

WATER MANAGEMENT PLAN 2008-2013

Practical, Measurable and Achievable

INTRODUCTION

Purpose of the Plan

The purpose of the Blue Earth County *Water Management Plan 2008-2013* is to identify and assess priority water resource concerns, develop goals and objectives to address priority concerns, and provide direction for Blue Earth County and Soil and Water Conservation District (SWCD) programs and decision making. Actions to achieve plan objectives are specified along with the necessary financial and staff resources and lead agency for a five year period, July 1, 2008 through June 30, 2013.

Authority

The authority and requirements for preparing County water management plans are defined in the Comprehensive Water Management Act, Minnesota Statutes, Chapter 103B. The *County's Water Management Plan 2008-2013* includes programs implemented under authority of many different State of Minnesota Statutes and Rules. To receive State funding, the County and Soil and Water Conservation District must have current plans approved by the Board of Water and Soil Resources (BWSR).

Historical Plans and Updates

This water plan will be Blue Earth County's third plan for water resources. The list of water plans include:

- Comprehensive Water Plan 1988-1997* (first plan)
- Comprehensive Water Plan 1998-2007* (second plan/first update)
- Water Management Plan 2008-2013* (third plan/second update)

As a result of changes in the Comprehensive Water Management Act, the updated *Water Management Plan 2008-2013* differs from Comprehensive Water Plans of the past. The main differences between the plans can be summarized as follows:

Title and Focus: The updated plan is more focused and management oriented, directing limited available resources strategically to refine and enhance successful ongoing programs and public-private partnerships to improve water quality. Previous plans were comprehensive and attempted to address and include all potential water quality problems and implementation partners without consideration of budget limitations.

Duration: The updated plan addresses a five-year period instead of ten years. Establishing a realistic implementation plan is easier with a shorter time period.

Responsibility: Blue Earth County is the designated, local unit of government responsible for the plan. The SWCD also adopts the plan, is the primary partner for implementation,

and is the lead agency for many of the plan objectives. Previous plans included goals, objectives and actions that would be implemented by many different organizations, local government units, and Federal, State and local government agencies, in addition to or instead of the County and the SWCD.

Accomplishments

The County and SWCD have successfully accomplished most of the objectives and actions contained in the *Comprehensive Water Plan 1998-2007*. Many existing, ongoing County programs were built on or enhanced as a result of implementing the plan. The following are some of the accomplishments between 1998 and 2007:

Feedlot Program

The County has permitted and inspected all feedlots. Through efforts of the County, SWCD and NRCS, nearly every feedlot with runoff pollution problems was either improved with structural practices or voluntarily closed by the owner. Since the County completed the first feedlot inventory and database, all feedlots have been inspected at least three times, and routine, systematic site review including inspections and permit review continue as part of the County program. The feedlot program continues to evolve, changing and responding to water quality needs. With most feedlot runoff issues addressed, manure management has become a major focus of the feedlot program.

County Well Program

Between 1997 and 2007, 899 new wells were constructed and 1,169 wells were sealed. The County operates an annual, County-funded well sealing, 50 percent cost-share program, with nearly \$10,000 each year. The County provided nearly \$100,000 cost-share for 403 of the 1,169 sealed wells between 1997 and 2007. Since the County was delegated the State Well Code program in 1989, 2,254 wells have been properly sealed.

County Septic System Program

Between 1998 and 2007, permits were issued for more than 2,000 septic systems, an average of 184 each year. County Codes were amended requiring compliance inspections at property transfer, and the septic system program was enhanced with an electronic database. The County's septic system inspection and permit program has operated since the early 1970s. The City of Mankato and the County worked with the City of Skyline, City of Madison Lake, Lime Township, South Bend Township and the Lake Washington Sanitary District to address wastewater treatment needs with regionalization of Mankato's wastewater treatment facility.

Water Quality Studies and Implementation Projects

The County and/or SWCD participated in, or coordinated, many water quality studies and implementation projects, including Thompson Creek, Indian Creek, Blue Earth River, Le Sueur River, Watonwan River, Maple River, Minneopa Creek, Crystal-Loon-Mills Lakes, Duck Lake, Lura Lake, Cobb River, Middle Minnesota River, and Lake Washington.

GIS and LIDAR

The Blue Earth County Board of Commissioners invested over \$340,000 local funding in 2005 for a high resolution ortho-photo and a Light Detection and Ranging (LIDAR)

Digital Elevation Model (DEM). LIDAR is a remote sensing system used to collect topographic data. From this data, the County was able to create elevation contours for the entire County at a 2-foot interval.

The County's use of GIS and LIDAR is proving to be a valuable asset and tool for local water management. Local water management efforts have been re-energized as the timing and availability of the new LIDAR and the process of preparing the County Water Management Plan coincide. To a great extent, much of the County's Water Management Plan is based on continuation of existing programs; however, there will be improved programs and effectiveness with GIS supporting better data management and planning. New objectives in the *Water Management Plan 2008-2013* also utilize LIDAR and GIS tools. Public access to information, especially maps and aerial photos, will be expanded. Public access to GIS and LIDAR data and tools is expected to increase awareness and understanding of water resources resulting in more focused and effective water planning and management.

The County provided the LIDAR data, 2-foot contours, and ortho-photos to State agencies, Federal agencies, and universities for \$250 to cover the cost of the hard drive required to transfer the large amount of data. Consulting firms are able to obtain the same data for \$500. The data has been used for many purposes such as a tool for wetland determinations, creating planning models and research. For example, MDA is doing a stream power index study, the National Center Earth Surface Dynamics is studying sediment transport in the Le Sueur River, and the MPCA and MSU-Mankato Water Resources Center are preparing TMDLs and many other projects using the LIDAR. The results of these studies and research projects may provide information helpful for local planning and implementation efforts in future years.

Priority Concerns

A *Priority Concerns Scoping Document* (PCSD) was prepared in order to identify and prioritize problems to be addressed in the County *Water Management Plan*. Preparation of the PCSD is a requirement of the Comprehensive Water Management Act which also prescribes a structured local public input process, State agency review and BWSR review and approval. The County also held many small group meetings and work sessions with the SWCD, County Board, Planning Commission, County staff and stakeholders.

There were five priority concerns identified in the *Priority Concerns Scoping Document* (PCSD). The priority concerns were ground water, surface water quality, drainage, wetlands and wildlife. As reflected in written surveys distributed during preparation of all three of the County water plans, protecting ground and drinking water resources is the most important concern to the residents of Blue Earth County. The five priority concerns are broad and most are interrelated from a hydrological standpoint. In addition, there are a many sources of surface water pollution, and many pollutants are a concern to both ground and surface water. Land use and pollutant sources directly related to surface water and ground water priority concerns were identified and addressed separately as sub-priority concerns. These include agricultural-related runoff, erosion, pesticides, feedlots, manure management, urban-related development, stormwater runoff and pesticides, and wastewater. Surface water impairments are a concern and the State

Total Maximum Daily Load (TMDL) program to address impairments is also discussed in the plan.

The public process used for preparation of the PCSD is specified in the Comprehensive Water Management Act. The County conducted a written survey and held a legally-noticed, public meeting and a public hearing. State agency input from BWSR, DNR, MPCA, MDA and MDH was also used in development of the PCSD. The County's priority concerns and the *Water Management Plan 2008-2013* are consistent with State and regional water plans, watershed plans and TMDLs. The PCSD was presented to the BWSR Board Southern Region Subcommittee and approved by the BWSR Board.

The *Water Management Plan* must focus on addressing priority concerns with realistic goals and objectives that are practical, measurable and can be achieved in the five-year planning period. This somewhat limits the use of the plan as opportunities to access additional financial resources to accomplish objectives may be unknown.

Plan Organization

The plan is organized into sections including the Executive Summary, Introduction, Background and Natural Resources Inventory, Priority Concerns, Implementation Schedule and Appendix.

I. Executive Summary

II. Introduction

III. Background and Natural Resources Inventory: This section describes location, demographic trends, natural resources, soils and expected changes to natural resources. Most of the maps are contained in this section of the plan.

IV. Priority Concerns: This section is divided into subsections to address issues related to the five priority concerns. Each subsection describes why the issue is a concern, applicable existing programs, guiding principles, goals, objectives, and actions. The Priority Concerns and related subsections include the following:

Priority Concern 1: Ground water

Priority Concern 2: Surface Water

Impaired Waters and Total Maximum Daily Loads (TMDLs)
Agricultural Runoff, Soil Erosion and Pesticides
Feedlots, Manure Management
Urban Development and Stormwater Runoff

Priority Concern 3: County Drainage Ditches

Priority Concern 4 and 5: Wetlands and Wildlife

Priority Concern 1 and 2: Ground *and* Surface Water

Wastewater Treatment - Subsurface Sewage Treatment Systems
Mercury, Pesticides and Household Hazardous Waste

V. Implementation Plan Schedule: This section is a table summary of the plan objectives and actions with projected budget, timeline and lead agency identified for each action.

VI. Appendix: This section contains the Priority Concerns Scoping Document and MPCA TMDL Fact Sheets and maps.

Roles and Responsibilities

Implementing the *Water Management Plan 2008-2013* will primarily be the responsibility of the County and the Blue Earth County Soil and Water Conservation District (SWCD). The *Water Management Plan-2008-2013* is officially adopted by only the County and the SWCD. The *Water Management Plan-2008-2013* contains realistic goals and objectives that are practical, measurable and achievable in the five-year planning period.

Municipalities and Townships, State and Federal Agencies, businesses, individuals and non-profit organizations have important roles in plan implementation but are not responsible for implementing the plan. The County encourages and supports sustainable programs with investment in local capacity and local public-private partnerships to achieve long-term, measurable success.

The role and responsibility of land owners, business owners, farmers and citizens of Blue Earth County must be recognized, as they support the tax base, are required to comply with local and State regulations and will pay for many of the water plan implementation projects on their property. Organized wildlife conservation groups, lake associations and others will be involved with implementation of the plan. Land owners, business owners, and citizens of Blue Earth County will ultimately determine the success of water management programs.

State Agencies: Some of the priority concerns are addressed administratively through State programs, regulations and permitting requirements. Projects are funded through State grant programs, mainly from the BWSR, MPCA and DNR. The DNR is also involved with DNR activities and partnerships in Blue Earth County relating to wildlife, fisheries, forestry, and parks. The Minnesota Geologic Survey also works with the County, mostly through the County well program.

Townships and Municipalities: Municipalities and Townships are both regulators and are regulated by State regulations. These local government units, like the County, are in a position to provide leadership related to water quality.

City of Mankato: The City of Mankato's population exceeds the threshold for a number of State environmental regulations. The City of Mankato is subject to higher wastewater treatment and stormwater management standards compared with other cities in the County. To effectively manage and operate stormwater and wastewater treatment systems, the City has developed applicable local plans and regulations.

Federal Agencies: The U.S. Fish and Wildlife Service (USFWS) will be involved with implementation projects related mainly to wetland habitat and water retention. The U.S. Army Corps of Engineers (USACE) is involved with implementation related to wetlands and flood control.

Watershed Organizations and Projects

The County participates in one watershed joint powers organization, the Minnesota River Board (MRB). The County and SWCD both participate in one watershed joint powers organization, the Greater Blue Earth River Basin Alliance (GBERBA). The Water Management Plan 2008-2013 is consistent with GBERBA plans. The GBERBA's role with watershed management is mainly to bring additional project funding to the Blue Earth County SWCD. The GBERBA organization consists of a technical committee and a policy committee.

The County's *Water Management Plan 2008-2013* is not intended to extend to watershed or joint powers organizations as the plan's purpose and implementation program are based on local authority and with recognition of local needs and the organizational capacity of multiple programs and jurisdictions. The County and SWCD do make the plan available to watershed organizations to ensure consistency with and consideration of County plans and priorities.

Blue Earth County Role and Responsibilities

Several County departments will be involved directly and indirectly with plan implementation including Environmental Services, Tax Payer Services- Ditch Management, and County Highway- Parks. The County supports providing Blue Earth County residents with consistent, reliable, and cost-effective services and programs.

Environmental Services Department

The County has regulatory authority under Minnesota Statutes and is accordingly the lead agency through programs and County Code regulations for feedlot and manure management, wastewater management, well code, Wetland Conservation Act administration, water planning, zoning and comprehensive land use planning. These land management issues are also managed under County Code regulations.

Beyond the Water Management Plan, the County integrates water management in many other plans and policies. The County is working on a comprehensive natural resources planning project with many partners. The County also provides data and information and routinely uses GIS.

The County also participates in or acts as the Regulatory Government Unit in the environmental review process for public and private entities, including Environmental Impact Statements, Environmental Assessment Worksheets, and Alternative Urban Area Review.

Taxpayer Services and Ditch Authority

The County has management authority of County ditches under Minnesota Statutes and is accordingly the lead agency through the Ditch Authority and Ditch Manager for drainage. The County Ditch Manager is located in the Taxpayer Services Department

The Taxpayer Services Department works with all property owners on recorded easements, liens, land sales and acquisitions and tax exemptions related to conservation practices.

Blue Earth County Public Works – County Highway Department and Parks

The County Public Works Department establishes many conservation projects, both voluntarily and as required, during construction of roads and other projects. The County parks and trails provide opportunities for public access to scenic areas, wildlife and natural resources. Most County parks are located in shoreland areas.

Soil and Water Conservation District (SWCD)

The SWCD organization is a non-regulatory agency that is operated by a board of five Supervisors elected to represent districts within the boundaries of Blue Earth County. The Soil and Water Conservation District (SWCD) is the lead agency related to establishing structural and other agricultural land best management practices to reduce soil erosion and runoff from agricultural land. The SWCD staff also provides technical assistance related to reducing soil erosion and runoff, wetland management, wildlife habitat and shoreland protection. The SWCD works with many partners including Federal, State and local government agencies, land owners/operators and non-profit organizations. The USDA Natural Resources Conservation Service (NRCS) is the SWCD's main partner.

BWSR annually allocates a general services grant to all Minnesota SWCDs for expenditures necessary for operation of the district. BWSR oversees SWCD operations. The County also allocates funds annually to the SWCD for operation of the district. The SWCD employs a District Manager and an Office Technician.

SWCD Mission and Purpose

The Blue Earth County SWCD's mission and purpose is consistent with the State of Minnesota soil and water conservation policy.

Blue Earth County Soil and Water Conservation District Mission Statement:

To assist and educate the people of Blue Earth County Soil and Water Conservation District in efficiently and effectively using the natural resources in order to increase the responsible use of the cropland, pasture land, woodland, wildlife habitat, wetlands, urban land, recreational land; and to improve the soil resource base, water quality, wildlife habitat and quality of life within the district.

Minnesota Statute 103C.005 Soil and Water Conservation Policy.

Maintaining and enhancing the quality of soil and water for the environmental and economic benefits they produce, preventing degradation, and restoring degraded soil and water resources of this state contribute greatly to the health, safety, economic well-being, and general welfare of this state and its citizens. Soil and water conservation measures implemented on private lands in this state provide benefits to the general public by reducing erosion, sedimentation, siltation, water pollution, and damages caused by floods. The soil and water conservation policy of the state is to encourage land occupiers to conserve soil, water, and the natural resources they support through the implementation of practices that:

- (1) control or prevent erosion, sedimentation, siltation, and related pollution in order to preserve natural resources;
- (2) ensure continued soil productivity;
- (3) protect water quality;

- (4) prevent impairment of dams and reservoirs;
- (5) reduce damages caused by floods;
- (6) preserve wildlife;
- (7) protect the tax base; and
- (8) protect public lands and waters.

Programs and Projects

The SWCD operates many ongoing, well-structured, traditional programs. Some of these programs raise money for the district while providing services to the public. Other projects are temporary, grant funded special projects. The SWCD participates as technical advisors for site specific situations under WCA, land owner requests and environmental review. Some of the SWCD programs include:

Tree Sales and Planting for Conservation Projects: The SWCD earns money for district programs by selling trees to the general public.

Equipment Rental: The SWCD rents a tree planter and a drill for grasses, native grasses and flowers/forbs

Wetlands and the Wetland Conservation Act (WCA): The Blue Earth County SWCD assists with developing restoration and replacement plans and serves on the Technical Evaluation Panels (TEP) for both the County and the City of Mankato.

Zone 10 - Nonpoint Technical Assistance Grant, aka State Revolving Fund (SRF) Implementation Program: Technical support for other programs dealing with conservation practices is allowed. The Blue Earth County SWCD houses and supervises the Zone 10 engineer and technician who work with land owners to design conservation practices. Zone 10 consists of nine SWCDs, including Blue Earth, Brown, Faribault, Le Sueur, Martin, Nicollet, Sibley, Waseca and Watonwan.

Rural Rainfall Monitoring: This program is a cooperative effort between BWSR, SWCDs and the State Climatology Office to monitor precipitation in a statewide network. The SWCD collects and reports rain gauge reader data to the State Climatology Office monthly.

Cost Share and Financial Incentives

The SWCD manages and administers cost share and financial incentive programs for the establishment of soil and water conservation practices. The sources, partners, levels of funding and terms and conditions are variable. The most consistently funded program administered by the SWCD is the BWSR Erosion, Sediment Control and Water Quality Cost-Share Program. The BWSR Reinvest in Minnesota (RIM) Reserve Program also provides local funding. MDA loans have been consistently available in varying amounts. Cost share funded through these programs does not meet local need and supplemental funding is obtained from watershed and other special projects.

Watershed and Special projects

Under various agreements, the SWCD also manages, supervises or houses staff working on projects with project partners. Currently the SWCD supervises two

watershed project staff. One works for the Maple River Clean Water Partnership and the other works in the GBERBA Cobb River project. Both the Cobb River and Maple River projects are temporary, grant-funded projects with staff and cost-share funding for projects available for a limited time period. The type of grants funding these projects include: MPCA Clean Water Partnership, MPCA 319 and Clean Water Legacy (BWSR).

