

Chapter 5.0

Implementation Program

Cedar River Watershed District

Watershed Management Plan

Chapter 5: Implementation Program

Table of Contents

| | |
|--|------|
| 5.0 Implementation Program..... | 5-1 |
| 5.1 Funding of Implementation Program..... | 5-3 |
| 5.1.1 Funds Generated By Ad Valorem Tax Levies | 5-4 |
| 5.1.2 Funds Generated By (Special) Assessment Levies | 5-6 |
| 5.1.3 Funds Generated Through Bond Sales | 5-7 |
| 5.1.4 Funds Generated Through Collection of Charges | 5-7 |
| 5.2 Types of Watershed District Projects | 5-8 |
| 5.3 Project Initiation and Establishment | 5-10 |
| 5.4 Project Construction..... | 5-11 |
| 5.5 Plan Review, Approval and Adoption..... | 5-12 |
| 5.6 Plan Update and Amendment Procedures | 5-12 |
| 5.7 Regulatory Framework and Agency Responsibilities | 5-14 |
| 5.7.1 Local Units of Government | 5-14 |
| 5.7.2 State Agencies..... | 5-16 |
| 5.7.3 Federal Agencies..... | 5-21 |

List of Tables

| | |
|---|------|
| Table 5-1 Cedar River Watershed District (CRWD) Implementation Program..... | 5-22 |
| Table 5-2 Cedar River Watershed District (CRWD) Implementation Program Summarized by Year..... | 5-65 |

5.0 Implementation Program

This chapter describes the Cedar River Watershed District's implementation program to address the issues and incorporate the actions identified in this Plan, funding of the implementation program, implementation priorities, and procedures for updating/amending the Plan.

The implementation program of this Plan includes both capital improvement (structural) projects and non-structural activities (e.g. programs, studies) to provide flood control, water quality improvement, and education and public involvement. The implementation program identifies the specific projects, studies and other activities necessary to implement the CRWD goals, objectives, and actions. **Table 5-1** is a comprehensive list of the CRWD implementation program. The implementation program components will be funded as shown in **Table 5-1** and in accordance with applicable state laws.

The activities in **Table 5-1** (implementation table) are broken down into the following headings (and item numbers):

- Flood Control
- Water Quality
- Agricultural and Urban Drainage Systems
- Erosion and Sediment Control
- Wetlands and Natural Resources
- Land Use
- Recreation, Habitat, and Shoreland Management
- Groundwater
- Administration
- Education and Public Involvement
- Funding

For each activity, **Table 5-1** provides a description of the activity, gives a plan reference (e.g., Chapter 4.6, Goal 4.6.2, Objective A, Action 5), identifies the CRWD's involvement in the implementation, provides an estimated cost, lists the potential funding sources, and shows the proposed year of implementation. In most cases, CRWD will be the lead agency for implementing the activities, but in many cases the CRWD will support, cooperate, and coordinate with other agencies and organizations. However, because the CRWD is so new, the activities in the CRWD Plan are known only at the conceptual level. As projects become better-defined, so will the responsibilities of CRWD and the other participating agencies/organizations. The cost estimates shown in **Table 5-1** are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown in **Table 5-1** reflect the total estimated project costs; for items other than

capital projects, the costs shown in the table include only the portion of the cost that will be borne by the CRWD.

Table 5-2 reorganizes all of the activities in **Table 5-1** to show the year-by-year estimated costs of the implementation program and the total annual costs from 2009–2019. As shown in **Table 5-2**, it could cost an estimated \$272,000 to \$914,000 annually to implement all of the actions in the CRWD Plan. The CRWD only generates \$250,000 per year through its general fund tax levy, and not all of the \$250,000 can be dedicated to projects (a portion will be used for administrative costs). This means the CRWD will need to seek outside funding sources (e.g., grants) and partnerships with other units of government and organizations to fully implement the CRWD Plan. If sufficient funds are not available or obtained, the CRWD will not be able to implement all of the suggested activities outlined in **Table 5-1** and **Table 5-2**. Therefore, **Table 5-2** represents a target of activities and projects that CRWD may complete if sufficient funding is obtained.

Most non-structural activities will be funded through the CRWD administrative budget (called “general fund” in Minnesota statutes) fund. In accordance with laws and county requirements, the CRWD must adopt a budget for the following year and forward its budget to the counties by September 15. The CRWD holds an annual hearing on the budget prior to forwarding it to the counties.

The capital improvement project costs in **Table 5-1**, expressed in 2009 dollars, will be adjusted annually in accordance with an inflation index (i.e., the Engineering News Record’s Construction Cost Index).

Using the information in **Table 5-1** and **Table 5-2** as a guide, the CRWD Board will develop a work plan covering at least the next two years, and will revise the work plan annually as part of the CRWD budgeting process. The process and schedule for developing and revising the work plan will include the following:

1. In June, the CRWD Board will discuss the current year’s work plan and develop a “wish list” for the following years’ work plan. (For example, in June 2010, the CRWD Board will discuss the 2011 and 2012 work plans.)
2. Staff will develop the draft work programs for discussion at the July CRWD Board meeting.
3. In August, the CRWD Board will hold a public hearing on the next year’s budget and levy request.
4. By September 15, the CRWD Board must submit its levy request to the county auditors.

When deciding the activities to include in the work plan, the CRWD Board will need to prioritize the implementation activities. Criteria that the CRWD Board could use in their decision-making include:

- Annual commitments from previous years

- Funding (e.g., tax revenues, grants, and cost-share funding)
- Health, safety and welfare (e.g., will the activity address/correct a threat to the health, safety, and welfare of the community?)
- Property damage (e.g., will the activity address/correct a property damage threat?)
- Environment (e.g., will the activity provide an environmental benefit?)
- Cost benefit (e.g., what is the cost of the activity compared to the benefit received?)
- Public benefit (e.g., who/how many people when benefit from the activity?)
- Prevention of future problems (e.g., will the activity prevent a future problem?)
- Consistency with CRWD Plan (e.g., for an activity currently not in the CRWD Plan, is the proposed activity consistent with the CRWD Plan?)
- Feasibility (e.g., can the activity be implemented?)
- Risk (e.g., what is the risk in implementing/not implementing the activity?)

Prior to undertaking projects included in the CRWD's work plan, the CRWD will conduct a feasibility study. The feasibility study will examine the benefits and costs related to the implementation of the project and evaluate alternatives to the project. Benefits and costs may be environmental, social, and/or economic. Feasibility studies will include the involvement of property owners, affected political bodies and regulatory agencies to help determine costs, required permits and/or reviews, and project constraints. The CRWD Board will also hold a public hearing to solicit input from affected stakeholders prior to project construction. During this time, stakeholders may raise concerns associated with a specific project.

5.1 Funding of Implementation Program

The CRWD will fund its implementation program through a series of taxing authorities authorized by state statute, and will seek to obtain grant funds, cost-sharing, in-kind contributions, etc. to offset implementation costs. (Much of the information in Chapters 5.1–5.4 is taken from the *Watershed District Handbook*, November 2005, prepared by the Minnesota Association of Watershed Districts.)

The following fiscal pools are available to the CRWD:

- Ad valorem taxes
- Special assessments
- Watershed district bonds
- Water management charges
- Grants
- Donations and in-kind contributions

Through state statute, the CRWD is allowed to establish a number of funds for the purpose of carrying out its powers and duties. Each fund has specific limits as authorized by state statute. The following paragraphs describe the available funds.

5.1.1 Funds Generated By Ad Valorem Tax Levies

“Ad valorem” is a phrase meaning “in proportion to the value.” Ad valorem taxes are collected over the entire taxing district and are based on property value, rather than benefits. For example, if a watershed district wishes to raise \$100,000 through an ad valorem tax, it would calculate a tax rate, expressed in percent, that is necessary to raise the \$100,000, based on the total value of real property within the watershed district. This tax rate would then be used to determine the tax for individual properties by maintaining the same proportion of tax to value for all properties within the watershed district.

Organizational expense fund

(M.S. 103D.905, Subd. 2)

When a watershed district is first established (or later enlarged) it may levy for an organizational expense fund. The fund is used to pay for organizational expenses and preparation of the watershed management plan. Unspent funds remaining in this account after organization and preparation of the watershed management plan may be transferred to the general fund. The watershed district may levy only once upon creation (or expansion) for this fund. The levy is an ad valorem tax levy, which cannot exceed 0.01596 percent of taxable market value or \$60,000, whichever is less. The CRWD levied \$60,000 for an organizational expense fund.

Managers may borrow from the affected counties up to 75 percent (75%) of the anticipated funds that would be collected from the organizational expense levy. The advancement of these funds needs to be apportioned among the affected counties in the same ratio as the net tax capacity of the area of the counties within the watershed district bears to the net tax capacity of the entire watershed district. If the watershed district is enlarged, an organizational expense fund may be levied in the same manner against the area added to the watershed district.

General fund

(M.S.103D.905, Subd. 3)

The purpose of the general fund is to pay for general administrative expenses of the watershed district, including staff salaries, consultant fees, insurance, office expenses, manager per diem and expenses, studies, and projects of common benefit to the watershed district.

A watershed district may levy annually for a general fund. The levy consists of an ad valorem tax levy, which is currently the lesser of 0.048 percent of taxable

market value of real property within the watershed district or \$250,000 (for CRWD the maximum amount is \$250,000). The amount of the annual levy for the fund must be determined and justified through the watershed district's annual budget process (M.S. 103D.911). Watershed districts may exceed the amount only with special legislative authority.

In addition to the annual general levy, watershed districts may annually levy to pay the cost of basic water management features of projects initiated by petition of a political subdivision within the watershed district or by petition of at least 50 resident owners whose property is within the Watershed District. The annual levy cannot exceed 0.00798 percent of taxable market value, and may continue for not more than 15 consecutive years. Political subdivision means a county, city, township, soil and water conservation district, school district or other political subdivision of the state, but not a watershed district.

Watershed districts are permitted to levy outside of the administrative levy for liability insurance (M.S. 466.06). In order to exercise this authority, a watershed district must identify the liability insurance premium as a separate line in its levy certification to the county and indicate that the premium amount is being levied under M.S. Chapter 466.06.

Survey and data acquisition fund

(M.S. 103D.905, Subd.8)

The survey and data acquisition fund is designed to pay for making necessary surveys and acquiring data. This fund is to be established only if other funds are not available to the watershed district. The survey and data acquisition fund is established by an ad valorem tax levy. The levy may only be collected once every five years. The maximum levy is 0.02418 percent of taxable market value of real property within the watershed district or \$50,000, whichever is less. The fund balance cannot exceed \$50,000. At the end of a five-year period, any balance remaining in the fund may have to be accounted for in the new levy in order to keep the fund balance below \$50,000.

For future projects where a survey has been paid for from this fund, the cost of the survey will be included as part of the project work and the sum will be repaid to the survey and data acquisition fund.

Emergency projects of common benefit fund

(M.S. 103D.615, Subd. 3)

The purpose of this levy is to pay the costs of projects that are associated with a watershed district's declaration of an emergency. If the work is found to be of common benefit to the watershed district, funding may be raised by an ad valorem tax levy upon all taxable property within the watershed district, if the cost is not

more than 25 percent of the most recent general ad valorem levy of the watershed district.

This ad valorem authority may be combined with assessments against benefited property in order to pay costs associated with emergency work performed without a contract.

5.1.2 Funds Generated By (Special) Assessment Levies

An assessment levy is a special tax levied on a property to pay for a local public improvement that will benefit that property, such as a drainage ditch.

Preliminary fund

(M.S. 103D.905, Subd. 6)

This fund is used for preliminary work on proposed projects of the Watershed District. The fund must be established by District Court. The fund can be established both for projects that are petitioned and for projects the managers initiate. The fund can be established both for projects that are to be paid for by assessment and for projects that are to be paid for by a combination of assessment and ad valorem, such as basic water management features of a project. When a project is ordered, the fund (i.e. county) must be repaid by assessment. If a project is not ordered, repayment could be made from ad valorem.

Construction or implementation fund

(M.S. 103D.905, Subd. 5)

The purpose of a construction fund is to establish an account that consists of:

- the proceeds of watershed district bonds or notes or of the sale of county bonds
- construction or implementation loans from the Minnesota Pollution Control Agency (MPCA) under M.S. Chapter 103F.701-103F.761 or from any agency of the federal government
- funds from special assessments, stormwater charges, loan repayments and ad valorem tax levies levied or to be levied to supply funds for the construction or implementation of projects

Repair and maintenance fund

(M.S. 103D.905, Subd. 7 and 103D.631)

The purpose of this fund is to provide money for maintaining the projects of a watershed district to ensure the projects will be effective. The cost of normal or

routine maintenance of the projects and the cost of removing obstructions/foreign substances from a drainage system may be paid from the maintenance fund.

Watershed districts may assess all the parcels of property and municipal corporations previously assessed for benefits at the time of construction. The assessment must be made pro rata according to benefits determined. The collection (or levy) resulting from an assessment may be made annually; however, the fund may not exceed 20 percent of the original cost of construction of the project. Before ordering the levy, the managers may give notice of a hearing on making the assessment and establishing the maintenance fund.

Emergency projects for benefited property fund

(M.S. 103D.615, Subd. 3)

See emergency projects of common benefit fund under Chapter 5.1.1 for assessment information.

5.1.3 Funds Generated Through Bond Sales

(M.S.103D.905, Subd. 4)

A watershed district may establish a bond fund, consisting of the proceeds of special assessments, stormwater charges, loan repayments, and ad valorem tax levies pledged by the watershed district for the payment of bonds or notes issued by the watershed district. The fund is to be used for the payment of the principal, premium or administrative surcharge and the interest on the bonds and notes issued by the watershed district and for payments required to be made to the federal government.

5.1.4 Funds Generated Through Collection of Charges

(M.S.103D.729 and 444.075)

This provision allows a watershed district the authority to establish one or more water management districts within the territory of the watershed district to collect revenues and pay the costs of projects initiated under sections 103B.231, 103D.601, 103D.605, 103D.611, or 103D.730. To use this funding method, the law requires that the watershed district prepare an amendment to its watershed management plan. The amendment must describe the area to be included in the water management district, the amount to be charged, the methods used to determine the charges, and the length of time the water management district will remain in force (MS 103D.729).

This provision also allows revenue to be collected in the form of a charge or fee. The method for determining the fee is authorized by M.S. 444.075.

5.2 Types of Watershed District Projects

State statute also establishes the types of projects that a watershed district can initiate and establish and how they may be done. The statute establishes different criteria for establishing the various types of projects. The method with which a project is initiated dictates the type of funding method that can be used. The following paragraphs describe the project types.

Basic water management projects; those constructed with government aid

(M.S.103D.605 and 103D.905, Subd. 3)

Projects that fall under this category must be identified in the watershed district's watershed management plan or constructed within the watershed district under an agreement between the managers and the state or federal government. The right-of-way and the cost of the project are the obligation of the watershed district. A project hearing procedure is described. A grant or cost-share agreement is developed.

Projects initiated under this section may be linked to M.S.103D.905, Subd. 3, which allows the use of an ad valorem levy over the entire watershed district if the project is initiated by a political subdivision and the cost is attributable to implementing and managing the basic water management features of projects identified in the plan.

Construction by government agencies

(M.S. 103D.611)

These are projects to be constructed within the watershed district under a contract between the watershed district and the state or federal government. The cost of the construction is paid by the governmental agency but the right-of-way, legal, and general expenses of the improvement are paid by the watershed district.

The main difference between this type of project and projects constructed with government aid is that this section requires a contract between the parties as compared to a grant or cost-share agreement. In addition, costs attributed to construction are not incurred by the watershed district under this section as they are under M.S. 103D.605.

Emergency Projects of Common Benefit

(M.S. 103D.615, Subd. 3)

These are associated with a watershed district's declaration of an emergency. If the work is found to be of common benefit to the Watershed District, funding may be raised by an ad valorem tax levy upon all taxable property within the watershed if the cost is not more than twenty-five (25) percent of the most recent general ad valorem levy of the Watershed District.

This ad valorem authority may be combined with assessments against benefited property in order to pay costs associated with emergency work performed without a contract.

Drainage systems and projects

(M.S. 103D.621–103D.625)

A county board or a joint county drainage authority may direct a watershed district to assume responsibility for a drainage system within the watershed district (M.S.103D.625). After the transfer, any repairs, improvements or construction must take place under Minnesota Drainage Law, M.S. 103E.

Project repairs and improvements

(M.S.103D.631, 103D.635 and 103D.641)

Managers are responsible for maintaining the projects of the watershed district in an effective condition. The cost of normal or routine maintenance of the watershed district's projects, and the cost of removing obstructions and accumulations of foreign substances from a drainage system, must be paid from the watershed district's maintenance fund. If the cost of a repair, including all fees and costs relating to it, is less than \$25,000, the watershed district may have the work done by contract without advertising for bids (M.S.103D.641).

For repairs and improvements exceeding normal maintenance, an engineer must prepare technical and cost specifications (M.S.103D.635). A public hearing must be held before the work can be ordered. A single levy for the repair or improvement may not exceed the amount of benefits originally determined.

Storm water facilities/storm water utilities

(M.S.103D.729–103D.730)

M.S.103D.729 allows a watershed district to establish a water management district for the purpose of collecting revenue to pay the cost of projects, including storm water facilities. Water management districts are established through revision of the watershed district's watershed management plan. The plan amendment must clearly identify the area to be included in the water management district, the amount of the necessary charges, the method used to determine charges, and the length of time the water management district will be used. M.S. Chapter 444 permits watershed districts to collect the charges in any manner it chooses and allows certification to the county to collect the charges.

M.S.103D.730 allows watershed districts to build, construct, reconstruct, repair, enlarge, improve, or in any other manner obtain stormwater systems, including mains, holding areas and ponds, and related facilities for the collection and disposal of storm water. It also allows them to maintain and operate the facilities and acquire land and easement.

5.3 Project Initiation and Establishment

(M.S. 103D.601–103D.615)

Watershed district projects can be established in one of the following ways:

- by a vote of the managers
- by a petition
- by a contract with a government entity
- through establishment of an emergency project
- through the drainage code, M.S. 103E

The following paragraphs discuss the establishment procedures for projects.

Establishment procedure for a project constructed with government aid or as part of the Watershed District plan

(M.S. 103D.605)

The Board of Managers must follow these steps:

- Submit a copy of the project plan to the Minnesota Board of Water and Soil Resources (BWSR) and the director of the Minnesota Department of Natural Resources (MDNR) Division of Waters for their review and their preparation of a report.
- After receiving the BWSR and MDNR reports, the managers must give proper notice of a project hearing and hold a project hearing to establish the project.
- After the project hearing and findings by the managers that the project should move ahead, the managers must establish the project, by order. The establishment order must include the findings of the managers.

Establishment procedure for a project involving construction by government agencies

(M.S. 103D.611)

The Board of Managers must follow these steps:

- Submit a copy of the project plan to the director of the MDNR Division of Waters and the BWSR for their review and their preparation of a report.
- The managers must give proper notice and hold a public hearing.
- After authorizing the project, the managers will appoint three disinterested resident owners of the state to act as appraisers to determine benefits and damages to property affected by the proposed project.
- After the appraisers' report, plans and engineering data are filed with the managers, the managers will prepare a detailed statement of all costs to be incurred by the watershed district.
- The managers will hold a hearing on the appraisers' report and make a determination. If the managers determine benefits from the construction or

implementation will be greater than the assessments, including damages, they will confirm the appraisers' report.

Establishment procedure for emergency projects

(M.S. 103D.615)

If the managers find that an emergency situation exists and that immediate action must be taken, they may declare an emergency and designate the location, nature, and extent of the emergency. Once declared, they may order that work be done under the direction of the managers and the engineer without a contract. The project may be paid for in one of the following ways:

- the cost of work may be assessed against benefited properties
- if the cost is not more than 25 percent of the most recent general ad valorem levy of the watershed and the work is found to be of common benefit to the watershed district, funding may be raised by an ad valorem tax levy upon all taxable property within the watershed district
- both methods can be used

Establishment procedure for projects initiated through petition

(M.S. 103D.701 and 103D.705)

Projects may not be initiated until the BWSR approves a watershed management plan for the watershed district. The watershed district's projects that will be paid for by assessment of the benefited properties must be initiated by a project petition filed with the managers, by unanimous resolution of the managers, or as otherwise prescribed by statute.

Many watershed district projects originate through a petition from landowners or local government within the watershed district. The following is general information on how a project is established after being initiated by petition.

These are the steps to initiate and establish a project by petition:

1. Prepare petition, which must contain certain elements prescribed by law.
2. Prepare engineer's report per M.S. 103D.711
3. Determine benefits and damages by managers per M.S. 103D.715 and 103D.721
4. Hold a hearing, establish project, and file order per M.S. 103D.735 - 103D.745

5.4 Project Construction

(M.S. 103D.801—103D.815)

After the managers establish and order a project, the managers must call for bids for the construction work. Bid notices must be published in at least one of the newspapers of the

state where notices are usually published. Bids which exceed the total estimated cost of construction by more than thirty (30) percent must follow M.S.103E.511.

5.5 Plan Review, Approval and Adoption

The CRWD Plan was submitted for formal review to the counties, soil and water conservation districts, cities, townships, BWSR and MDNR, in accordance with Minnesota statutes. (See **Table 1-1** for a listing of all of the counties, cities and townships in the CRWD.)

The CRWD Board formed a Planning Advisory Group (PAG) to assist the Board in the preparation of the CRWD Plan. The PAG met four times during the development of the draft Plan. Prior to submitting the CRWD Plan for formal review, the CRWD solicited comments on a preliminary draft of the CRWD Plan from the PAG (its fifth meeting) and the CRWD Advisory Committee. Prior to submitting the Plan for formal review, the CRWD managers and staff also met with city councils, town boards, county boards, and other stakeholders to discuss the preliminary draft and to gather feedback.

After formal review of the CRWD Plan, the PAG met a sixth time to review the formal comments received on the Plan, and the CRWD Board held a public hearing on the Plan. BWSR approved the CRWD Plan on September 23, 2009, indicating that the CRWD Plan met all the requirements of the current Minnesota laws (Minnesota Statutes 103D.401). The CRWD Board formally adopted the CRWD Plan on October 21, 2009.

5.6 Plan Update and Amendment Procedures

This Plan will guide CRWD activities through 2019, or until superseded by adoption and approval of a subsequent Plan or revised plan. According to Minnesota laws (M.S. 103D.405), the CRWD must revise its Plan at least once every ten years. Approximately 2 years prior to the expiration date of this Plan (in 2017), the CRWD will begin the process of updating its Plan. The updated Plan will meet the requirements of the applicable Minnesota laws.

The CRWD may revise its Plan through an amendment prior to a scheduled Plan update. However, this Plan, authorities, and official controls of the CRWD will remain in full force and effect until a Plan revision is approved by BWSR.

All amendments to this Plan will follow the procedures set forth in this section, or as required by Minnesota laws (M.S. 103D.411). Citizens, landowners, local units of government, county commissioners, or staff may propose to the CRWD Board, but only the CRWD Board may initiate the amendment process.

After the Plan amendment is prepared, the CRWD must initiate the amendment procedure by (M.S. 103D.411)

1. Submitting a petition along with a copy of the proposed amendment to the BWSR.

2. At the same time that the CRWD sends the proposed Plan amendment to the BWSR, it must also send a copy of the amendment to the MDNR, as well as the county boards, county auditors, cities, and soil and water conservation districts within its territory.
3. Within sixty (60) days of receiving the proposed amendment, the MDNR must review and make recommendations on the proposed amendment. The MDNR must send the recommendations to the CRWD.
4. Within forty-five (45) days of receiving the MDNR's recommendations, the BWSR must give notice and hold a hearing on the proposed amendment. If the BWSR determines the proposed amendment to be non-controversial, it may provide notice to that effect. If a non-controversial procedure is used, a hearing will be held only if one or more persons request a hearing on the proposed amendment.
5. After the hearing, the BWSR may, by order, approve or prescribe changes in the amendment.

The amendment becomes part of the Plan after it is adopted by the Board of Managers. The BWSR is responsible for notification of the approved amendment.

A Plan amendment will NOT be required for the following situations:

1. The capital projects, annual activities, or studies listed in Table 5-1 are implemented at a different time than shown in the table;
2. Implementation of a capital project discussed in the Plan, but not listed in Table 5-1;
3. The estimated costs for a project (capital and non-capital) are different than shown in Table 5-1;
4. The CRWD adds or deletes projects (capital and non-capital) to/from Table 5-1. Such additions or deletions will be proposed, discussed and adopted as part of the CRWD's annual budgeting process; and
5. The proposed funding method for a capital improvement project listed in Table 5-1 is different than shown in the table (e.g. special assessment instead of ad valorem levy). In this situation, CRWD will hold a public hearing on the proposed change to the funding method.

Examples of situations where a Plan amendment will be required include:

1. Establishment of a water management district (or more than one district) to collect revenues and pay for projects initiated through MS 103D.601, 605, 611 or 730. To use this funding method, Minnesota law (MS 103D.729) requires that the watershed district prepare an amendment to its watershed management plan. The amendment must describe the area to be included in the water management district, the amount to be

charged, the methods used to determine the charges, and the length of time the water management district will remain in force.

2. Incorporation of TMDL implementation plans into the CRWD Plan.
3. Acceptance of authority over the public drainage systems within the CRWD, if turned over to the CRWD by the drainage authorities.

If an amendment is needed, the CRWD will prepare and distribute the plan amendment. The CRWD will maintain a distribution list of everyone who receives a copy of the Plan. Within 30 days of adopting an amendment, the CRWD will distribute copies of the amendment to everyone on the distribution list.

5.7 Regulatory Framework and Agency Responsibilities

Besides the CRWD, various units of government are involved in regulating water resource related activities including: local units of government - counties, cities and townships, state agencies - the Minnesota Department of Natural Resources, the Minnesota Board of Water and Soil Resources, the Minnesota Pollution Control Agency, the Minnesota Department of Health, the Minnesota Environmental Quality Board, the Minnesota Department of Transportation, and federal agencies - the US Corps of Engineers.

5.7.1 Local Units of Government

Counties

Counties have a wide variety of duties, including property assessment, record-keeping, road maintenance (including street sweeping, and snow/ice control), surface water management (including bridges, pipes, and ditches), administration of election and judicial functions, social services, corrections, child protection, library services, hospitals and rest homes, public health services, planning and zoning, economic development, parks and recreation, water quality, and solid waste management and recycling (including yard waste and compost sites).

Individual counties may have specific responsibilities with respect to surface water management. In Mower County, for example, all bridges and pipes under County State Aid Highways and all bridges and pipes under township roads greater than or equal to 48 inches in diameter (or equivalent area) are owned by the county and controlled by the County Board.

The counties' responsibilities directly related to CRWD include:

- Appointing the CRWD Board of Managers - Mower County appoints four managers, Dodge County, Freeborn County and Steele County each appoint one manager.
- Levying taxes for CRWD.

- Providing bonds for CRWD capital improvement projects, if needed.
- Acting as the local government unit (LGU) responsible for administering the Wetland Conservation Act (WCA).
- Developing and administering ordinances. The counties' ordinances need to be revised to include the CRWD standards for flood control, erosion and sediment control, and stormwater management. The counties should revise their ordinances to be consistent with low impact development principles (e.g., allow narrower streets, allow native plantings in boulevards, encourage pervious driveway and roadway surfaces).
- Preparing and adopting local (county) water management plans, if they choose to prepare one.
- Enforcing SSTS requirements.

More information is available at the County websites:

- Dodge County - <http://www.co.dodge.mn.us/>
- Freeborn County - <http://www.co.freeborn.mn.us/>
- Mower County - <http://www.co.mower.mn.us/>
- Steele County - <http://www.co.steele.mn.us/>

Cities

Cities also perform a wide variety of duties, similar to those performed by counties, but on a smaller scale. Following are several water resource-related city responsibilities:

- Local Water Resource Management: Cities are responsible for addressing water resource management issues that are related to the city's stormwater management infrastructure.
- Project Review & Permitting: Once the CRWD implements a permit program, cities will be responsible for informing developers and other project applicants regarding the need to obtain a CRWD permit. Cities will also be responsible for developing and implementing permit programs for projects that fall below the threshold for a CRWD permit. Cities should also inform permit applicants, for projects over one acre, that they are required to obtain a Minnesota Construction Site Permit from the MPCA.
- Land Use Planning & Zoning: Cities are responsible for land use planning and zoning in their cities. However, cities need to recognize that proposed zoning changes have the potential to 1) impact water quality in downstream resources;

and 2) cause flooding problems due to increased runoff rates. These impacts should be reviewed prior to adoption of the zoning change.

- Maintenance of City Stormwater Management Systems: Cities are responsible for the inspection, maintenance, cleaning, repair, and reconstruction of the city's stormwater management system (storm sewers, ponding areas, ditches, water level control structures, etc.) to keep it in good working order to prevent flooding and water quality problems. Such maintenance requirements should be addressed in the city's NPDES Phase II MS4 stormwater permit (where applicable).
- City Ordinances: The cities' ordinances need to be revised to include the CRWD standards for flood control, erosion and sediment control, and stormwater management. The cities should revise their ordinances to be consistent with low impact development principles (e.g., allow narrower streets, allow native plantings in boulevards, encourage pervious driveway and roadway surfaces).
- Wetlands Management: The counties within the CRWD are the LGUs responsible for administering the WCA.
- Groundwater: The cities are responsible for developing, adopting, and implementing wellhead protection programs. Cities should submit their wellhead protection plans to the CRWD during the review process. Cities also enforce local SSTS requirements.

Townships

Township duties include road maintenance (including snow/ice control), and may also include land use planning and zoning, parks and recreation, wastewater treatment, and cemetery maintenance. Townships also enforce local SSTS requirements. If townships have ordinances, they will need to be revised to include the CRWD standards for flood control, erosion and sediment control, and stormwater management. The townships should revise their ordinances to be consistent with low impact development principles (e.g., allow narrower streets, allow native plantings in boulevards, encourage pervious driveway and roadway surfaces).

5.7.2 State Agencies

Minnesota Department of Natural Resources (MDNR)

The MDNR Division of Waters (Waters) manages water resources through a variety of programs in its Water Management Section, Surface Water and Hydrographics Section, and Ground Water and Climatology Section. MDNR Waters administers the public waters work permit program, the water appropriation permit program, and the dam safety permit program. MDNR Fisheries administers the aquatic plant management control permit program and other fishery related permits.

In addition to permit programs, the MDNR oversees the floodplain management program, the public waters inventory program, the shoreland management program, the flood damage reduction grant program, the wild and scenic rivers program, various surface and groundwater monitoring programs, and the climatology program. The MDNR is involved in enforcement of the Wetland Conservation Act (WCA) and is responsible for identifying, protecting, and managing calcareous fens.

The MDNR's public waters work permit program (Minnesota Statutes 103G) requires a MDNR public waters permit for work below the MDNR designated Ordinary High Water Level (OHWL) that will alter or diminish the course, current, or cross-section of any public waters or public waters wetlands, including lakes, wetlands and streams. For lakes and wetlands, the MDNR's jurisdiction extends to designated U.S. Fish and Wildlife Service Circular #39 Types 3, 4, and 5 wetlands which are 10 acres or more in size in unincorporated areas, or 2.5 acres or more in size in incorporated areas. The program prohibits most filling of public waters and public waters wetlands for the purpose of creating upland areas. The public waters work permit program was amended in 2000 to reclassify public waters and to make the administrative program more consistent with the WCA administrative program. Under certain conditions, work can be performed below the OHWL without a public waters work permit. Examples include docks, watercraft lifts, beach sand blankets, ice ridge removal/grading, riprap, and shoreline restoration.

The MDNR regulates groundwater usage rate and volume as part of its charge to conserve and use the waters of the state. For example, suppliers of domestic water to more than 25 people or applicants proposing a use that exceeds 10,000 gallons per day or 1,000,000 gallons per year must obtain a water appropriation permit from the MDNR. Appropriation permits from the MDNR are not required for domestic uses serving less than 25 persons for general residential purposes. The MDNR is also responsible for mapping sensitive groundwater areas, conducting groundwater investigations, addressing well interference problems, and maintaining the observation well network.

More information is available at the MDNR website: www.dnr.state.mn.us

Minnesota Board of Water and Soil Resources (BWSR)

BWSR oversees the state's watershed management organizations (joint powers, county and watershed district organizations), oversees the state's Soil and Water Conservation Districts, and administers the rules for the WCA and metropolitan area watershed management.

More information is available at the BWSR website: www.bwsr.state.mn.us

Minnesota Pollution Control Agency (MPCA)

The MPCA administers the State Discharge System/National Pollutant Discharge Elimination System (NPDES) Permit program (point source discharges of wastewater), the NPDES General Stormwater Permit for Construction Activity, the NPDES General Industrial Stormwater Permit program, the NPDES Phase I and Phase II Storm Water Permit program, and the individual sewage treatment system regulations (7080 Rules). The MPCA also reports the state's "impaired waters" to the U.S. Environmental Protection Agency. Spills should be reported directly to the MPCA.

The MPCA administers and enforces laws relating to pollution of the state's waters, including groundwater. The MPCA monitors ambient groundwater quality, and administers septic system design and maintenance standards. The Tanks and Spills Section of the MPCA regulates the use, registration and site cleanup of underground and above ground storage tanks.

The MPCA is responsible for administering the programs regulating construction and reconstruction of subsurface sewage treatment systems (SSTS). SSTS are also known as septic systems and individual sewage treatment systems (ISTS). The MPCA requires an inspection program for SSTS that meets MPCA standards. Minnesota Rules 7080 govern administration and enforcement of new and existing SSTS. The individual cities, counties and townships with CRWD enforce SSTS rules.

In 2007, the MPCA resumed selective administration of Section 401 of the Clean Water Act - Water Quality Certification program, which is primarily administered by the U.S. Army Corps of Engineers (COE) (See Chapter 5.8.3 below). Section 401 certification is required to obtain a federal permit for any activity that will result in a discharge to navigable waters of the U.S. Formal applications for 401 certification must be sent to the MPCA.

The MPCA provides guidance for the disposal of dredged material, which is defined as a waste and regulated by the MPCA. The MPCA considers material excavated from public waters below the MDNR's ordinary high water level to be dredged material. A guidance document is available from the MPCA website:
<http://www.pca.state.mn.us/water/dredgedmaterials.html>.

The MPCA's dredged material guidance document provides assistance in determining what types of regulatory oversight and/or permitting is required at projects and sites involving the removal and management (storage, treatment, disposal, and/or reuse) of dredged materials, once excavated, as well as what is required for discharges from the project site and/or management control site, including stormwater.

Because the MPCA's guidance is not mandatory, it does not establish or affect legal rights or obligations. However, should a permit be needed for managing the

dredged material, such as in the event of short term or long term storage of dredged material on site, any generation of runoff from the stored materials (including stormwater runoff), dewatering runoff, etc., then following the guidance will help ensure a project is in compliance.

Some types of dredging projects do not require a permit from the MPCA for the management of dredged material; examples include the following:

- Projects involving the removal of less than or equal to 3,000 cubic yards of material with no surface water discharge (i.e., the material is immediately hauled away or any dewatering water infiltrates and does not runoff), and where the material is either:
 - more than 93 percent sand, as determined by the grain size analysis;
 - characterized as having contaminant values less than the relevant soil reference values (SRV) for the proposed disposal option; or,
 - disposed at a site or landfill that already has an MPCA permit to manage dredged material (industrial waste management plan).
- Projects involving the removal of more than 3,000 cubic yards with no surface water discharge that is disposed at a site or landfill that already has an MPCA permit to manage dredged material (industrial waste management plan).

If not disposed of in a landfill, the dredged material needs to be characterized according to the relevant soil reference values (SRV). A Level 1 SRV is required for the material to be re-used on residential/recreational lands, whereas a Level 2 SRV means the material must be re-used on industrial sites. The guidance document specifies the number, location, and depth of sediment cores that are to be collected.

For projects not requiring a permit, information pertaining to the project must be submitted to the MPCA for review prior to initiation of dredge activities. A Notification to Manage Dredged Materials without a Permit (notification) is used for this purpose. The MPCA will review the notification within 30 days, and if there's no response otherwise from the MPCA, no permit is required and the project can proceed. Even if no permit is required, sediment cores must be collected and analyzed. If a permit is required, it needs to be submitted at least 180 days before the anticipated date of dredging.

More information is available at the MPCA website: www.pca.state.mn.us

Minnesota Department of Health (MDH)

The MDH is the official state agency responsible for addressing all environmental health matters, including groundwater protection. The MDH administers the Well Management Program, the Wellhead Protection Program, and the Safe Drinking

Water Act rules. The MDH also issues fish consumption advisories. The MDH is responsible for preventing pollution of water supplies to ensure safe drinking water sources and limit public exposure to contaminants. Through implementation of the federal Safe Drinking Water Act, the MDH conducts the Public Water Supply Program, which allows the MDH to monitor ground water quality and train water supply system operators. The 1996 amendments to the federal Safe Drinking Water Act require the MDH to prepare source water assessments for all of Minnesota's public water systems and to make these assessments available to public.

Through its Well Management Program, the MDH administers and enforces the Minnesota Water Well Code, which regulates activities such as well abandonment and installation of new wells. The MDH also administers the Wellhead Protection Program, which is aimed at preventing contaminants from entering the recharge zones of public water supply wells.

In 1997, the Wellhead Protection Program rules (Minnesota Rules 4720.5100 to 4720.5590) went into effect. These rules require all public water suppliers that obtain their water from wells to prepare, enact, and enforce wellhead protection plans. The MDH prepared a prioritized ranking of all such suppliers in Minnesota. Regardless of the ranking, Rules 4720 require all public water suppliers to initiate wellhead protection measures for the inner wellhead management zone prior to June 1, 2003. If a city drills a new well and connects it to the distribution system, the city must begin development of a wellhead protection plan. Wellhead protection plans include: delineation of groundwater "capture" areas (wellhead protection areas), delineation of drinking water supply management areas (DWSMA), assessment of the water supply's susceptibility to contamination from activities on the land surface, and management programs, such as identification and sealing of abandoned wells, and education/public awareness programs. As part of its role in wellhead protection, the MDH developed the guidance document *Evaluating Proposed Stormwater Infiltration Projects in Vulnerable Wellhead Protection Areas* (MDH, 2007).

See the Minnesota Department of Health website (<http://www.health.state.mn.us/divs/eh/water/index.html>) for more information about these programs.

Minnesota Environmental Quality Board (EQB)

The EQB administers the state's environmental review program, including Environmental Assessment Worksheets (EAW) and Environmental Impact Statements (EIS).

More information is available at the EQB website: www.eqb.state.mn.us

Minnesota Department of Transportation (MnDOT)

When NPDES Phase II became effective in 2003, MnDOT was required to apply for a NPDES permit to discharge stormwater from its right-of-way. In addition to the NPDES permit, if a project constructed on MnDOT property disturbs one or more acres, a Stormwater Pollution Prevention Plan (SWPPP) must be developed for the project. Any work done on, or affecting, MnDOT property must be approved by MnDOT.

More information is available at the MnDOT website: <http://www.dot.state.mn.us/>

5.7.3 Federal Agencies

U.S. Army Corps of Engineers (COE)

The COE administers the Section 10 of the Rivers and Harbors Act permit program, and the Section 404 permit program.

Section 404 Authorizations. The Federal Clean Water Act requires that anyone who wants to discharge dredged or fill material into U.S. waters including wetlands must first obtain a Section 404 permit from the U.S. Army Corps of Engineers. Examples of activities that require a Section 404 permit include: construction of boat ramps, placement of riprap for erosion protection, placing fill in a wetland, building a wetland, construction of dams or dikes, stream channelization, and stream diversion.

When Section 404 permit applications are submitted to the Corps of Engineers, the applications are typically posted for the U.S. Fish and Wildlife Service, the U.S. Forest Service, the U.S. EPA, and other federal agencies to review and provide comments on the application. The Corps of Engineers evaluates permit requests for the potential impact to various functions and values of the wetland.

Section 401 Water Quality Certifications. A Section 401 water quality certification may be granted if an applicant demonstrates that a proposed activity “will not violate Minnesota’s water quality standards or result in adverse long-term or short-term impacts on water quality.” Greater protection is given to a category of waters designated as Outstanding Resource Value Waters. The waters in this category have received this designation because of their exceptional value. These include such groups as scientific and natural areas, wild, scenic and recreational river segments and calcareous fens.

More information is available at the COE website: www.usace.army.mil

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|------------------------------------|-------------------------------|---|--|--|---|--------------------------------------|--|
| Flood Control (Chapter 4.1) | | | | | | | |
| Flood-1 | Data Collection and Reporting | Monitor water levels and flow rates on the primary flowages in the watershed, including water levels on Cedar River, its tributaries and other water bodies periodically, and during flooding events. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3, Objective A, Action 1 | CRWD performs or contracts for performance, and/or volunteers perform | \$2,000 per manual stream gauge reading; \$5,000 per automatic station per year | CRWD Ad Valorem | Annually |
| | | Install automatic flow gauging stations on the Cedar River and other water bodies. | | | \$3,000 per automatic station | | 2010 |
| | | Collect rainfall data from agencies and cooperators. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective A, Action 3 | CRWD performs | \$500 | | Annually |
| Flood-2 | Data Collection and Reporting | Photograph flooding events in the watershed, including aerial photographs during major flooding events. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3, Objective A, Action 2 | CRWD performs or contracts for performance, other units of government perform, and/or volunteers perform | \$3,000 | CRWD Ad Valorem | As needed, during and after flood events |
| | | Survey remnant debris lines and other water marks after flood events that indicate how high water rose during the flood event. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3, Objective A, Action 4 | | | | |
| Flood-3 | Data Collection and Reporting | Require CRWD, the counties, the cities and/or the townships to evaluate the function and condition of stormwater systems and prioritize problem areas | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective B, Action 1 | CRWD performs or contracts for performance, and/or other units of government perform | \$6,000 | CRWD Ad Valorem | 2010 - 2012 |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|---|--|---------------------------------|--------------------------------------|---|
| Flood-4 | Administrative | Provide incentives to counties, cities, and townships to retrofit existing stormwater systems to reduce stormwater rates and volumes in priority locations. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective B, Action 2 | CRWD performs | \$10,000 - \$50,000 per project | CRWD Ad Valorem | As funding allows and projects are proposed |
| Flood-5 | Administrative | Establish CRWD development policies and require townships, cities, and counties to implement them. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective B, Action 3 | CRWD performs | Included in item Admin-1 | CRWD Ad Valorem | 2009 |
| | | Require project proposers to apply best management practices (BMPs) to site designs that reduce the volume and rate of stormwater runoff, to the maximum practical extent. Examples of urban stormwater runoff volume reduction methods include: <ul style="list-style-type: none"> Reducing the amount of planned impervious surface (as areas develop). Reducing the amount of impervious surface (during redevelopment). Rain gardens and other BMPs that promote infiltration. In areas where infiltration is difficult to achieve or not desirable, project proposers must consider providing extended detention basins. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective B, Action 6 | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|---|--|-----------------------|--------------------------------------|---|
| Flood-6 | Administrative | Review proposed improvements, developments and redevelopment projects in the watershed and, if necessary, require compliance with CRWD rules and policies to help ensure such projects will not create flood conditions that are worse than currently exist. The CRWD's review of development, redevelopment and improvement projects includes review of proposed work in the CRWD established floodplain. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective B, Action 5 | CRWD | \$5,000 | CRWD Ad Valorem | Annually |
| Flood-7 | Administrative | Establish and adopt 100-year floodplain elevations for those reaches of the Cedar River and its tributaries that are under the CRWD's jurisdiction. These floodplain elevations will be based on either a) current/future Flood Insurance Studies (FIS); or (b) studies completed by other entities (e.g., the CRWD, counties, cities, etc.) and accepted by the CRWD. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective B, Action 4 | CRWD performs | \$5,000 | CRWD Ad Valorem | 2009 and updated as needed thereafter, based on study results |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|---|---|--|--------------------------|--------------------------------------|------------------------------|
| Flood-8 | Administrative | Require cities/counties to revise their floodplain ordinances to cover the broader CRWD established floodplain and include the following CRWD requirements. [The "broader CRWD- established floodplain" is as discussed in Action 4 above. Typically, city/county floodplain ordinances only regulate activities within the FEMA-designated floodplain shown in the FIS. By following this requirement, cities/counties would be applying their ordinances to floodplains of smaller tributary streams and detention/retention basins.] | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective B, Actions 7 – 12 | CRWD | Included in item Admin-1 | CRWD Ad Valorem | 2010 |
| | | Allow only those land uses in the CRWD established floodplain that will not have facilities that could be damaged by floodwaters and will not increase flooding. Allowable types of land use that are consistent with the floodplain include recreation areas, parking lots, excavation and storage areas, public utility lines, agriculture, and other open spaces | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|----------------|--|-----------------------|--------------------------------------|------------------------------|
| | | Prohibit permanent storage piles, fences and other obstructions in the floodplain that would collect debris or restrict flood flows. Require removal of downed trees, snags and debris in the main channel of the Cedar River, especially after flood events, to reduce flow resistance. | | | | | |
| | | Prevent (if possible) construction of new roads in the floodplain, and bring existing roads out of the floodplain, if possible. Discourage development where the sole access to the site is through the established 100-year floodplain. | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|----------------|--|-----------------------|--------------------------------------|------------------------------|
| | | <p>Require the following minimum building elevation be met for all new permanent structures located within or around the CRWD 100-year floodplain:</p> <p>i. The lowest floor (including basement) must be at least 2 feet above the 100-year floodplain elevation.</p> <p>Encourage the following minimum building elevations be met for all new permanent structures located within or around the CRWD 100-year floodplain:</p> <p>i. The lowest floor (including basement) must be at least 3 feet above the highest local groundwater elevation.</p> <p>ii. All HVAC facilities must be at least 2 feet above the 100-year floodplain elevation.</p> <p>iii. All HVAC facilities must be at least 3 feet above the highest local groundwater elevation.</p> <p>iv. The lowest opening must be at least 2 feet above the 100-year flood elevation of emergency overflow swales.</p> | | | | | |
| | | Develop a "no net loss of floodplain" rule | | | \$5,000 | CRWD Ad Valorem | 2010 |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|---|--|--|--|---|
| Flood-9 | Study | Set flow rate goals for the remaining subwatersheds in the entire CRWD by developing and/or updating hydrologic and hydraulic models. Revise already-set flow rate goals, where appropriate, as additional modeling is completed. Update Figure 4-1A, Figure 4-1B, and Table 4-1 as models are developed and/or updated. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Actions 1.a | CRWD | \$250,000 | CRWD Ad Valorem | 2009-2012 |
| | | Designate "priority" subwatersheds, where flood control features and measures should be implemented first. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 1.b | | | | |
| Flood-10 | Capital Project | Construct/implement flood control features and measures that achieve the CRWD's subwatershed flow rate goals, focusing on implementing projects in priority subwatersheds. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C—Actions 1.c & 2 | CRWD performs | Variable, from less than \$10,000 to more than \$500,000 per project | CRWD Ad Valorem, special assessments, stormwater utility, grants | Annually and as funding allows |
| Flood-11 | Administrative | Drawdown of lakes/ponds in anticipation of flood events. Consider the water quality and other impacts of such drawdowns. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 2.c | CRWD performs or contracts for performance | \$5,000 | CRWD Ad Valorem | When needed, and only if there's enough forewarning, such as a spring snowmelt event. |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|---|--|-----------------------|--------------------------------------|------------------------------|
| Flood-12 | Administrative | Coordinate with Turtle Creek Watershed District to achieve the subwatershed flow rate goals for the Turtle Creek watershed, as set in the <i>Upper Cedar River Surface Water Management Plan</i> and as set in the Turtle Creek Watershed District report <i>Summary of Potential Water Storage Sites</i> (Barr, 1970). | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 3 | CRWD and Turtle Creek Watershed District | \$1,000 | CRWD Ad Valorem | Annually |
| Flood-13 | Administrative | In the event of a road washout: a. Require the road authority to create a protected overflow path/route where protective armoring material prevents future road washouts. b. Encourage the road authorities to consider implementing flood reduction measures where increased flooding will not be problematic for upstream buildings and land areas; examples of flood reduction measures include: i. Maintaining existing culvert size(s) ii. Raising the road elevation iii. Adding a flow restriction | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 4 | CRWD in cooperation with other units of government | \$1,000 | CRWD Ad Valorem | As needed |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|----------------------------------|---|---|--|--|--------------------------------------|--|
| Flood-14 | Study | Analyze the upstream and downstream impacts of proposed flood reduction measures and mitigate any negative impacts prior to their implementation. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 5 | CRWD | \$5,000 per proposed project | CRWD Ad Valorem | As needed |
| Flood-15 | Administrative | Support the removal of homes, businesses, and other occupied structures from the floodplain. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 6 | CRWD | \$1,000 | CRWD Ad Valorem | As needed/ requested |
| Flood-16 | Administrative | Provide financial or other assistance (when possible) to implement localized individual floodproofing measures for those structures that cannot be moved out of the floodplain. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 7 | CRWD | Up to \$5,000 | CRWD Ad Valorem | As funding allows and projects are proposed |
| Flood-17 | Administrative | Apply for grants from the MNDNR, other state and federal agencies, and other sources to support the funding of flood control/flood reduction projects. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 8 | CRWD | Included in item Fund-3 | CRWD Ad Valorem | Annually/As needed |
| Flood-18 | Annual Operation and Maintenance | Operate, inspect, maintain, modify, and repair all future CRWD flood control and water quality improvement projects | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective C, Action 9 | CRWD performs or contracts for performance by others | Cost will depend on number of projects | CRWD Ad Valorem | After construction, annual inspections will be needed. |
| Flood-19 | Administrative | Support the development of a coordinated and comprehensive program with partnering agencies for administering and implementing BMPs on agricultural lands. | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective D, Action 1 | CRWD, supporting and partnering with other units of government | \$5,000 | CRWD Ad Valorem | 2010 |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|------------------------------------|------------------|--|---|---|---------------------------|--------------------------------------|---|
| Flood-20 | Administrative | Develop and enforce rate control rules (e.g., post-development rates must be less than or equal to pre-development rates). | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective D, Action 2 | CRWD performs | Included in item Admin-1 | CRWD Ad Valorem | 2010 Annually (after rule development) |
| Flood-21 | Administrative | Prohibit diversions of surface water within, into, or out of the watershed that may have a substantial adverse effect on stream flow or water levels at any point within the watershed | Chapter 4.1 Goals 4.1.1, 4.1.2, 4.1.3 Objective D, Action 3 | CRWD performs | Included in item Admin-1 | CRWD Ad Valorem | Annually (after fund development) |
| Water Quality (Chapter 4.2) | | | | | | | |
| WQual-1 | Administrative | Support the development of a coordinated and comprehensive program with partnering agencies for administering and implementing BMPs on agricultural and urban lands. | Chapter 4.2 Goal 4.2.1 Objective A, Action 1 | CRWD, supporting and partnering with other agencies and units of government | Included in item Flood-19 | CRWD Ad Valorem | See item Flood-19 |
| | | Develop and implement a coordinated and comprehensive program for administering and implementing BMPs in riparian/ shoreland areas, including support of the design, installation and maintenance of riparian/shoreland vegetation in riparian/ shoreland areas. The program should provide incentives to riparian/ shoreland landowners to maintain and enhance natural vegetation on their property. | Chapter 4.2 Goal 4.2.1 Objective A, Action 5 | | \$5,000 | | 2012 and annually thereafter |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|---|---|--|-----------------------|--------------------------------------|------------------------------|
| WQual-2 | Administrative | Provide municipalities and counties with technical assistance in applying stormwater management BMPs on road and land development projects. | Chapter 4.2 Goal 4.2.1 Objective A, Action 7 | CRWD | \$5,000 | CRWD Ad Valorem | As needed |
| WQual-3 | Administrative | Partner with federal, state, and local agencies to promote efficient use of fertilizers for agricultural and residential applications including: soil testing, application recommendations, and sewage/manure application monitoring. | Chapter 4.2 Goal 4.2.1 Objective A, Action 2 | CRWD, partnering with other units of government | \$5,000 | CRWD Ad Valorem | Annually |
| WQual-4 | Administrative | Support the SWCDs in their role as the buffer strip program coordinator for all efforts by federal, state, and local agencies, and non-profit groups to implement agricultural buffer projects. | Chapter 4.2 Goal 4.2.1 Objective A, Action 3 | SWCDs | \$10,000 | CRWD Ad Valorem | Annually |
| WQual-5 | Administrative | Work with local feedlot officers to bring feedlot operations in compliance with state regulations. | Chapter 4.2 Goal 4.2.1 Objective A, Action 4 | CRWD | \$5,000 | CRWD Ad Valorem | Annually |
| WQual-6 | Administrative | Encourage practices that exclude livestock from streams, creeks, ponds, concentrated flow areas, etc. | Chapter 4.2 Goal 4.2.1 Objective A, Action 11 | CRWD, partnering with SWCDs/NRCS | \$5,000 | CRWD Ad Valorem | Annually |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|---|---|--|--------------------------------------|--|
| | | Develop and implement a riparian area livestock fencing program to keep livestock out of riparian areas. | Chapter 4.2 Goal 4.2.3 Objective A, Action 2 | CRWD, in coordination with other units of government | \$5,000 | | 2011 develop program and implement annually thereafter |
| WQual-7 | Administrative | Discourage the improper spreading/application of manure and sewage – e.g., keep away from creeks and other areas of concentrated flow, such as draws and swales. Encourage the use of filter strips between manure/sewage application areas and areas of concentrated flow (swales, draws, streams, etc.). | Chapter 4.2 Goal 4.2.1 Objective A, Action 10 | CRWD, partnering with other units of government | \$5,000 | CRWD Ad Valorem | Annually |
| WQual-8 | Administrative | Work to incorporate water quality treatment components into future flood control projects for cost efficiency and effective use of land resources. | Chapter 4.2 Goal 4.2.1 Objective A, Action 6 | | Costs will vary; Included in item Flood-10 | CRWD Ad Valorem | As needed |
| WQual-9 | Administrative | Assess and address water quality issues relating to road salt application, salt storage, snow removal, and snow piling/disposal. | Chapter 4.2 Goal 4.2.1 Objective A, Action 8 | CRWD, with cities, counties, townships and other agencies | \$5,000 | CRWD Ad Valorem | 2013 |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|--|--|--------------------------|--------------------------------------|------------------------------|
| WQual-10 | Administrative | Continue to apply for grants from the Minnesota Pollution Control Agency (MPCA), Minnesota Board of Water and Soil Resources (BWSR), other state and federal agencies, private foundations, and other sources to support the funding of targeted water quality projects relating to point and non-point pollution sources. | Chapter 4.2 Goal 4.2.1 Objective A, Action 9 | CRWD | Included in item Fund-3 | CRWD Ad Valorem | Annually |
| WQual-11 | Administrative | Support efforts by local units of government in the CRWD to develop, adopt and administer performance standards that protect water resources. | Chapter 4.2 Goal 4.2.1 Objective B, Action 1 | CRWD | \$5,000 | CRWD Ad Valorem | Annually, as needed |
| WQual-12 | Administrative | Develop a program that encourages communities, landowners, and other road authorities to eliminate or minimize the discharge of untreated stormwater runoff to the surface water resources in the CRWD. | Chapter 4.2 Goal 4.2.1 Objective B, Action 3 | CRWD | \$5,000 | CRWD Ad Valorem | 2009 |
| WQual-13 | Administrative | Develop rules to address stormwater discharge rate, volume and quality. | Chapter 4.2 Goal 4.2.1 Objective B, Action 2 | CRWD | Included in item Admin-1 | CRWD Ad Valorem | 2009 |
| | | Develop rules requiring CRWD to be notified of all new direct discharges (including tile systems) to water resources. | Chapter 4.2 Goal 4.2.1 Objective B, Action 4 | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|----------------------------------|---|--|--|---|--|---|
| | | Develop an enforcement program for the CRWD rules. | Chapter 4.2 Goal 4.2.1 Objective B, Action 6 | | | | |
| WQual-14 | Administrative | Develop CRWD permitting procedures, including but not limited to, applications, checklists, fees, and inspections. | Chapter 4.2 Goal 4.2.1 Objective B, Action 5 | CRWD | Included in item Admin-1 | CRWD Ad Valorem | 2009 |
| WQual-15 | Annual Operation and Maintenance | Operate, inspect, maintain, modify, and repair all future CRWD flood control and water quality improvement projects | Chapter 4.2 Goal 4.2.1 Objective C, Action 7 | CRWD performs or contracts for performance by others | Cost will depend on number of projects, included in item Flood-18 | CRWD Ad Valorem | Annually after project construction or implementation |
| WQual-16 | Data Collection and Reporting | Support the MPCA and other monitoring programs for rivers, streams, and other waterbodies in the watershed. | Chapter 4.2 Goal 4.2.1 Objective C, Action 1 | Other units of government perform | \$5,000 | CRWD Ad Valorem | Annually |
| WQual-17 | Study | Support the preparation of TMDL studies for the MPCA-designated impaired waters in the CRWD. | Chapter 4.2 Goal 4.2.1 Objective C, Action 2 | MPCA or CRWD | \$5,000 | CRWD Ad Valorem, grants (if CRWD performs) | As needed, while TMDL studies are underway |
| WQual-18 | Administrative | Develop performance standards and rules to protect surface water in the CRWD, as recommended in the TMDL studies. | Chapter 4.2 Goal 4.2.1 Objective C, Action 3 | CRWD | \$5,000 | CRWD Ad Valorem | After completion of TMDL studies |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|---|--|--|-------------------------|--------------------------------------|---|
| | | Incorporate implementation plans for future Cedar River TMDL studies into this Plan as amendments, including the implementation plan for the Cedar River Watershed Turbidity, Excess Nutrient and pH TMDL Study into this Plan as an amendment (this study is scheduled to be completed in 2011). | Chapter 4.2 Goal 4.2.1 Objective C, Action 5 | | \$5,000 | | After completion of TMDL studies (2012 for Cedar River Watershed Turbidity, Excess Nutrient, and pH TMDL Study) |
| WQual-19 | Capital Project | Take the lead and coordinate with the counties and local units of government in implementing the water quality improvement measures recommended in TMDL studies to reduce pollutants in MPCA-designated impaired waters in the CRWD. | Chapter 4.2 Goal 4.2.1 Objective C—Action 4 | CRWD, coordinating with other units of government | Varies/to be determined | Grants | Upon completion of TMDL (or draft TMDL) studies and if funding is available |
| | | Consider implementing draft/preliminary water quality improvement measures identified in the Cedar River Watershed Turbidity, Excess Nutrient and pH TMDL Study, prior to its formal approval by the EPA. | Chapter 4.2 Goal 4.2.1 Objective C—Action 6 | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|---|---|--|-----------------------|--------------------------------------|-------------------------------|
| WQual-20 | Administrative | Cooperate with Turtle Creek Watershed District, Shell Rock River Watershed District, and other agencies/units of government (e.g., counties, SWCDs, cities) to implement measures to reduce nitrate concentrations in the Cedar River watershed. | Chapter 4.2 Goal 4.2.1 Objective C, Action 7 | CRWD, in cooperation with other units of government | \$5,000 | CRWD Ad Valorem | 2013, and annually thereafter |
| WQual-21 | Administrative | Support the preparation and implementation of source water protection plans in the CRWD. | Chapter 4.2 Goal 4.2.1 Objective D, Actions 1 – 3 | CRWD | \$5,000 | CRWD Ad Valorem | Annually/As needed |
| | | Support the efforts of the counties, cities, and townships to minimize groundwater impacts from SSTs. | | | | | |
| | | Refer to the recommendations from the Minnesota Department of Health (MDH) <i>Recommendations And Guidance Pertaining To The Development And Implementation Of Source Water Protection Plans For Public Water Supplies Relying On Surface Waters</i> (2005) and MDH <i>Evaluating Proposed Stormwater Infiltration Projects in Vulnerable Wellhead Protection Areas</i> (2007) for guiding the development of source water protection plans for systems that use surface water sources. | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|-------------------------------|---|--|--|---|--------------------------------------|-------------------------------|
| WQual-22 | Data Collection and Reporting | Coordinate with counties, townships and cities to create and update an inventory of municipal and commercial/ industrial point source discharges to surface waters. | Chapter 4.2 Goal 4.2.1 Objective D, Action 4 | CRWD, in coordination with other units of government | \$5,000 | CRWD Ad Valorem | 2013 |
| WQual-23 | Data Collection and Reporting | Prepare an annual water quality monitoring program that delineates the specific sites and monitoring to be undertaken in the upcoming year(s). | Chapter 4.2 Goal 4.2.2 Objective A, Action 1 | CRWD | \$10,000 for first year, \$2,000 thereafter | CRWD Ad Valorem | 2010, and annually thereafter |
| | | Install and operate automatic sampling equipment at as many sites as possible (as funding allows). | | | \$3,000 per year per automatic sampling site | | |
| | | Implement the annual monitoring plan, which may include monitoring of key tributaries, drainage ditches, streams, lakes, high quality wetlands, surface runoff in drainage ditches, and other water resources within the CRWD | Chapter 4.2 Goal 4.2.2 Objective A, Action 2 | CRWD, in support of volunteer and other agency efforts | Grab samples: \$1,000 per site Automatic sampling: \$10,000 per site | | Annually |
| | | Support volunteer and agency efforts to monitor water resources in the CRWD | Chapter 4.2 Goal 4.2.2 | | \$5,000 | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|-------------------------------|--|--|--|--------------------------|--------------------------------------|------------------------------|
| | | Support the active involvement of citizens in the monitoring of water resources in the CRWD through existing programs of the MPCA or other agencies and/or developing specific programs for groups such as schools within the CRWD | Objective A, Actions 4 & 5 | | | | |
| WQual-24 | Data Collection and Reporting | Gather and organize monitoring results and maintain an active and user-friendly database. | Chapter 4.2 Goal 4.2.2 Objective A, Action 3 | CRWD, in coordination with other units of government | \$5,000 | CRWD Ad Valorem | Annually |
| | | Develop a web-based digital database for surface water monitoring data that connects specific data with monitoring sites. | Chapter 4.2 Goal 4.2.2 Objective B, Action 1 | | \$5,000 | | 2013 |
| WQual-25 | Administrative | Include a summary of the surface water monitoring results in the annual report. | Chapter 4.2 Goal 4.2.2 Objective B, Action 2 | CRWD | Included in item Admin-6 | CRWD Ad Valorem | Annually |
| WQual-26 | Administrative | Advocate programs through the USDA Farm Services Agency (FSA) and other agencies that support good water supplies for agricultural operations. | Chapter 4.2 Goal 4.2.3 Objective A, Action 1 | CRWD | \$1,000 | CRWD Ad Valorem | Annually |
| WQual-27 | Administrative | Advocate for the development of wellhead protection plans for municipal water supplies. | Chapter 4.2 Goal 4.2.3 Objective A, Action 3 | CRWD | \$1,000 | CRWD Ad Valorem | Annually |
| WQual-28 | Data Collection and Reporting | Maintain data that reflects the economic benefits of clean water in the CRWD's rivers and streams to the local economy. | Chapter 4.2 Goal 4.2.3 Objective B, Action 1 | CRWD | Included in item Edu-3 | CRWD Ad Valorem | Annually |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|--|------------------|---|--|--|-----------------------|--------------------------------------|---------------------------------------|
| WQual-29 | Study | Identify quantifiable aspects of the benefits that riparian area protection efforts have on communities. | Chapter 4.2 Goal 4.2.3 Objective B, Action 2 | CRWD | \$2,000 | CRWD Ad Valorem | 2014 |
| WQual-30 | Administrative | Review and provide comments on all surface water appropriation permits for the MDNR. | Chapter 4.2 Goal 4.2.3 Objective C, Action 1 | CRWD | \$1,000 | CRWD Ad Valorem | Annually |
| Agricultural and Urban Drainage Systems (Chapter 4.3) | | | | | | | |
| Drain-1 | Administrative | The CRWD will not seek authority over public drainage systems within the CRWD, but may be asked to accept this authority from the counties (per Minnesota Statutes 103D.625). | Chapter 4.3 Goal 4.3.1 Objective A, Action 1 | CRWD | To be determined | CRWD Ad Valorem | When/if authority turned over to CRWD |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|-------------------------------|---|--|---|---|--------------------------------------|--|
| Drain-2 | Data Collection and Reporting | Develop an inventory of available data regarding agricultural and other rural drainage systems to determine location, approx. size of tile, approx. dimensions of ditches (profile and cross section), and type/condition of vegetation along and within the ditch (e.g., trees, grass, deadfalls, eroded areas, sediment deltas). Where information is not available, obtain data through surveys or other methods and add the data to the inventory. Where needed, field review the drainage capacity and condition of each agricultural and other rural (public and private) drainage system in the watershed. Collect and organize records on ditch maintenance and assessments. | Chapter 4.3 Goal 4.3.1 Objective A, Action 2 | CRWD, in coordination with drainage authorities, SWCDs, counties, townships, property owners and others | \$30,000 | CRWD Ad Valorem | 2010 – 2012 |
| | | Develop and maintain the data for agricultural and other rural drainage systems for each county in the CRWD, using GIS software. | Chapter 4.3 Goal 4.3.1 Objective A, Action 3 | | \$5,000 to develop GIS database; \$1,000 to maintain | | Annually after development of inventory (2010) |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|-------------------------------|--|---|---|-----------------------|--------------------------------------|------------------------------|
| | | Correlate the drainage systems to current land use conditions and with erodible soils, steep slopes, and other sensitive soil characteristics. | Chapter 4.3 Goal 4.3.1 Objective A, Action 4 | | \$5,000 | | 2013 |
| Drain-3 | Data Collection and Reporting | Identify specific areas within agricultural and urban areas where drainage systems are causing significant impacts to water resources. Develop a prioritized listing of drainage systems where action is required to correct water quality and quantity problems. | Chapter 4.3 Goal 4.3.1 Objective A, Actions 5 & 6 | CRWD, in coordination with drainage authorities, SWCDs, counties, cities, townships, and others | \$20,000 | CRWD Ad Valorem | 2013 |
| | Capital Project | Work to correct or minimize identified significant impacts of drainage systems to water resources. | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|---|----------------------------------|--|---|---|--------------------------|--------------------------------------|---------------------------------------|
| Drain-4 | Annual Operation and Maintenance | Develop an ongoing schedule for visiting and inspecting all drainage systems for maintenance purposes. Develop drainage system monitoring & maintenance plan, including an inventory and assessment of past maintenance efforts, identification of chronic problem areas, and a prioritization of maintenance needs. | Chapter 4.3 Goal 4.3.1 Objective A, Action 7 | CRWD, in coordination with drainage authorities, SWCDs, counties, cities, and townships | \$5,000 | CRWD Ad Valorem | 2013 |
| Erosion and Sediment Control (Chapter 4.4) | | | | | | | |
| E&SC-1 | Administrative | Develop rules regarding design requirements for sediment ponds, basins, contour farming, buffer strips, conservation tillage, grassed swales/draws, and other erosion and sediment control BMPs. | Chapter 4.4 Goal 4.4.1 Objective A, Action 1 | CRWD | Included in item Admin-1 | CRWD Ad Valorem | See item Admin-1 |
| E&SC-2 | Administrative | Provide design recommendations and technical assistance for erosion and sediment control plans prepared for all major construction and roadway projects. | Chapter 4.4 Goal 4.4.1 Objective A, Actions 2 & 3 | CRWD | Included in item WQual-7 | CRWD Ad Valorem | Annually/as needed (see item WQual-7) |
| | | Provide support and assistance for the construction of sediment ponds and basins for intensive agricultural operations. | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|---|--|--------------------------|---|------------------------------|
| E&SC-3 | Administrative | Facilitate discussions and provide seminars or workshops for local units of government, agencies and relevant parties on issues of BMPs and stormwater. | Chapter 4.4 Goal 4.4.1 Objective A, Action 4 | CRWD | \$2,000 | CRWD Ad Valorem | Annually |
| E&SC-4 | Study | Investigate measures that address controlling the movement of sediment once it has entered the river or stream system, and the minimization of bank erosion. | Chapter 4.4 Goal 4.4.1 Objective A, Action 5 | CRWD | \$10,000 | CRWD Ad Valorem | 2013 |
| E&SC-5 | Capital Project | Implement measures that address controlling the movement of sediment once it has entered the river or stream system, and the minimization of bank erosion. | Chapter 4.4 Goal 4.4.1 Objective A, Action 5 | CRWD | Varies/to be determined | CRWD Ad Valorem, drainage authority funds, other agency funds, grants | 2014 – 2018 |
| E&SC-6 | Administrative | Develop rules requiring the preparation of plans that show grading and temporary and permanent erosion/ sediment controls for all major land development proposals and public construction projects. | Chapter 4.4 Goal 4.4.1 Objective B, Actions 1 & 2 | CRWD CRWD | Included in item Admin-1 | CRWD Ad Valorem | 2010 (see item Admin-1) |
| | | Develop procedures and methods for enforcing CRWD grading and erosion control requirements. | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|---|-------------------------------|--|--|---|---------------------------|---|------------------------------|
| E&SC-7 | Data Collection and Reporting | Develop an erosion problem inventory for prioritized application of stabilization BMPs. | Chapter 4.4 Goal 4.4.1 Objective B, Action 3 | CRWD, in coordination with SWCDs/NRCS | \$10,000 | CRWD Ad Valorem | 2013 |
| E&SC-8 | Administrative | Encourage livestock producers to develop plans to reduce grazing in streams, creeks, ditches, draws, and other waterways. | Chapter 4.4 Goal 4.4.1 Objective B, Action 4 | CRWD, partnering with SWCDs/NRCS | Included in item WQual-11 | CRWD Ad Valorem | Annually |
| Wetlands and Natural Resources (Chapter 4.5) | | | | | | | |
| Wetland-1 | Study | Support a coordinated interagency watershed wide study to determine the location of presettlement wetlands and the amount of wetland area that has been drained or filled. | Chapter 4.5 Goal 4.5.1 Objective A, Action 1 | CRWD, with other agencies | \$2,000 | CRWD Ad Valorem | 2010 |
| Wetland-2 | Study | Develop and adopt a prioritized list of wetland restoration opportunities. | Chapter 4.5 Goal 4.5.1 Objective A, Action 2 | CRWD, with the SWCDs/NRCS | \$2,000 | CRWD Ad Valorem | 2011 |
| Wetland-3 | Capital Project | Support and assist in the restoration and re-establishment of priority wetlands as feasible. | Chapter 4.5 Goal 4.5.1 Objective A, Action 3 | CRWD, SWCDs/NRCS, and others | Varies/to be determined | CRWD Ad Valorem. other agency funds, grants | 2010 – 2018 |
| Wetland-4 | Administrative | Support the use of a wetland banking program in the CRWD. | Chapter 4.5 Goal 4.5.1 Objective A, Action 4 | CRWD and local units of government responsible for administering the Wetland Conservation Act | \$1,000 | CRWD Ad Valorem | Annually |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------------------------|------------------|---|---|--|--------------------------|--------------------------------------|------------------------------|
| Land Use (Chapter 4.6) | | | | | | | |
| LU-1 | Administrative | Provide technical assistance and information to communities regarding surface water, groundwater and land resources. | Chapter 4.6 Goal 4.6.1 Objective A, Action 1 | CRWD | Included in item WQual-7 | CRWD Ad Valorem | Annually |
| LU-2 | Administrative | Review and comment on goals and policies proposed in county and municipal plans as they are being prepared. Recommend the integration of goals and policies that protect water resources. | Chapter 4.6 Goal 4.6.1 Objective A, Actions 2 & 3 | CRWD | \$2,000 per plan | CRWD Ad Valorem | As needed |
| | | Coordinate the implementation of resource protection programs with local governments through the adoption and implementation of county and municipal land use plans. | | | | | |
| LU-3 | Administrative | Inventory and assess local controls for effectiveness, consistency and coordination as they relate to water resource management. | Chapter 4.6 Goal 4.6.2 Objective A, Actions 1 – 5 | CRWD | \$5,000 | CRWD Ad Valorem | 2011 |
| | | Assist local units of government in their development of appropriate protections where they lack standards or regulatory controls to protect water resources. | | | \$5,000 | | 2012 - 2014 |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|---|--|--|-----------------------|--------------------------------------|------------------------------|
| | | Provide technical assistance and information regarding natural resources to local units of government to assist them in their efforts to prepare zoning ordinances, subdivision regulations, SSTS ordinances, feedlot ordinances, official maps and other regulatory controls as well as preparing for meetings with variance boards, planning commissions, water planning committees, and other water-related boards and committees. | | | \$3,000 | | Annually/as needed |
| | | Review and comment on the specific regulations relating to water resource issues proposed in the various ordinances as they are being prepared. | | | | | |
| | | Assist local governments in the administration of their ordinances as they relate to water resource management. | | | | | |
| LU-4 | Administrative | Review and provide recommendations on subdivision plats and major zoning approvals as they relate to water resource management | Chapter 4.6 Goal 4.6.2 Objective A, Action 6 | CRWD | \$1,000 | CRWD Ad Valorem | Annually/as needed |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|---|--|-----------------------|--------------------------------------|------------------------------|
| LU-5 | Administrative | Assist cities and counties in the development, administration and enforcement of stormwater design standards. | Chapter 4.6 Goal 4.6.2 Objective A, Action 7 | CRWD | \$1,000 | CRWD Ad Valorem | Annually/as needed |
| LU-6 | Administrative | Assist in the collection, organization and distribution of information materials that describe the various land conservation programs that protect and conserve water and land related resources offered by federal, state, local agencies and non profit organizations. | Chapter 4.6 Goal 4.6.3 Objective A, Actions 1 – 6 | CRWD, working with the SWCDs/NRCS and other agencies | \$25,000 | CRWD Ad Valorem | Annually/as needed |
| | | Recommend that all local governments in the watershed with land use controls incorporate goals and policies that encourage the use of land conservation programs. | | | | | |
| | | Support the SWCDs/NRCS to encourage the use of the Conservation Reserve Program, the Reinvest in Minnesota Program and other land resource protection programs. | | | | | |
| | | Support the development of conservation easements in appropriate areas of the watershed concurrent with land development requests. | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-------------|------------------|--|--|--|-----------------------|--------------------------------------|----------------------------------|
| | | Promote the adoption of conservation tillage and contour farming through education and interaction with farmers. | | | | | |
| | | Recommend and provide assistance on the preservation or installation of buffers along surface water features through applicable conservation programs. | | | | | |
| | | Develop an incentive program that provides financial assistance for the implementation of conservation practices by agricultural operators in the CRWD. | Chapter 4.6 Goal 4.6.3 Objective B, Action 5 | | | | 2011 |
| LU-7 | Administrative | Assist farmers in using crop residue management practices, no till drilling, rotational grazing, grassed waterways, terracing and other methods to prevent or reduce erosion. | Chapter 4.6 Goal 4.6.3 Objective B, Action 1 | CRWD, working with the SWCDs/NRCS | \$5,000 | CRWD Ad Valorem | Annually |
| LU-8 | Administrative | Support tours and field demonstrations on improved agricultural practices. | Chapter 4.6 Goal 4.6.3 Objective B, Action 2 | CRWD, partnering with local agencies to | \$2,000 per tour | CRWD Ad Valorem | As needed/as opportunities arise |
| LU-9 | Administrative | Research and analyze the impacts of new farm bills and related legislation. Review the land conservation programs that are funded or mandated through the legislation and their impacts on the CRWD's programs and projects. | Chapter 4.6 Goal 4.6.3 Objective B, Action 3 | CRWD, with assistance from the SWCDs/NRCS | \$2,000 | CRWD Ad Valorem | Annually/as needed |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year | |
|--|------------------|--|---|--|-----------------------|--------------------------------------|------------------------------|--|
| LU-10 | Administrative | Support and coordinate with other units of government and organizations to develop programs that protect farmland through water resource conservation programs. | Chapter 4.6 Goal 4.6.3 Objective B, Action 4 | CRWD, coordinating with other units of government | \$1,000 | CRWD Ad Valorem | Annually | |
| LU-11 | Administrative | Develop a program that provides financial incentives for permanent riparian plantings in priority areas of the CRWD. | Chapter 4.6 Goal 4.6.3 Objective C, Actions 1 – 4 | CRWD, with other units of government | \$2,000 | CRWD Ad Valorem | 2011 | |
| | | Provide technical assistance on the selection of the appropriate planting materials and maintenance of vegetation in riparian areas. | | CRWD, working with the SWCDs/NRCS CRWD, working with the SWCDs/NRCS | \$1,000 | CRWD Ad Valorem | Annually | |
| | | Maintain a list of equipment suppliers and contractors who can provide equipment and services needed to install and maintain vegetation. | | | | | | |
| | | Increase the incentive for landowners to create buffer strips along wetlands, rivers and streams in the district. | | CRWD, working with the SWCDs/NRCS | \$2,000 | | | |
| Recreation, Habitat, and Shoreland Management (Chapter 4.7) | | | | | | | | |
| RecHab& Shore-1 | Administrative | Develop and distribute a Cedar River watershed recreational map to chambers of commerce, the Minnesota Department of Trade and Economic Development and other tourism organizations. | Chapter 4.7 Goal 4.7.1 Objective A, Actions 1 & 3 | CRWD, with other units of government | \$7,000 | CRWD Ad Valorem | 2015 | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Item Number | Type of Activity | Item Description | Plan Reference | Responsible Party (CRWD, Other Unit of Government, etc.) | Total Estimated Cost* | Potential Funding Sources/ Authority | Proposed Implementation Year |
|-----------------|------------------|---|---|--|-----------------------|--------------------------------------|------------------------------|
| | | Support the development and distribution of a Cedar River canoe route map. | | | | | |
| RecHab& Shore-2 | Admin-istrative | Support the distribution of MDNR public access maps for rivers and streams within the CRWD. | Chapter 4.7 Goal 4.7.1 Objective A, Actions 2 & 4 | CRWD | \$1,000 | CRWD Ad Valorem | Annually |
| | | Distribute maps locating public hunting lands within the watershed. | | | | | |
| RecHab& Shore-3 | Admin-istrative | Support the development of marketing materials that promote major destinations and features in the watershed. | Chapter 4.7 Goal 4.7.1 Objective A, Action 5 | CRWD, in support of other units of government | \$1,000 | CRWD Ad Valorem | As needed |
| RecHab& Shore-4 | Admin-istrative | Work with MDNR (Divisions of Fish and Wildlife and Waters) to develop and implement management programs. | Chapter 4.7 Goal 4.7.1 Objective B, Action 1 | CRWD | \$500 | CRWD Ad Valorem | Annually |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|----------------------------------|-------------------------------|---|---|--|---------|-----------------|-----------|
| RecHab& Shore-5 | Data Collection and Reporting | Support the inventory of fish and wildlife resources. | Chapter 4.7 Goal 4.7.1 Objective B, Actions 2 & 3 | CRWD, in support of MDNR and other agencies | \$2,000 | CRWD Ad Valorem | As needed |
| | | Support the identification and protection of critical water bodies and wetlands for fish and wildlife. | | | | | |
| RecHab& Shore-6 | Administrative | Support the design and construction of public access facilities to surface water features in the CRWD, where appropriate. | Chapter 4.7 Goal 4.7.1 Objective C, Actions 1 & 2 | CRWD, in support of MDNR and other units of government | \$2,000 | CRWD Ad Valorem | As needed |
| | | Support the open and unimpeded access and use of all navigable public waters in the CRWD. Coordinate and assist enforcement efforts to maintain open access and to remove illegal fencing. | | | | | |
| RecHab& Shore-7 | Administrative | Support the minimization of road ditch mowing during the nesting season. | Chapter 4.7 Goal 4.7.1 Objective C, Action 3 | CRWD, in support of road authorities | \$500 | CRWD Ad Valorem | Annually |
| Groundwater (Chapter 4.8) | | | | | | | |
| GW-1 | Administrative | Provide technical assistance to communities preparing wellhead protection plans. Provide additional staffing support to community water suppliers and transient systems where there is limited or no staffing available to prepare the plans. | Chapter 4.8 Goal 4.8.1 Objective A, Action 1 | CRWD | \$1,000 | CRWD Ad Valorem | As needed |
| GW-2 | Administrative | Share resource information with public water suppliers that can help in identifying and establishing source water protection areas. | Chapter 4.8 Goal 4.8.1 Objective A, Action 2 | CRWD | \$500 | CRWD Ad Valorem | As needed |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|------|-------------------------------|---|--|--|------------------------|-----------------|------------------------------------|
| GW-3 | Administrative | Pursue financial resources to assist communities in the purchase of development rights in vulnerable wellhead protection priority areas. | Chapter 4.8 Goal 4.8.1 Objective A, Action 3 | CRWD | \$5,000 | CRWD Ad Valorem | As needed, as funding is available |
| GW-4 | Administrative | Meet with landowners and public water suppliers and facilitate workable solutions that protect the groundwater resources | Chapter 4.8 Goal 4.8.1 Objective A, Action 4 | CRWD | \$1,000 | CRWD Ad Valorem | As needed |
| GW-5 | Administrative | Periodically include information on the potential impacts of abandoned wells in a CRWD newsletter and/or the CRWD website. | Chapter 4.8 Goal 4.8.1 Objective B, Action 1 | CRWD | Included in item Edu-3 | CRWD Ad Valorem | As appropriate |
| GW-6 | Data Collection and Reporting | Identify and record the locations of unused or abandoned wells. | Chapter 4.8 Goal 4.8.1 Objective B, Action 2 | CRWD, working with local units of government | \$5,000 | CRWD Ad Valorem | 2014 |
| GW-7 | Administrative | Develop an abandoned well sealing cost-share program for targeted areas that are not adequately served by any municipal, county or state programs. | Chapter 4.8 Goal 4.8.1 Objective B, Action 3 | CRWD | \$2,000 | CRWD Ad Valorem | 2015 |
| GW-8 | Administrative | Encourage and support the responsible agencies to develop a groundwater recharge area map based on available information. Distribute the map to land use authorities in the CRWD for their use and consideration when reviewing land development proposals. | Chapter 4.8 Goal 4.8.1 Objective C, Action 1 | CRWD, in support of other agencies | \$1,000 | CRWD Ad Valorem | 2015 |
| GW-9 | Administrative | Coordinate and support the use of BMPs that protect and conserve groundwater resources. | Chapter 4.8 Goal 4.8.1 Objective C, Action 2 | CRWD, in coordination and support of other units of government | \$500 | CRWD Ad Valorem | Annually |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|-------|-------------------------------|---|---|--|--|-----------------|---|
| GW-10 | Administrative | Recommend and advocate the protection of wetlands, especially those considered essential for groundwater recharge. | Chapter 4.8 Goal 4.8.1 Objective C, Action 3 | CRWD, in coordination and support of other units of government | \$500 | CRWD Ad Valorem | Annually |
| GW-11 | Data Collection and Reporting | Identify areas in the watershed where ISTS/SSTS may potentially impact groundwater resources and monitor these areas on a regular basis. | Chapter 4.8 Goal 4.8.1 Objective C, Action 4 | CRWD | \$10,000 to identify \$5,000 to monitor | CRWD Ad Valorem | 2013 – identify areas, monitor thereafter |
| | | Work with state, county, and local governments in evaluating the condition of SSTS | Chapter 4.8 Goal 4.8.1 Objective D, Action 4 | CRWD, working with local units of government | | | |
| GW-12 | Administrative | Support the efforts of the counties, cities, and townships to minimize groundwater impacts from SSTS | Chapter 4.8 Goal 4.8.1 Objective C, Action 5 | CRWD | \$500 | CRWD Ad Valorem | Annually |
| GW-13 | Administrative | Use the Minnesota Department of Health's <i>Evaluating Proposed Storm Water Infiltration Projects in Vulnerable Wellhead Protection Areas</i> , and the MPCA's <i>Minnesota Stormwater Manual</i> guidance for evaluating proposed stormwater infiltration projects in wellhead protection areas. | Chapter 4.8 Goal 4.8.1 Objective C, Action 6 | CRWD | \$500 | CRWD Ad Valorem | As needed |
| GW-14 | Administrative | Coordinate and support state and federal incentive programs that encourage agricultural producers to use groundwater protection BMPs in their operations. | Chapter 4.8 Goal 4.8.1 Objective D, Actions 1 & 2 | CRWD, in coordination and support of other units of government | Included in item Flood-19 | CRWD Ad Valorem | Annually |
| | | Support the adoption and use of sound irrigation management techniques. | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|-------|-------------------------------|---|---|--|---------------------------|-----------------|----------|
| GW-15 | Administrative | Investigate and implement a notification system or comment role regarding MDNR water appropriation permit applications. | Chapter 4.8 Goal 4.8.1 Objective D, Action 3 | CRWD, in coordination and support of other units of government | Included in item WQual-30 | CRWD Ad Valorem | Annually |
| GW-16 | Administrative | Develop a groundwater monitoring program that delineates the specific sites and monitoring to be performed in the upcoming year. | Chapter 4.8 Goal 4.8.2 Objective A, Actions 1 & 2 | CRWD, assisting responsible agencies | \$1,000 | CRWD Ad Valorem | 2015 |
| | | Coordinate all groundwater testing efforts in the CRWD including programs through the MPCA, MDA, county health departments, Extension Service and other local programs. | | | | | |
| GW-17 | Data Collection and Reporting | Collect and gather existing data sets on groundwater monitoring. | Chapter 4.8 Goal 4.8.2 Objective B, Actions 1 – 3 | CRWD, in support of other agencies' efforts | \$1,500 | CRWD Ad Valorem | 2015 |
| | | Organize and maintain records on groundwater permits. | | | | | |
| | | Develop and maintain a database on groundwater use in the watershed | | | | | |
| GW-18 | Data Collection and Reporting | Develop a web-based digital database for groundwater monitoring data that connects specific data with monitoring sites. | Chapter 4.8 Goal 4.8.2 Objective C, Action 1 | CRWD | \$2,000 | CRWD Ad Valorem | 2015 |
| GW-19 | Administrative | Include a summary of the groundwater monitoring results in the CRWD annual report. | Chapter 4.8 Goal 4.8.2 Objective C, Action 2 | CRWD | Included in item Admin-6 | CRWD Ad Valorem | Annually |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|-------|-------------------------------|--|---|---|-----------------------|-----------------|-------------------------------|
| GW-20 | Data Collection and Reporting | Identify and map groundwater recharge areas in the watershed. | Chapter 4.8 Goal 4.8.2 Objective D, Actions 1 – 3 | CRWD, assisting responsible agencies | \$2,000 | CRWD Ad Valorem | 2015 |
| | | Create an inventory of existing and abandoned gravel pits, junkyards, fuel storage facilities, and other potential point sources of groundwater contamination. | | CRWD, in coordination with counties, townships and cities | | | |
| | | Support increased intensity of groundwater monitoring in targeted areas. | | CRWD, in support of other agencies' efforts | \$1,000 | | 2015 and as needed thereafter |
| GW-21 | Data Collection and Reporting | Support the preparation of maps illustrating trends in groundwater conditions in the watershed. | Chapter 4.8 Goal 4.8.2 Objective D, Action 4 | CRWD, in support of other agencies' efforts | \$1,000 | CRWD Ad Valorem | 2016 |
| GW-22 | Administrative | Provide comments on major subdivision and planned unit developments that have the potential to impact groundwater resources. | Chapter 4.8 Goal 4.8.3 Objective A, Action 1 | CRWD | Included in item LU-2 | CRWD Ad Valorem | Annually/as needed |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| Administration (Chapter 4.9) | | | | | | | |
|------------------------------|----------------|--|--|----------------------|----------|-----------------|-----------|
| Admin-1 | Administrative | Develop, adopt, and implement CRWD rules, in accordance with Minnesota Statutes 103D.341. | Chapter 4.9 Goal 4.9.1 Objective A, Action 1 | CRWD | \$25,000 | CRWD Ad Valorem | 2010 |
| Admin-2 | Administrative | Prepare a handbook that provides managers and advisory committee members with the basic procedures and processes involved in CRWD operations. Include a copy of the <i>Watershed District Manager's Handbook</i> prepared by the Minnesota Association of Watershed Districts, the adopted CRWD Plan, annual work programs and budgets, CRWD rules and bylaws, phone directory and meeting calendar. | Chapter 4.9 Goal 4.9.1 Objective B, Action 1 | CRWD | \$1,000 | CRWD Ad Valorem | 2009 |
| Admin-3 | Administrative | New manager attendance at the orientation workshop or similar program within the first six months of serving as manager. | Chapter 4.9 Goal 4.9.1 Objective B, Action 2 | CRWD | \$500 | CRWD Ad Valorem | As needed |
| Admin-4 | Administrative | Support the legislative oversight and lobbying efforts of the Minnesota Association of Watershed Districts (MAWD). | Chapter 4.9 Goal 4.9.1 Objective C, Action 1 | CRWD CRWD CRWD | \$2,500 | CRWD Ad Valorem | Annually |
| | | Seek opportunities such as conferences and publications to learn about emerging issues regarding surface water and integrate this information into watershed management goals. | Chapter 4.9 Goal 4.9.1 Objective D, Action 1 | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|---------|----------------|--|---|------|---------|-----------------|----------|
| | | Continually monitor and evaluate state and federal changes to water policy and programs in order to ensure that the CRWD Plan and Plan implementation remain consistent with changing policy and avoid inherent conflicts of interest. | Chapter 4.9 Goal 4.9.2 Objective C, Action 1 | | | | |
| Admin-5 | Administrative | Prepare, publish, and distribute CRWD annual report | Chapter 4.9 Goal 4.9.1 Objective E, Action 1 | CRWD | \$5,000 | CRWD Ad Valorem | Annually |
| Admin-6 | Administrative | Provide a financial and regulatory link between local and state authorities where programs or projects are missing | Chapter 4.9 Goal 4.9.2 Objective A, Action 1 | CRWD | \$500 | CRWD Ad Valorem | Annually |
| Admin-7 | Administrative | Maintain relationships with Dodge, Freeborn, Mower and Steele SWCDs to optimize joint implementation of CRWD and SWCD goals | Chapter 4.9 Goal 4.9.2 Objective A, Actions 2 & 3 | CRWD | \$2,000 | CRWD Ad Valorem | Annually |
| | | Develop effective cooperative agreements with local, state, and federal agencies, utilizing available resources to implement CRWD goals | | | | | |
| | | Create and maintain relationships with non-profit organizations (e.g. MN Farm Bureau, Pheasants Forever, Ducks Unlimited, local sportsmans clubs, Boy Scouts, Girl Scouts, and the J.C. Hormel Nature Center) | Chapter 4.9 Goal 4.9.2 Objective B, Action 2 | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|--|----------------|--|---|--|------------------------|-----------------|--------------------|
| Admin-8 | Administrative | Partner with the U of M Extension Service, as well as local school districts, vocational/technical schools, and community colleges to provide educational programs. | Chapter 4.9 Goal 4.9.2 Objective B, Action 1 | CRWD | Included in item Edu-3 | CRWD Ad Valorem | Annually |
| Admin-9 | Administrative | Identify key players and the unique roles they play, or could play, in resolution of issues or plan implementation. | Chapter 4.9 Goal 4.9.2 Objective C, Actions 2 & 3 | CRWD | \$500 | CRWD Ad Valorem | Annually |
| | | Identify overlapping roles and identify groups that contribute in a support capacity to reduce duplication of effort, streamline programs, and provide efficient and cost effective service. | | | | | |
| Education and Public Involvement (Chapter 4.10) | | | | | | | |
| Edu-1 | Administrative | Coordinate and develop educational programs on surface water resources. | Chapter 4.10 Goal 4.10.1 Objective A, Action 1 | CRWD, in coordination with other units of governments | \$5,000 | CRWD Ad Valorem | Annually |
| Edu-2 | Administrative | Develop a strategic education program that identifies key water resource stakeholder groups and outlines an educational strategy for each group. | Chapter 4.10 Goal 4.10.1 Objective C, Action 3 | CRWD | \$2,000 | CRWD Ad Valorem | 2011 |
| Edu-3 | Administrative | Implement annual education program, which may include the following: | See actions below: | CRWD, in coordination with other units of governments and educational institutions | \$15,000 | CRWD Ad Valorem | Annually/as needed |
| | | Collect informational materials from the Extension Service on a regular basis and distribute to CRWD constituents. | Chapter 4.10 Goal 4.10.1 Objective A, Action 2 | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|--|-------------------------------|--|--|--|--|--|--|
| | | Support youth education events and programs in school districts within the watershed | Chapter 4.10 Goal 4.10.1 Objective A, Action 3 | | | | |
| | | Support the implementation of volunteer water resource projects | Chapter 4.10 Goal 4.10.1 Objective A, Action 4 | | | | |
| | | Establish an annual volunteer clean-up day to pick up debris and trash along rivers and streams. | Chapter 4.10 Goal 4.10.1 Objective B, Action 7 | | | | |
| | | Prepare and distribute press releases that highlight CRWD activities and decisions. | Chapter 4.10 Goal 4.10.1 Objective B, Action 2 | | | | |
| | | Coordinate on-the-ground tours of the CRWD to foster better understanding of water quality and water resource issues | Chapter 4.10 Goal 4.10.1 Objective B, Action 8 | | | | |
| | | Contact media on an annual basis to update contact information and activities. | Chapter 4.10 Goal 4.10.1 Objective B, Action 6 | | | | |
| | | Develop and hold an annual poster contest for youth that focuses on water quality. | Chapter 4.10 Goal 4.10.1 Objective B, Action 4 | | | | |
| | Data Collection and Reporting | Gather, maintain and distribute data on economic benefits related to water resources. | Chapter 4.10 Goal 4.10.1 Objective A, Action 6 | | | | |
| | Admin-istrative | Distribute the results of the surface water monitoring program to the official CRWD newspapers. | Chapter 4.10 Goal 4.10.1 Objective C, Action 1 | | | | |
| | | Publish the results of the surface water monitoring program in the CRWD newsletter and/or website. | Chapter 4.10 Goal 4.10.1 Objective C, Action 2 | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|-------|----------------|---|--|------|--------------------------|-----------------|------|
| | | Coordinate and disseminate information regarding University of Minnesota Extension Service, MPCA, BWSR or other workshops on surface water management topics. | Chapter 4.10 Goal 4.10.1 Objective C, Action 4 | | | | |
| | | Produce, distribute and present targeted information for government and agency partners. | Chapter 4.10 Goal 4.10.1 Objective B, Action 5 | | Included in item E&SC-3 | | |
| | | Prepare and distribute to all households in the watershed an annual CRWD newsletter via technologically appropriate media. | Chapter 4.10 Goal 4.10.1 Objective B, Action 1 | | Included in item Admin-6 | | |
| Edu-4 | Administrative | Develop a CRWD logo and use on all future correspondence. | Chapter 4.10 Goal 4.10.1 Objective B, Action 3 | CRWD | \$1,000 | CRWD Ad Valorem | 2010 |
| Edu-5 | | Develop a public information package that can be distributed to landowners that explains what a watershed is and how they might impact water resources. | Chapter 4.10 Goal 4.10.1 Objective A, Action 5 | CRWD | \$1,000 | CRWD Ad Valorem | 2010 |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|-------|-----------------|--|--|--|---------|-----------------|----------------------------------|
| Edu-6 | Admin-istrative | Develop a safe drinking water public education program that includes brochures, press releases, and informational materials. Utilize existing materials from other organizations such as the MDH and the MPCA. | Chapter 4.10 Goal 4.10.1 Objective D, Action 1 – 6 | CRWD, with information from other agencies | \$4,000 | CRWD Ad Valorem | 2012 |
| | | Distribute groundwater educational materials on a periodic basis to cities and townships for their use and distribution. | | | | | 2012 and periodically thereafter |
| | | Conduct an annual groundwater educational event for children on the importance of groundwater protection. | | | | | Annually/as appropriate |
| | | Provide residents in the CRWD with information about safe drinking water supply. Provide information to address the specific drinking water needs and concerns for infants, such as high nitrate levels. | | | | | |
| | | Combine groundwater curriculum and materials with surface water education programs for students. | | | | | |
| | | Incorporate water testing clinics into educational events. | | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|-------------------------------|----------------|--|--|------|---------|-----------------|----------|
| Edu-7 | Administrative | Maintain the CRWD website and update as needed to post meeting agendas and minutes, publications, data, etc. Post this plan and future plan amendments/updates on the CRWD website. | Chapter 4.10 Goal 4.10.1 Objective E, Actions 1 & 2 | CRWD | \$1,000 | CRWD Ad Valorem | Annually |
| Edu-8 | Administrative | Maintain an advisory committee (per Minnesota Statutes 103D.331). Seek to develop meaningful responsibilities for the advisory committee. | Chapter 4.10 Goal 4.10.1 Objective F, Actions 1 & 2 | CRWD | \$2,000 | CRWD Ad Valorem | Annually |
| Edu-9 | Administrative | Maintain lists of: <ul style="list-style-type: none"> • local elected officials for all units of local government in the watershed. • official newspapers where notices are published. • all agency & organization representatives, including federal & state agencies, SWCDs, county planning and zoning, county environmental health departments, cities, townships, school districts, etc. | Chapter 4.10 Goal 4.10.2 Objective A, Actions 1, 2 & 3 | CRWD | \$500 | CRWD Ad Valorem | Annually |
| Funding (Chapter 4.11) | | | | | | | |
| Fund-1 | Administrative | Adopt the CRWD annual budget after holding a public hearing and meeting other statutory requirements. | Chapter 4.11 Goal 4.11.1 Objective A, Action 1 | CRWD | \$500 | CRWD Ad Valorem | Annually |
| | | Use the statutory tools provided to watershed districts to fund the implementation of this plan | Chapter 4.11 Goal 4.11.1 Objective B, Action 1 | | | | |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-1 Cedar River Watershed District (CRWD) Implementation Program (Continued)

| | | | | | | | |
|--------|----------------|--|--|--|---|-----------------|----------|
| Fund-2 | Administrative | Update the CRWD's implementation program at least every two years, including the capital improvement program (CIP) | Chapter 4.11 Goal 4.11.1 Objective A, Action 2 | CRWD | \$500 | CRWD Ad Valorem | Annually |
| Fund-3 | Administrative | Seek grants, partnerships, loans, etc. whenever possible and cost effective to reduce the CRWD's share of project costs. | Chapter 4.11 Goal 4.11.1 Objective B, Action 2 | CRWD | \$1,000 (cost varies depending on application requirements) | CRWD Ad Valorem | Annually |
| Fund-4 | Administrative | Complete CRWD annual audit and include with CRWD annual report. | Chapter 4.11 Goal 4.11.1 Objective C, Action 1 | CRWD will contract for performance by others | \$3,000 | CRWD Ad Valorem | Annually |

*Cost estimates are conceptual, based on 2009 dollars, do not account for inflation, and are for planning purposes only. For capital projects, the costs shown reflect the total estimated project costs; for items other than capital projects, the costs shown include only the portion of the cost borne by the CRWD.

| | | | | | |
|--------|---|--------|---------------|---------------|---|
| Admin: | Administration | Flood: | Flood Control | RecHab&Shore: | Recreation, Habitat, and Shoreland Management |
| Drain: | Agricultural and Urban Drainage Systems | Fund: | Funding | WQual: | Water Quality |
| Edu: | Education and Public Involvement | GW: | Groundwater | Wetland: | Wetlands and Natural Resources |
| E&SC: | Erosion and Sediment Control | LU: | Land Use | | |

Table 5-2 Cedar River Watershed District (CRWD) Implementation Program Summarized by Year

| Item Number | Estimated Costs by Year (\$) ¹ | | | | | | | | | |
|------------------------------------|---|-----------|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Flood Control (Chapter 4.1) | | | | | | | | | | |
| Flood-1 | | \$48,500 | \$30,500 | \$30,500 | \$30,500 | \$30,500 | \$30,500 | \$30,500 | \$30,500 | \$30,500 |
| Flood-2 ² | | | | \$3,000 | | | | \$3,000 | | |
| Flood-3 | | \$2,000 | \$2,000 | \$2,000 | | | | | | |
| Flood-4 ² | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 |
| Flood-5 | Included in item Admin-1 | | | | | | | | | |
| Flood-6 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| Flood-7 ² | \$5,000 | | | | | \$5,000 | | | | |
| Flood-8 | | \$5,000 | Included in item Admin-1 | | | | | | | |
| Flood-9 | \$62,500 | \$62,500 | \$62,500 | \$62,500 | | | | | | |
| Flood-10 ³ | | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 |
| Flood-11 ² | | \$5,000 | | \$5,000 | | \$5,000 | | \$5,000 | | \$5,000 |
| Flood-12 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| Flood-13 ² | | | | \$1,000 | | | | \$1,000 | | |
| Flood-14 ² | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| Flood-15 ² | | \$1,000 | | \$1,000 | | \$1,000 | | \$1,000 | | \$1,000 |
| Flood-16 ² | \$5,000 | | \$5,000 | | \$5,000 | | \$5,000 | | \$5,000 | |
| Flood-17 | Included in item Fund-3 | | | | | | | | | |
| Flood-18 ² | | | \$5,000 | \$10,000 | \$15,000 | \$20,000 | \$25,000 | \$30,000 | \$35,000 | \$40,000 |
| Flood-19 | | \$5,000 | | | | | | | | |
| Flood-20 | Included in item Admin-1 | | | | | | | | | |
| Flood-21 | Included in item Admin-1 | | | | | | | | | |

¹ Cost estimates are based on 2009 dollars, do not account for inflation, and are for planning purposes only. This table represents a target of activities and projects the CRWD may complete if sufficient funding is available.

² For items in Table 5-1 with "as needed" or "to be determined" cost, an estimated cost and the distribution of costs in each year is provided based on anticipated need.

³ For capital projects, the cost is the total estimated project cost, which may be funded wholly or in part by outside sources (e.g. grants, other agency funds)

Table 5-2 Cedar River Watershed District (CRWD) Implementation Program Summarized by Year (continued)

| Item Number | Estimated Costs by Year (\$) ¹ | | | | | | | | | |
|------------------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| <i>Flood Total</i> | \$113,500 | \$420,000 | \$396,000 | \$406,000 | \$341,500 | \$352,500 | \$351,500 | \$361,500 | \$361,500 | \$367,500 |
| Water Quality (Chapter 4.2) | | | | | | | | | | |
| WQual-1 | Included in item Flood-19 | | | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-2 ² | | \$5,000 | | \$5,000 | | \$5,000 | | \$5,000 | | \$5,000 |
| WQual-3 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-4 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 |
| WQual-5 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-6 | \$5,000 | \$5,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 | \$10,000 |
| WQual-7 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-8 | Included in item Flood-10. | | | | | | | | | |
| WQual-9 | | | | | \$5,000 | | | | | |
| WQual-10 | Included in item Fund-3 | | | | | | | | | |
| WQual-11 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-12 | \$5,000 | | | | | | | | | |
| WQual-13 | Included in item Admin-1 | | | | | | | | | |
| WQual-14 | Included in item Admin-1 | | | | | | | | | |
| WQual-15 ² | Included in item Flood-18 | | | | | | | | | |
| WQual-16 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-17 ^{2,3} | \$5,000 | | \$5,000 | | \$5,000 | | \$5,000 | | \$5,000 | |
| WQual-18 ² | | | | \$10,000 | | | \$10,000 | | | \$10,000 |
| WQual-19 ^{2,3} | | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 |
| WQual-20 | | | | | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-21 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-22 | | | | | \$5,000 | | | | | |

¹ Cost estimates are based on 2009 dollars, do not account for inflation, and are for planning purposes only. This table represents a target of activities and projects the CRWD may complete if sufficient funding is available.

² For items in Table 5-1 with “as needed” or “to be determined” cost, an estimated cost and the distribution of costs in each year is provided based on anticipated need.

³ For capital projects, the cost is the total estimated project cost, which may be funded wholly or in part by outside sources (e.g. grants, other agency funds)

Table 5-2 Cedar River Watershed District (CRWD) Implementation Program Summarized by Year (continued)

| Item Number | Estimated Costs by Year (\$) ¹ | | | | | | | | | |
|--|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| WQual-23 | | \$93,000 | \$85,000 | \$85,000 | \$85,000 | \$85,000 | \$85,000 | \$85,000 | \$85,000 | \$85,000 |
| WQual-24 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$10,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| WQual-25 | Included in item Admin-6 | | | | | | | | | |
| WQual-26 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| WQual-27 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| WQual-28 | Included in item Edu-3 | | | | | | | | | |
| WQual-29 | | | | | | \$2,000 | | | | |
| WQual-30 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| <i>WQual Total</i> | \$63,000 | \$251,000 | \$248,000 | \$263,000 | \$273,000 | \$260,000 | \$268,000 | \$258,000 | \$258,000 | \$268,000 |
| Agricultural and Urban Drainage Systems (Chapter 4.3) | | | | | | | | | | |
| Drain-1 | | | | | | | | | | |
| Drain-2 | | \$15,000 | \$11,000 | \$11,000 | \$6,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| Drain-3 ³ | | | | | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 |
| Drain-4 | | | | | \$5,000 | | | | | |
| <i>Drain Total</i> | \$0 | \$15,000 | \$11,000 | \$11,000 | \$31,000 | \$21,000 | \$21,000 | \$21,000 | \$21,000 | \$21,000 |
| Erosion and Sediment Control (Chapter 4.4) | | | | | | | | | | |
| E&SC-1 | Included in item Admin-1 | | | | | | | | | |
| E&SC-2 | Included in item WQual-7 | | | | | | | | | |
| E&SC-3 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 |
| E&SC-4 | | | | | \$10,000 | | | | | |
| E&SC-5 ^{2,3} | | | | | | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 |
| E&SC-6 | Included in item Admin-1 | | | | | | | | | |
| E&SC-7 | | | | | \$10,000 | | | | | |
| E&SC-8 | Included in item WQual-11 | | | | | | | | | |

¹ Cost estimates are based on 2009 dollars, do not account for inflation, and are for planning purposes only. This table represents a target of activities and projects the CRWD may complete if sufficient funding is available.

² For items in Table 5-1 with "as needed" or "to be determined" cost, an estimated cost and the distribution of costs in each year is provided based on anticipated need.

³ For capital projects, the cost is the total estimated project cost, which may be funded wholly or in part by outside sources (e.g. grants, other agency funds)

Table 5-2 Cedar River Watershed District (CRWD) Implementation Program Summarized by Year (continued)

| Item Number | Estimated Costs by Year (\$) ¹ | | | | | | | | | |
|--|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| <i>E&SC Total</i> | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$22,000 | \$52,000 | \$52,000 | \$52,000 | \$52,000 | \$52,000 |
| Wetlands and Natural Resources (Chapter 4.5) | | | | | | | | | | |
| Wetland-1 | | \$2,000 | | | | | | | | |
| Wetland-2 | | | \$2,000 | | | | | | | |
| Wetland-3 ^{2,3} | | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 |
| Wetland-4 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| <i>Wetland Total</i> | \$1,000 | \$103,000 | \$103,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 |
| Land Use (Chapter 4.6) | | | | | | | | | | |
| LU-1 | Included in item WQual-7 | | | | | | | | | |
| LU-2 ² | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 |
| LU-3 | \$3,000 | \$3,000 | \$8,000 | \$8,000 | \$8,000 | \$8,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 |
| LU-4 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| LU-5 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| LU-6 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 |
| LU-7 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| LU-8 ² | \$2,000 | | \$2,000 | | \$2,000 | | \$2,000 | | \$2,000 | |
| LU-9 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 |
| LU-10 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| LU-11 | \$3,000 | \$3,000 | \$5,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 |
| <i>LU Total</i> | \$45,000 | \$43,000 | \$52,000 | \$48,000 | \$50,000 | \$48,000 | \$45,000 | \$43,000 | \$45,000 | \$43,000 |
| Recreation, Habitat, and Shoreland Management (Chapter 4.7) | | | | | | | | | | |
| RecHab&Shore-1 | | | | | | | \$7,000 | | | |
| RecHab&Shore-2 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| RecHab&Shore-3 ² | | \$1,000 | | | | \$1,000 | | | | \$1,000 |

¹ Cost estimates are based on 2009 dollars, do not account for inflation, and are for planning purposes only. This table represents a target of activities and projects the CRWD may complete if sufficient funding is available.

² For items in Table 5-1 with "as needed" or "to be determined" cost, an estimated cost and the distribution of costs in each year is provided based on anticipated need.

³ For capital projects, the cost is the total estimated project cost, which may be funded wholly or in part by outside sources (e.g. grants, other agency funds)

Table 5-2 Cedar River Watershed District (CRWD) Implementation Program Summarized by Year (continued)

| Item Number | Estimated Costs by Year (\$) ¹ | | | | | | | | | |
|----------------------------------|---|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| RecHab&Shore-4 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| RecHab&Shore-5 ² | \$2,000 | | | \$2,000 | | | \$2,000 | | | \$2,000 |
| RecHab&Shore-6 ² | | | \$2,000 | | | | \$2,000 | | | |
| RecHab&Shore-7 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| <i>RecHab&Shore Total</i> | \$4,000 | \$3,000 | \$4,000 | \$4,000 | \$2,000 | \$3,000 | \$13,000 | \$2,000 | \$2,000 | \$5,000 |
| Groundwater (Chapter 4.8) | | | | | | | | | | |
| GW-1 ² | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| GW-2 ² | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| GW-3 ² | | | \$5,000 | | | \$5,000 | | | \$5,000 | |
| GW-4 ² | | \$1,000 | | | \$1,000 | | | \$1,000 | | |
| GW-5 ² | Included in item Edu-3 | | | | | | | | | |
| GW-6 | | | | | | \$5,000 | | | | |
| GW-7 | | | | | | | \$2,000 | | | |
| GW-8 | | | | | | | \$1,000 | | | |
| GW-9 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| GW-10 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| GW-11 | | | | | \$10,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| GW-12 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| GW-13 ² | | | | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| GW-14 | Included in item Flood-19 | | | | | | | | | |
| GW-15 | Included in item WQual-30 | | | | | | | | | |
| GW-16 | | | | | | | \$1,000 | | | |
| GW-17 | | | | | | | \$1,500 | | | |

¹ Cost estimates are based on 2009 dollars, do not account for inflation, and are for planning purposes only. This table represents a target of activities and projects the CRWD may complete if sufficient funding is available.

² For items in Table 5-1 with “as needed” or “to be determined” cost, an estimated cost and the distribution of costs in each year is provided based on anticipated need.

³ For capital projects, the cost is the total estimated project cost, which may be funded wholly or in part by outside sources (e.g. grants, other agency funds)

Table 5-2 Cedar River Watershed District (CRWD) Implementation Program Summarized by Year (continued)

| Item Number | Estimated Costs by Year (\$) ¹ | | | | | | | | | |
|-------------------------------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| GW-18 | | | | | | | \$2,000 | | | |
| GW-19 | Included in item Admin-6 | | | | | | | | | |
| GW-20 | | | | | | | \$3,000 | \$1,000 | \$1,000 | \$1,000 |
| GW-21 | | | | | | | | \$1,000 | | |
| GW-22 | Included in item LU-2 | | | | | | | | | |
| GW Total | \$3,000 | \$4,000 | \$8,000 | \$3,500 | \$14,500 | \$18,500 | \$19,000 | \$11,500 | \$14,500 | \$9,500 |
| Administration (Chapter 4.9) | | | | | | | | | | |
| Admin-1 | | \$25,000 | | | | | | | | |
| Admin-2 | \$1,000 | | | | | | | | | |
| Admin-3 ² | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| Admin-4 | \$2,500 | \$2,500 | \$2,500 | \$2,500 | \$2,500 | \$2,500 | \$2,500 | \$2,500 | \$2,500 | \$2,500 |
| Admin-5 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| Admin-6 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| Admin-7 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 |
| Admin-8 | Included in item Edu-3 | | | | | | | | | |
| Admin-9 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| Admin Total | \$12,000 | \$36,000 | \$11,000 |

¹ Cost estimates are based on 2009 dollars, do not account for inflation, and are for planning purposes only. This table represents a target of activities and projects the CRWD may complete if sufficient funding is available.

² For items in Table 5-1 with “as needed” or “to be determined” cost, an estimated cost and the distribution of costs in each year is provided based on anticipated need.

³ For capital projects, the cost is the total estimated project cost, which may be funded wholly or in part by outside sources (e.g. grants, other agency funds)

Table 5-2 Cedar River Watershed District (CRWD) Implementation Program Summarized by Year (continued)

| Education and Public Involvement (Chapter 4.10) | | | | | | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Edu-1 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| Edu-2 | | | \$2,000 | | | | | | | |
| Edu-3 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 |
| Edu-4 | | \$1,000 | | | | | | | | |
| Edu-5 | | \$1,000 | | | | | | | | |
| Edu-6 | | | | \$4,000 | \$4,000 | \$4,000 | \$4,000 | \$4,000 | \$4,000 | \$4,000 |
| Edu-7 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| Edu-8 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 |
| Edu-9 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| Edu Total | \$23,500 | \$25,500 | \$25,500 | \$27,500 |
| Funding (Chapter 4.11) | | | | | | | | | | |
| Fund-1 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| Fund-2 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 | \$500 |
| Fund-3 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| Fund-4 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 |
| Fund Total | \$5,000 |
| Total Estimated Costs by Year | | | | | | | | | | |
| Total | \$272,000 | \$907,500 | \$865,500 | \$882,000 | \$878,500 | \$899,500 | \$914,000 | \$893,500 | \$898,500 | \$910,500 |

¹ Cost estimates are based on 2009 dollars, do not account for inflation, and are for planning purposes only. This table represents a target of activities and projects the CRWD may complete if sufficient funding is available.

² For items in Table 5-1 with “as needed” or “to be determined” cost, an estimated cost and the distribution of costs in each year is provided based on anticipated need.

³ For capital projects, the cost is the total estimated project cost, which may be funded wholly or in part by outside sources (e.g. grants, other agency funds)