Steele County</u>	<u>Dodge County</u>
Austin	Dexter Township	Blooming Prairie	Hayfield
Brownsdale	Grand Meadow Township	Blooming Prairie Township	Ashland Township
Dexter	Lansing Township	<u>Freeborn County</u>	Hayfield Township
Elkton	Lyle Township	Hayward Township	Ripley Township
Lyle	Marshall Township	London Township	Westfield Township
Mapleview	Nevada Township	Moscow Township	
Rose Creek	Red Rock Township	Newry Township	
Sargeant	Sargeant Township	Oakland Township	
Waltham	Udolpho Township	Shell Rock Township	
Adams Township	Waltham Township		
Austin Township	Windom Township		
Clayton Township			

Watershed districts are governed by a local board of managers who are appointed by the boards of the counties with land in the watershed district. In the CRWD, the board of managers has seven members; four members are appointed by the Mower County Board and one manager each is appointed by the Dodge County Board, Freeborn County Board and Steele County Board. The appointments are for staggered three-year terms.

The regularly scheduled meetings of the CRWD board of managers are held once a month, on the third Wednesday of the month at 7:00 p.m. The meetings are open to the public and are held at the JC Hormel Nature Center in the Ruby Rupner Room, located at 1304 21st Street NE in Austin.

Administration and technical services for the CRWD are provided by the Mower County Soil and Water Conservation District. The Austin Daily Herald is the legal paper for the CRWD. The board has contracted with Jones-Haugh and Smith, Inc. to be the District Engineer. The board selected Attorney Matt Benda of Peterson, Savelkoul & Benda LTD for legal council. The CRWD has a website (<http://www.cedarriverwd.org/>) that provides information about the district, press releases, agendas and minutes from managers' meetings, and annual reports.

1.2 Purpose and Scope

Like all watershed districts, the CRWD is a special purpose unit of local government that manages water resources on a watershed basis (a watershed is an area of land that drains to a given lake, river, stream or wetland). Watershed district boundaries generally follow natural watershed divides, rather than political boundaries.

Recognizing that water does not follow political boundaries, the State of Minnesota established the Watershed Act (Minnesota Statutes 103D) in 1955, which provided for the creation of watershed districts anywhere in the state and requires watershed districts to prepare watershed management plans. There are 46 watershed districts in the state (as of 2009).

As given in statute (Minnesota Statutes 103D.201), the general purposes of a watershed district are:

To conserve the natural resources of the state by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources.

Watershed districts may be formed for a number of specific purposes, including protection or enhancement of water quality, prevention and alleviation of flood damage, prevention and alleviation of soil erosion and sedimentation, regulation of streams, lakes and water courses for domestic, recreational and public use, and protection and regulation of groundwater uses (Minnesota Statutes 103D.201).

Minnesota statutes (103D.335 in particular) give watershed districts a number of broad authorities, including the authority to:

- Collect data
- Conduct studies and investigations
- Construct improvements
- Levy property taxes and assess properties for benefits received
- Adopt rules to regulate, conserve, and control the use of water resources
- Contract with private and public entities for the construction, maintenance, and operation of projects and other activities
- Hire staff and consultants
- Acquire property
- Incur debts, liabilities, and obligations
- Acquire, operate, construct and maintain dams, dikes, reservoirs, and water supply systems
- Enter lands for surveying and other investigations

See Minnesota Statutes 103D for additional authorities.

As required by law (Minnesota Statutes 103D.401), the CRWD Managers must adopt a watershed management plan for any or all of the purposes for which a watershed district may be established.

1.3 Plan Organization and Summary of Issues, Goals, Objectives, and Potential Solutions

The Plan sets the CRWD's water resource goals and objectives, provides data and other background information, outlines the applicable regulations, assesses watershed-wide and specific issues, and lists implementation tasks to achieve the goals. The Plan also provides information regarding the funding of the implementation program.

1.3.1 Plan Organization

The Plan is organized into six major chapters as follows:

Chapter 1	Executive Summary
Chapter 1 is the Executive Summary, which provides background information about the CRWD and summarizes the highlights of the Plan, including the Plan purpose and scope, goals, objectives, and implementation tasks.	
Chapter 2	Physical Environment Inventory
Chapter 2 provides technical information describing the surface and subsurface conditions of the CRWD. Most of Chapter 2 presents a watershed-wide inventory, including climate and precipitation, topography, soils, geology, groundwater, Minnesota Department of Natural Resources (MDNR) public waters, wetlands, surface water resource monitoring information, floodplain information, unique features and scenic areas, pollutant sources, and major watersheds. Chapter 2 also includes a number of maps, such as watershed-wide maps of land cover, MDNR public waters, impaired waters, wetlands, and watersheds. This chapter also includes a number of tables, such as precipitation information, and water quality information.	
Chapter 3	Assessment of Issues
Chapter 3 assesses the issues, challenges, and problems the CRWD faces in managing water resources on behalf of the public. Watershed-wide and specific issues are presented and discussed under a number of topic areas, including flood control, water quality, erosion and sediment control, etc.	
Chapter 4	Goals, Objectives, and Actions
Chapter 4 presents the CRWD's goals, objectives, and actions that will guide the CRWD in accomplishing its mission over the 10-year life of the Plan. The goals, objectives and actions are presented under a number of topic areas, including flood control, water quality, agricultural and urban drainage systems, erosion and sediment control, etc.	
Chapter 5	Implementation Program
Chapter 5 describes the components of the CRWD's Plan implementation program, including administrative activities, data collection and reporting, studies, and capital projects. This chapter also describes the available funding options, how projects can be initiated, the Plan review and approval process, the procedures for updating and amending the Plan, and the regulatory framework.	
Chapter 6	References
Chapter 6 lists the documents and other references used in the preparation of the Plan.	

1.3.2 Summary of Issues

The following section outlines the issues faced by the Cedar River Watershed District. These issues are discussed in greater detail in Chapter 3.0 of the Plan.

- Addressing existing flooding issues and preventing/minimizing the risk of future flooding. Impacts from flooding can include disruption of normal activities, physical damage to infrastructure, loss of life, and potential health hazards. Without controls, increased urbanization of a watershed causes an increase in average annual flood damage.
- Reducing non-point source pollution. For most water bodies, non-point source runoff, especially stormwater runoff, is a major contributor of pollutants. As urbanization increases and other land use changes occur in the watershed, nutrient and sediment inputs (i.e., loadings) from stormwater runoff can far exceed the natural inputs to the watershed's water resources.
- Implementing the action steps of TMDL studies, when completed, in cooperation with other agencies.
- Reducing sedimentation and turbidity in waterbodies within the CRWD. High levels of suspended sediment can reduce sunlight penetration and affect aquatic life, increase phosphorus concentrations, and alter channel capacity and drainage rates.
- Reducing nutrient loading to waterbodies, including nitrogen and phosphorus. Sources of nutrient loading may include increased runoff due to urbanization, agricultural practices, and failing subsurface sewage treatment systems.
- Reducing erosion within the CRWD. Erosion may be increased by construction and agricultural activities. Increased erosion and sediment loading may impact stormwater management systems (e.g., ponds, pipes, ditches), requiring more frequent maintenance, repair, and/or modification to ensure they will function as designed.
- Developing policies to guide the development and maintenance of sustainable agricultural and urban drainage systems.
- Protecting groundwater quality from the detrimental impacts of improperly operating subsurface sewage treatment systems, nonconforming feedlot operations, and chemical contamination from landfills, storage tanks, spills and other similar activities.

1.3.3 Plan Goals and Objectives

The following paragraphs summarize the goals and objectives for each of the topic areas in Chapter 4:

Flood Control (Chapter 4.1):

Goal 4.1.1 - Protect human life, property, and surface water systems that could be damaged by flood events.

Goal 4.1.2 - Correct/address existing flooding problems.

Goal 4.1.3 - Prevent future flooding problems.

Objective A - Quantify and understand where and when flooding problems occur and how water is stored/drained in the watershed.

Objective B - Regulate stormwater runoff discharges and volumes on a watershed-wide basis to 1) minimize flood problems, flood damages and the future costs of building and maintaining stormwater management systems; and 2) prevent structural damages during storms up through the critical 100-year precipitation event. Protect township, county, city and state infrastructure from flooding impacts.

Objective C - Decrease the risk of flooding throughout the watershed; specifically, decrease flooding by 20 percent in the Cedar River through the City of Austin during the critical 100-year rainfall or snowmelt event (based on current precipitation and runoff design events).

Objective D - Provide leadership and assist townships, cities, and counties with coordination of intercommunity stormwater runoff planning and design.

Water Quality (Chapter 4.2):

Goal 4.2.1 - Encourage and implement practices to address current water quality problems, and to maintain or improve the quality of surface waters in the CRWD.

Objective A - Develop and support the use of BMPs relating to improving the quality of surface water for all land uses and activities in the watershed.

Objective B - Eliminate or minimize the discharge of untreated stormwater to the Cedar River and its tributaries, as well as other watercourses and water bodies in the CRWD.

Objective C - Reduce the level of pollutants in surface waters of the CRWD as identified in Total Maximum Daily Load (TMDL) studies.

Objective D - Prevent or minimize contaminants from entering surface water resources in the CRWD.

Goal 4.2.2 - Improve and increase the understanding and knowledge of the quality of the surface water resources in the Cedar River watershed.

Objective A - Develop, operate, and maintain a surface water quality monitoring program in the CRWD.

Objective B - Assess and analyze data collected from the surface water monitoring program.

Goal 4.2.3 - Promote and enhance the full economic value and benefits of the Cedar River watershed.

Objective A - Support the maintenance of clean water supplies for the public, as well as agricultural uses and livestock.

Objective B - Support the maintenance of clean water for shoreland development and rural residential uses.

Objective C - Support the maintenance of clean water resources for commercial and industrial uses.

Agricultural and Urban Drainage Systems (Chapter 4.3):

Goal 4.3.1 - Inventory and analyze the state of the agricultural and urban (public and private) drainage systems within the CRWD.

Objective A - Inventory and map all agricultural and urban (public and private) drainage systems in the watershed to further the CRWD's understanding of where and how water is drained throughout the watershed.

Analyze/understand ongoing maintenance needed for drainage systems to correct/address existing flooding problems or to prevent future flooding problems in the watershed.

Erosion and Sediment Control (Chapter 4.4):

Goal 4.4.1 - Minimize erosion and its effects on water quality.

Objective A - Support the construction of sediment ponds, basins (including re-establishment of wetlands), and other erosion and sediment control BMPs throughout the watershed.

Objective B - Develop and implement programs that protect sensitive areas from erosion.

Wetlands and Natural Resources (Chapter 4.5):

Goal 4.5.1 - Maximize the water quality and quantity benefits of wetlands.

Objective A - Identify, restore, and enhance wetland areas on a prioritized basis to improve surface water quality, promote groundwater recharge, and support biodiversity in the CRWD.

Land Use (Chapter 4.6):

Goal 4.6.1 - Protect water resources from impacts associated with land use and land development in the CRWD.

Objective A - Support the development and implementation of local land use plans and policies that are based on sound water and land resource principles.

Goal 4.6.2 - Promote the coordination of land use management and regulation with other land use authorities in the CRWD.

Objective A - Support and coordinate the development and implementation of land use plans, ordinances, and other official controls which protect water resources.

Goal 4.6.3 - Encourage water resource protection in the Cedar River watershed through land conservation programs.

Objective A - Coordinate the implementation of land conservation programs as a part of the land development process.

Objective B - Support and coordinate the use of conservation agricultural practices that protect and conserve water resources in the CRWD.

Objective C - Support the development of a riparian area planting program.

Recreation, Habitat, and Shoreland Management (Chapter 4.7):

Goal 4.7.1 - Attain a high degree of recreational use of the surface water resources in the Cedar River watershed.

Objective A - Develop an outreach program to promote the recreational use of surface water resources in the CRWD.

Objective B - Develop a plan for managing fish, wildlife, and other recreational resources.

Objective C - Support increased opportunities for the safe and sustainable use of surface water resources in the CRWD.

Groundwater (Chapter 4.8):

Goal 4.8.1 - Protect groundwater resources in the Cedar River watershed.

Objective A - Support the development and implementation of wellhead protection plans.

Objective B - Promote the locating and sealing of abandoned wells.

Objective C - Support land use practices that enhance high quality groundwater recharge.

Objective D - Support agricultural practices that protect and conserve groundwater resources in the watershed.

Goal 4.8.2 - Improve and increase the understanding and knowledge of the groundwater resources in the CRWD.

Objective A - Develop an ongoing groundwater quality and quantity monitoring program.

Objective B - Establish and maintain a comprehensive database on groundwater resources in the watershed.

Objective C - Assess and analyze data collected from the groundwater monitoring program.

Objective D - Assess groundwater supply and quality of the aquifers in the watershed on an ongoing basis.

Goal 4.8.3 - Encourage the wise use of groundwater resources in the Cedar River watershed.

Objective A - Provide technical assistance and comments on land development requests and permits on groundwater issues.

Administration (Chapter 4.9):

Goal 4.9.1 - Apply statutory authorities in ways that protect and enhance safety, commerce, and natural resources.

Objective A - Develop rules to implement the goals, objectives, and actions of this plan.

Objective B - Provide training for board managers and advisory committee members to assist them in dealing with the complexities of managing a watershed district.

Objective C - Develop and maintain an active legislative program.

Objective D - Investigate and remain informed of new studies and research on emerging surface water issues, contaminants, and technologies.

Objective E - Monitor the effectiveness and efficiency of CRWD programs and services.

Goal 4.9.2 - Develop and maintain successful interagency working relationships to effectively implement the CRWD Plan.

Objective A - Build and maintain cooperative working partnerships with local, state, and federal government agencies.

Objective B - Develop collaborative partnerships with local school districts, universities, and non-profit organizations to implement the plan, especially education and information programs.

Objective C - Develop a "chain of authority" to identify roles and responsibilities integral to plan implementation.

Education and Public Involvement (Chapter 4.10):

Goal 4.10.1 - Maximize awareness and understanding of the value of water resources by all citizens living, working, and recreating in the Cedar River watershed.

Objective A - Support and coordinate the development and dissemination of educational programs and materials on water and land related resource issues and management throughout the watershed.

Objective B - Develop a comprehensive public relations program.

Objective C - Educate the citizens of the CRWD on surface water management.

Objective D - Develop an educational program for the general public on groundwater resources and safe drinking water.

Objective E - Maintain and update the CRWD website.

Objective F - Increase interest in and support of CRWD programs and projects.

Goal 4.10.2 - Encourage active public participation in the implementation of this plan and future plan updates and amendments.

Objective A - Develop an effective notification system for activities and actions administered by the CRWD.

Funding (Chapter 4.11):

Goal 4.11.1 - Achieve fair and fiscally responsible management of the affairs of the CRWD.

Objective A - Develop an annual CRWD budget and implementation program.

Objective B - Develop enhanced funding mechanisms to enable the CRWD to pursue the projects needed to improve water resources.

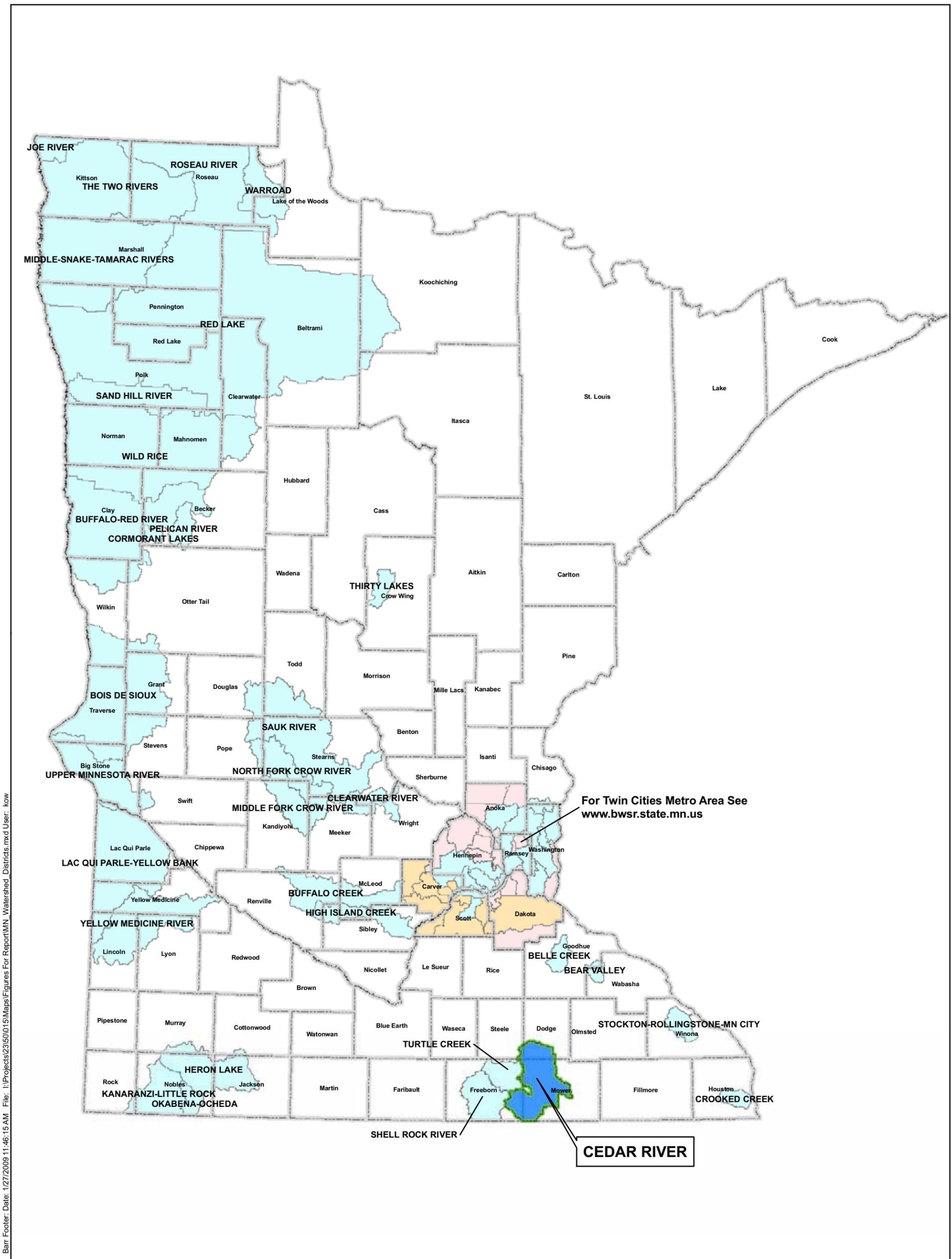
Objective C - Ensure the financial solvency and accountability of the CRWD and the efficient and effective use of CRWD funds.

1.3.4 Summary of Potential Solutions

Chapter 5.0 of the Plan presents the CRWD's implementation program. Significant implementation tasks are summarized in this section.

- Develop, adopt, and implement CRWD rules, in accordance with Minnesota Statutes 103D.341.
- Establish and adopt 100-year floodplain elevations for the CRWD established floodplain.
- Set/revise flow rate goals for subwatersheds within the CRWD.
- Construct, implement, and maintain flood control structures
- Develop a coordinated program to administer and implement BMPs in riparian and shoreland areas.
- Support the development of a coordinated and comprehensive program with partnering agencies for administering and implementing BMPs on agricultural and urban lands.
- Develop and implement plans to monitor water quality and quantity within the CRWD.
- Develop and implement a comprehensive education program in cooperation with other governmental units and educational institutions.
- Provide technical assistance to communities regarding surface water, groundwater, and land resources.
- Fund the implementation of this plan using the statutory tools provided to watershed districts, using grants, partnerships, and loans whenever possible and cost effective to reduce the CRWD's share of project costs.
- Implementing the action steps of TMDL studies, when completed, in cooperation with other agencies.

Figures



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Sources:
 Watershed Districts - Minnesota Board of Water and Soil Resources (2009)
 County Boundary - MN Dept. of Transportation (2003)
 Cedar River Watershed District Legal Boundary - Jones, Haugh & Smith Inc. (2007)

Figure 1-1

Water Management Authorities in Minnesota

Cedar River Watershed District

Legend	
	Cedar River Watershed District
	County Boundary
Water Management Authorities	
	Watershed Districts
	Joint Powers Agreement Watershed Management Organizations
	County Watershed Management Organizations



Miles

