

# **RICE COUNTY WATER RESOURCE MANAGEMENT PLAN**

**A Water Resource Management Plan for the  
Watersheds and subwatersheds of the  
Cannon River, Minnesota River, and Zumbro River.**



**Adopted March 30, 2004**



# ACKNOWLEDGEMENT

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## **RICE COUNTY WATER RESOURCE MANAGEMENT PLAN ADVISORY COMMITTEE**

In August, 2001, the Rice County Board of Commissioners appointed a Water Resource Management Plan Advisory Committee to assist in revising the Rice County Comprehensive Water Management Plan. From August, 2001, through , March, 2003, the Committee held meetings to discuss revisions and to create an updated draft, Rice County Comprehensive Local Water Plan 2003-2008. These revisions focused on the goals, policies, and actions found within the *Administration & Implementation* section of the plan.

The sixteen (16) members of the Committee (listed below) represented the wide range of views and experiences found throughout Rice County.

Stan Burmeister, Township Official  
Greg Carlson, Lake Resident  
Jerry Courson, SWCD Supervisor – District 2  
Elmer Covert, Township Official, Interested Citizen  
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Rice County

## **RICE COUNTY WATER RESOURCE MANAGEMENT PLAN EXECUTIVE SUMMARY**

### **PURPOSE OF PLAN**

The *Rice County Water Resource Management Plan, (Water Plan)* fulfills the requirements of Minnesota Statutes Chapter 103B.311. The overall purpose of this plan is protect, preserve and manage natural surface and groundwater systems within Rice County in the face of rapid urban growth and intensive agricultural activity. The plan also presents sustainable and equitable means to effectively reach those goals by providing guidance and specific standards for decision-makers, residents, landowners, educators, and implementing staff at the local level. This is Rice County's Third Generation Water Plan, the first Plan was adopted in 1990, and the second in 1997. The second generation water plan presented all issues that can affect water resources and an implementation plan for each. In the updated plan, we have chosen to prioritize major issues that will greatly affect the County over the period of the Water Plan.

It is not the purpose of the Plan to fully explore all aspects of surface water and groundwater issues or to present all possible information on water issues. Several major issues were chosen to be addressed over the five-year period of the Plan. This plan is intended to be part of an ongoing process of water resource planning and implementation, and is to be integrated with the other planning occurring at city, county, township and state levels.

### **1997-2002 WATER PLAN ACCOMPLISHMENTS**

Many action items were accomplished in the 1997-2002 Comprehensive Local Water Plan. For example, the county:

- Protect the future quality of Shields, Mazaska, and Fox lakes by encouraging the residents around each lake to organize a lake association.
- Promote the reenactment of the Coalition of Lake Associations (COLA) to encourage the wise use and preservation of the lake areas.
- Enhanced protection of surface waters by completing a Level II Feedlot Inventory with an access database and GIS coverage.
- The development of Shoreland Best Management Practices fact sheets to better inform the public of shoreland rules and enhancement of the shoreline.
- Enhanced protection of groundwater by adopting new ISTS regulations.
- Enhanced protection of lakes by adopting new Shoreland regulations.

- Groundwater quality was monitored through well water tests available to the public and a database of results kept for each year.
- Protect groundwater contamination through the development of a karst learning trunk to educate the public on groundwater and karst geology.
- Aided in the wellhead protection area delineation of the City of Faribault through finding grant money for pumping tests.
- Development of the Rice County Geologic Atlas as a planning tool to determine and access localized groundwater sensitivity.
- Through the ISTS program, assisted local lake associations develop three off-site cluster septic systems to help improve and maintain the water quality of those lakes.
- Developed GIS coverage of the County ditch system to protect and prevent drainage problems for the County in the future.
- Developed GIS coverage of DNR protected waters to provide sustainable planning.

Rice County has been somewhat successful in achieving the goals and objectives laid out in the second-generation plan. The major reason for not accomplishing more of the objectives in the previous plan is staff shortage, staff turnover and a small water planning budget. Rice County has only two Environmental Planners, one who spends a lot of time on agricultural issues and permits and zoning work.

## **PLAN ORGANIZATION & DEVELOPMENT**

The Rice County Water Resources Management Plan is organized into three focal areas: Resource Inventory, Major Issues, and Implementation Actions. Rice County will use this document, *The Rice County Water Resource Management Plan (Water Plan)*, as the basis for managing surface and groundwater systems within Rice County. The Water Plan provides goals, policies, and implementation actions that the County will use to protect, preserve, and manage water resources within the boundaries of Rice County. The major issues of the Plan arose from a survey given to residents of the County. Two committees were developed, a Technical Advisory Committee, consisting of federal, state, county, and city staff. A second committee, a Citizen Advisory Committee, consisting of interested residents of Rice County was also developed to guide the development of the Plan. During fall of 2001 through the fall of 2002, a series of meetings were held to educate the committees and discuss the issues. In December 2002, the new Rice County Comprehensive Plan was adopted by the Board of Commissioners.

The 2003 Rice County Water Resources Management Plan addresses issues within the context of watersheds and groundwater systems by identifying those priority areas by subwatersheds and groundwater systems, and also by taking a holistic approach to water resource management.

## **WATER MANAGEMENT ISSUES, POLICIES AND GOALS**

The County used the guidelines established in the state statute to develop a set of overall water management goals. These goals provide a recognition of Rice County's natural resource and guidance for managing those resources.

## OVERALL WATER RESOURCE MANAGEMENT GOALS

1. **Protect, preserve, and manage natural surface and groundwater storage systems;**
2. **Effectively and efficiently manage public capital expenditures needed to correct flooding and water quality problems;**
3. **Identify and plan for means to effectively protect and improve surface and groundwater quality;**
4. **Establish more uniform local policies and official controls for surface and groundwater management;**
5. **Prevent erosion of soil into surface water systems;**
6. **Promote groundwater recharge;**
7. **Protect and enhance fish and wildlife habitat and water recreational facilities**
8. **Secure other benefits associated with the proper management of surface and groundwater.**

**Rice County recognizes that actions impacting water quality and quantity in Rice County have regional and national implications.**

Based on these goals, the County wanted to identify those priority issues that needed continued or immediate action. It was clear at the outset of the planning process and after reviewing what had been accomplished in the second generation plan, that not all issues could be completely identified and addressed in this plan within a five year time span. The planning process used the existing second generation water plan, citizen and landowner surveys, and several issue identification and prioritization sessions with both advisory committees. As a result of this process, issues requiring action were identified. The plan identifies goals, policies, and implementation steps for each of these issues.



## **ANIMAL AGRICULTURE**

Improperly managed feedlots have a high risk of polluting surface and groundwater.

### **MANAGEMENT GOALS**

- **Protect the public health, surface and ground waters of Rice County from contaminants and excessive nutrients derived from animal wastes by ensuring proper management of these wastes.**



### **IMPLEMENTATION SOLUTIONS**

Bring all feedlots under the provisions of a permit as required by County ordinance to ensure operation and management according to the ordinance and current best management practices.

1. Follow and implement all state statutes and rules as they are updated.
2. Implement the provisions of the County Feedlot Ordinance.
3. Include proper feedlot management in education programs.

## **GROUNDWATER RESOURCES**

### **MANAGEMENT GOALS**

- **To protect drinking water supplies in Rice County.**
  - **Support the MDH's Source Water Protection Program.**
  - **Prevent contamination from abandoned wells.**
  - **Protect base flows in rivers & streams.**
  - **Bring old well pits up to code or seal them.**
- 
- **Educate the public on best management and implementation practices to maintain the quantity and quality of the groundwater supply.**



### **IMPLEMENTATION SOLUTIONS**

1. Promote the usefulness of the Rice County Geologic Atlas as a tool to assess localized groundwater sensitivity and as a decision-making tool to assess the impacts of projects, CUPs, variances, and permits.
2. Inventory abandoned wells and potential and existing contamination sites.
3. Continue to offer water testing kits and free nitrate clinics to the public.
4. Assist communities in Rice County with their source water assessments and wellhead protection plans.
5. Promote study of the 'Decorah Edge' to understand its dynamics in relation to groundwater recharge
6. Delineate and map karst features in Rice County.
7. Educate the public on septic system operation and maintenance.
8. Make available materials and information on all groundwater issues including wellhead protection.

## **EROSION & SEDIMENT CONTROL**

Improper planning, installation and maintenance of erosion and sediment control practices cause shortened life of sediment basins, loss of flood storage capacity, loss of soil productivity, increased sediment and nutrient loads to nearby water bodies, impaired water quality, and loss of fisheries habitat.

### **MANAGEMENT GOALS**

- **To minimize soil erosion and reduce sediment deposition in our surface waters, and continue to actively promote the voluntary adoption of conservation of all lands in Rice County.**

### **IMPLEMENTATION SOLUTIONS**

1. Implement current NPDES requirements for erosion control.
2. Provide technical and educational assistance to contractors working on construction projects.
3. Target watersheds to accelerate land treatment.
4. Conduct contractor workshops for construction and agricultural.
5. Provide technical and educational assistance to farmers on residue management and no-till systems and grazing systems.
6. Coordinate County Highway Dept and SWCD to work together on construction of roads and ditches, and to follow up after road construction projects with critical area plantings, etc.
7. Maintain adequate funding to provide technical assistance to contractors and landowners to adopt soil erosion BMP's.
8. Develop an environmental review committee for upfront review of proposed developments; onsite construction activity; and post vegetation management.



## **STORMWATER MANAGEMENT**

Urban and rural stormwater practices change the hydrology of an area. These changes increase impervious surface area, decrease groundwater infiltration, resulting in an increase of overbank flooding, an impact to fish and wildlife habitat, and stormwater pollutant loads to water resources.

### **MANAGEMENT GOALS**

- **To minimize changes in hydrology and to mitigate for polluted runoff caused by development.**

### **IMPLEMENTATION SOLUTIONS**

1. Encourage all communities to adopt a stormwater management plan.
2. Identify stormwater outfalls that directly discharge to waterbodies without treatment.
3. Develop an educational campaign of “No Net Gain of Runoff .”
4. Create standards in the Zoning Ordinance for runoff volume control.
5. Develop a watershed/catchment/drainage network base map.
6. Work in cooperation with the County Highway Department on stormwater management on construction of roads, improvement projects throughout the county.
7. Develop Best Management Practices for mitigating the effects of agricultural runoff for flash flooding.
8. Research or demonstration project of urbanization in agricultural areas and how that affects the agricultural drainage.



## **SURFACE WATER**

Rice County's lakes, streams, and rivers are some of the most significant resources available. They provide recreation for thousands of residents and visitors, support tourism, are utilized for agriculture and industry and support a high quality of life for everyone including a multitude of biodiversity. However, these water resources are fragile resources that are vulnerable to pollution from a wide variety of human activities.

### **MANAGEMENT GOALS**

- **To better manage development and control pollution within Rice County's shoreland and floodplain areas and to improve the water quality of Rice County's surface waters.**



### **IMPLEMENTATION SOLUTIONS**

1. Decrease the total volume of water drained.
2. Upland assessment of each drainage ditch.
3. Encourage any BMPs along a ditch.
4. Protect undeveloped shoreline through land acquisition, easements.
5. Promote the use of phosphorus-free fertilizer on lakeshore properties.
6. Monitor the major lakes for the minimum requirements of total phosphorus, chlorophyll-a, and secchi to enlist these lakes on the next 303(d) TMDL list.
7. Develop a program to upgrade and finance 25% of septic systems of lakeshore properties and homes in the lakes watersheds with emphasis on off-site cluster systems for lakeshore properties.

## **WETLANDS**

Over the years many wetlands in the County have been drained for agriculture and development. While several wetlands have been restored, the net effect over the past several decades has been the loss of thousands of acres of wetlands. Today, Rice County has less than 25% of its pre-settlement wetlands. Wetlands provide several benefits for the people of Rice County which include; valuable fish and wildlife habitat, removes nutrients, organic chemicals, and sediment from surface waters, protect shorelines from wave action, provide storm water storage and ground water recharge, and recreation and aesthetics values.

### **MANAGEMENT GOALS**

- **Work with landowners to restore pre-settlement wetlands that provide valuable fish and wildlife habitat, that act as recharge areas for groundwater to filter pollutants, in areas of the lake watersheds that would protect the lake shoreline and provide water storage to also protect areas from flooding.**



### **IMPLEMENTATION SOLUTIONS**

1. Contact and encourage landowners to participate in programs to restore and protect wetlands.
2. Identify wetlands that should be classified as "high priority" and focus restoration & protection efforts on these especially those that are aquifer recharge areas.
3. Create a form that will be attached to the building permit application that will require the identification of any wetlands on the property and a statement indicating they will not be impacted by the development.
4. Administer the Wetland Conservation Act.
5. Reduce exotic species through biocontrol and education.
6. Develop an educational program about wetlands for the general public, developers, realtors, and environmental education in schools.