

Priority Concern: Wetlands

Priority Concern: Wildlife

PRIORITY CONCERNS: Wetlands and Wildlife

Water Plan Management Goal:

Maximize opportunities to protect, enhance and restore wetlands and other natural areas to improve water quality, fisheries, wildlife habitat, recreation and land conservation.

Priority Concern

Most of the County's pre-settlement wetlands were lost due to drainage for agriculture, community development and transportation. While all land uses can harm the ecological value of wetlands, urban development is likely the greatest threat to permanent loss of wetland quantity and quality in Blue Earth County at this time. The natural services provided by healthy wetlands are important for water quality, flood control, and wildlife. Identifying, assessing and prioritizing wetland areas for protection and enhancement and restoring wetlands is a continuation of the County's Greenprint Plan and are priorities of the *Water Management Plan 2008-2013*.

Priority Concern Assessment

Appreciation of wetlands is growing as awareness of the functions and benefits of wetlands are increasingly demonstrated. Even with more than half of the State's wetlands lost and Federal, State and local regulations protecting wetlands, wetland losses of quantity and quality continues. This is a concern in Blue Earth County where most of the pre-settlement wetlands have been drained.

Wetland functions and values are numerous and vary depending on location in the landscape and other factors. Some of the benefits of wetlands include:

Water quality

Wetlands filter and absorb polluted surface water runoff before it enters lakes and rivers downstream.

Flood control and low flow augmentation

Wetlands serve as holding areas for water. When rainfall is heavy, wetlands slow the flow of water, reducing flood damage and soil erosion downstream. During drought, slow release of water from wetlands may help maintain stream flows, and may help recharge groundwater supplies.

Fish and wildlife habitat

Wetlands provide a permanent or seasonal home to fish and wildlife, including some threatened or endangered species. Wetlands also indirectly support many species by breaking down large amounts of leaves and stems for food for insects, amphibians and fish.

Education and recreation

Wetlands offer great opportunities for education and recreation. Recreational benefits include fishing, hunting, bird-watching and hiking. Many of the parks and trails in the County are located next to wetlands. Schools visit wetlands to learn about aquatic plants and animals.

Wetlands are described as lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands have the following three attributes:

- a predominance of hydric soils
- are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and
- under normal circumstances support a prevalence of such vegetation.

Regulations Protecting Wetlands

With increasing knowledge of the benefits of wetlands, wetland management, including both protection and restoration, has become increasingly important. Concern about the loss of wetlands resulted in legislation at the State and Federal level to protect wetlands. Wetland laws protect wetlands from drainage but also provide exemptions and allow for filling and replacement. The real effectiveness of wetland laws in achieving “no net loss” goals related to wetland quantity is not well understood for many reasons related to coordination and reporting, and very little is known about wetland quality trends in Minnesota. The State is developing methods to improve their ability to monitor and assess status and trends in wetland quantity and quality.

The major wetland laws include the Wetland Conservation Act, Minnesota Public Waters and the Federal Clean Water Act, Section 404. Two or more programs can overlap on the same wetland or even portions of the same wetland. Coordination among laws protecting wetlands can be confusing for local government and land owners. The Food Security Act’s “Swamp Buster” provisions protect wetlands in agricultural areas.

Minnesota Public Waters Wetlands

Minnesota Statutes, Section 103G.005, designates some wetlands as public waters, including:

- Water basins are assigned a shoreland management classification, including wetlands. Wetlands less than 80 acres in size are classified as natural environment lakes.
- Water basins designated for management for a specific purpose such as a trout lake and game lake;
- All types 3, 4 and 5 wetlands, as defined in U.S. Fish and Wildlife Service (USFWS) Circular No. 39, not included in the definition of public waters, that are ten or more acres in size in unincorporated areas or 2.5 acres or more in incorporated areas.

The DNR maintains an inventory of all public waters wetlands. Public waters wetlands are shown on an official map available from the DNR. The OHWL is used to determine

the boundary of public waters wetlands. Public waters work permits are required for excavation, filling and other impacts on all public waters wetlands.

Some public waters wetlands with shoreland management classification are also regulated by the Shoreland Ordinance Section of the Blue Earth County Code. Map 8 displays the streams, lakes and wetlands currently protected by the County Code.

Minnesota Wetland Conservation Act

The purpose of the Wetland Conservation Act, Minnesota Statutes, Chapter 8420.0100, is to:

- A. achieve no net loss in the quantity, quality, and biological diversity of Minnesota's existing wetlands;
- B. increase the quantity, quality, and biological diversity of Minnesota's wetlands by restoring or enhancing diminished or drained wetlands;
- C. avoid direct or indirect impacts from activities that destroy or diminish the quantity, quality, and biological diversity of wetlands; and
- D. replace wetland values where avoidance to activity is not feasible or prudent.

Implementation of Wetland Conservation Act is the responsibility of both State and local government. BWSR promulgates administrative rules for the program, provides training to local government units (LGUs), participates on technical evaluations panels (TEP), hears appeals from local government determinations, and assures proper implementation by LGUs.

The LGU is responsible for making the initial regulatory determinations for the program. Within Blue Earth County, the City of Mankato administers WCA and a separate TEP, and the County administers WCA in the remainder of the County.

DNR conservation officers issue enforcement orders including cease and desist, restoration and replacement orders. Cease and desist and restoration or replacement orders are not criminal charges; however, violation of a cease and desist or restoration or replacement order is a misdemeanor. Cease and desist and restoration or replacement orders may also be enforced civilly by action for injunction in district court.

Federal Clean Water Act, Section 404

A permit must be obtained from the United States Army Corps of Engineers for non-exempt discharges of dredged or fill material into waters of the United States, including jurisdictional wetlands and wetlands adjacent to waters.

U.S. Department of Agriculture 1985 Food Security Act

Food Security Act rules do not allow new drainage systems or improvements to an existing drainage system that alter the hydrology of wetlands. In order for a land owner/operator to be eligible for USDA program benefits, including loans, subsidies, crop insurance and price support programs, wetlands existing after December 23, 1985, cannot be drained or altered by drainage activities or repairs. An AG-1026 form is used by the land owner to request NRCS determinations of potential impacts for projects disturbing agricultural land, including tile drainage projects. The NRCS makes a determination of the potential lateral effect associated with the drainage project. USDA forms, permits and other information related to land alteration and farming practices on private land are considered private data and not available for public review.

Wetland Boundary Determinations

Lacking a County wide inventory of wetlands, wetland boundaries must be determined when there could be wetland impacts. Wetland boundary determinations are most often necessitated by a development proposal.

A number of manuals and resources are used for determining wetland boundaries by the Federal, State and local government. Basically, three conditions are evaluated in a wetland determination: soils, hydrology and vegetation.

- **Soils-** Wetlands have mostly hydric soils. These are soils that developed in wet conditions.
- **Hydrology-** Wetlands have standing water or saturated soil for at least part of the growing season.
- **Vegetation-** Wetlands have vegetation adapted to wet soil conditions.

WCA Replacement Plan Sequencing

The replacement plan applicant must demonstrate compliance with “sequencing.” Specifically, the applicant must demonstrate that:

1. *Avoid.* Wetland impacts have been avoided as much as possible.
2. *Minimize.* To the extent wetland impacts cannot be avoided, the impacts have been minimized.
3. *Replace.* Unavoidably impacted wetlands have been replaced by restoring or creating wetlands of equal or greater public value.

WCA Replacement Plan Requirements

The rules contain numerous specific requirements as to the location, size, and type, etc. of replacement wetlands. In brief summary, some of the major requirements include the following:

Type. Replacement may be provided by wetland restoration or creation. Restoration is preferred over creation.

Location. On-site is preferred over off-site replacement. If not on-site, then the replacement site typically must be in the same or adjacent watershed or county, with exceptions for public transportation projects.

Size. The minimum replacement ratio is generally two acres of replacement wetland for each acre of impacted wetland. WCA replacement ratios vary for restoration in advance of project impacts, establishment of upland buffer areas contiguous to replacement wetlands, and other factors.

Wetland Inventory

Most of the wetlands in Blue Earth County have been lost or drained. While limited in their use for planning and regulatory purposes, the NWI and Minnesota Public Waters

Wetlands are the only inventories of existing wetlands. In order to achieve public goals for preserving wetlands and comply with purpose and requirements of the WCA, the existence and boundaries of wetlands must be determined on a site-by-site basis.

While an inventory of drained wetlands can be helpful, an inventory of existing wetlands combined with a plan identifying and prioritizing areas for wetland restoration are more useful for the purpose of achieving “no net loss” wetland goals related to wetland quantity, quality and the WCA sequencing requirements for restoration activities to be of equal or greater public value.

Potentially restorable wetlands have been identified and mapped by the Ducks Unlimited organization. With a BWSR Challenge Grant, Blue Earth County and MSU-WRC completed an inventory of potentially restorable wetlands. This inventory was completed using 1993 FSA aerial photos to document crop damage caused by standing water or “wet spots” in farm fields following the unusually heavy rainfall and flooding during the summer in 1993. These “wet spots” may point to potentially restorable wetlands.

WETLAND MANAGEMENT IN BLUE EARTH COUNTY

The Wetland Conservation Act (WCA) is the primary tool used for protection of wetlands in Blue Earth County. The Blue Earth County Environmental Services Department administers the WCA in all areas of the County, with the exception of the City of Mankato and publicly owned lands as described in WCA rules. The City of Mankato administers the WCA separately from the County.

Administration of the WCA requires appointment of a Technical Evaluation Panel (TEP). Blue Earth County’s TEP includes the SWCD Manager, County Highway Department representative, local BWSR Conservationist and local DNR Hydrologist. The City of Mankato’s TEP includes the same SWCD and BWSR staff, the City Engineer and a City Planner.

Administration of the WCA in the County primarily involves urban development, mostly in the northeast area of the County. Urban growth in the County has impacted wetlands and increased the time County and City staff and TEP members devote to the WCA. Many of the wetland determinations involve cropland being converted to urban land use and review of wetland delineations prepared by the land owner or developer’s consultant.

Wetland delineations on existing cropland are difficult. Vegetation is virtually non-existent and subsurface drainage to lower the water table is common. Hydric soils are the dominant soil type in the County necessitating drainage for crop production, and many non-hydric soil units have inclusions of hydric soils in drainage ways and depressed areas.

Public agencies at all levels of government respond to public inquiries related to wetlands for general information, technical guidance and regulatory requirements. The SWCD and NRCS are frequently the first local agencies contacted by land owners/operators. The SWCD is involved with many wetland restoration projects and works with many partners, including the USFWS, DNR, BWSR and the County Ditch Authority/Manager. The level of SWCD technical involvement with establishing and

restoring wetlands generally relates to the availability of financial assistance through the SWCD. The SWCD participated in the Minnesota River Conservation Reserve Enhancement Protection (CREP), marketing and establishing sites in Blue Earth County.

Agricultural land uses also impact wetlands. Even though restricted, agricultural drainage impacts to wetlands still occur today. Land owners continue to expand tile drainage systems. Some land owners find alternative outlets to County ditches in order to avoid ditch improvements. Generally, only dramatic wetland impacts are observed on the landscape when, for example, water levels in a wetland appear lower over a number of years. At the State or local level, there are no permits required or tracking methods to monitor tile drainage.

In both urban and rural areas wetland hydrology is impacted when surface water flows are rerouted with new tile drainage or with grading changes and urban storm water infrastructure interrupting the natural surface drainage supplying water to a wetland. Reduced water levels can decrease the wetland's wildlife habitat and ground water recharge benefits.

High Priority Regions and Areas

More than 50% of the pre-settlement wetlands in Blue Earth County have been lost. Due to the high percentage of lost wetlands, the County is considered a "high priority region" for preservation, enhancement, restoration, and establishment of wetlands, according to the WCA, Section 8420.0350, Subparts 1 and 2. The WCA requires Counties in high priority regions to identify in the County Water Management Plan those areas that qualify as "high priority areas" for wetland preservation, enhancement, restoration and establishment.

Minnesota Statutes, Chapter 8420, Wetland Conservation Act Rules, Section 8420.0350, state:

"Plans should give strong consideration to identifying as high priority areas minor watersheds having less than 50 percent of their original wetland acreages, and intact wetlands, diminished wetlands, and the areas once occupied by wetlands that have been diminished or eliminated and could feasibly be restored taking into account the present hydrology and use of the area. Plans should give strong consideration to identifying as high priority areas all type 1 or 2 wetlands, and other wetlands at risk of being lost by permanent conversion to other uses. When individual wetlands are identified as high priority for preservation and restoration, the high priority area shall include the wetland and an adjacent buffer strip not less than 16.5 feet wide around the perimeter of the wetland and may include up to four acres of upland for each wetland acre."

"In all counties, plans may identify additional high priority areas where preservation, enhancement, restoration, and establishment of wetlands would have high public value by providing benefits for water quality, flood water retention, public recreation, commercial use, and other public uses. High priority areas should be delineated by minor or major watershed. For the purposes of this part, "watershed" means major or minor watershed or sub-watershed. To identify high priority areas, the local government unit shall consider at a minimum those items listed in part 8420.0103. (Public value of wetlands)"

Wetland Functions for Determining Public Values.

Minnesota Statutes, Chapter 8420.013, WCA, defines the publicly valued functions of wetlands. The public values of wetlands must be based upon the functions of wetlands, including:

- A. A. water quality, including filtering of pollutants to surface and ground water, utilization of nutrients that would otherwise pollute public waters, trapping of sediments, shoreline protection, and utilization of the wetland as a recharge area for groundwater;
- B. flood water and stormwater retention, including the potential for flooding in the watershed, the value of property subject to flooding, and the reduction in fish, wildlife, and native plant habitats;
- C. low-flow augmentation;
- D. other functions, values and public uses as identified in BWSR-approved wetland evaluation methods.
- E. potential flooding by the wetland;
- F. public recreation and education, including hunting and fishing areas, wildlife viewing areas, and nature areas;
- G. commercial uses, including wild rice and cranberry growing and harvesting, and aquaculture;

The board shall review the inclusion of high priority areas in plans as part of the standard process for plan review established in statute.

Virtually all minor watersheds in Blue Earth County have less than 50% of their original wetland acreage. This causes the entire County to be designated as a high priority area for wetland restoration. Wetlands in the areas near Mankato, Eagle Lake and Madison Lake in the Middle Minnesota River Watershed and the adjacent watersheds of the lower Blue Earth River and lower Le Sueur River are the most likely to be impacted by permanent conversion to other uses.

The *Comprehensive County Water Plan 1998-2007* cited sections of the WCA that suggested criteria for determining high priority areas for wetland restoration. These criteria were removed from WCA; however the County continues to consider those criteria useful for prioritizing as they can be used to categorize landscape and social conditions related to the function of wetlands for water quality, flood control, wildlife and recreation. These criteria include the following:

Water Quality and Quantity

Land Use and Cover Crops.

Wetlands located in watersheds having a high proportion of cultivated land, developed areas or other intensive land use are likely to have high value for water quality and flood water retention.

Wetland and watershed ratio.

Wetlands located in watersheds having a low proportion of wetlands relative to the size of the watershed are likely to have high value for water quality and flood water retention.

Soil erosion rates.

Wetlands located in watersheds where erosion rates are high are likely to have high value for flood water retention and water quality.

Watershed gradient.

Wetlands in watersheds where the difference between the highest and lowest points of the watershed is great are likely to have high value for water retention and water quality.

Surface water retention.

Wetlands in watersheds where direct runoff is high are likely to have high value for flood water retention and water quality.

Soil fertility.

Wetlands in watersheds where soil fertility is high are likely to have high value for water quality, wildlife habitat and commercial uses.

Geology.

Wetlands in watersheds with high subsurface permeability are likely to have high value for ground water recharge and water quality.

Wildlife and Recreation

Wetland complexes.

Wetlands in watersheds where a diversity of wetland types and sizes are or were historically present are likely to have high value for public recreation and benefit to wildlife.

Proximity to population centers.

Wetlands in watersheds that are close to population centers are likely to have high value for water quality, flood water retention, public recreation, and commercial uses.

Public ownership.

Wetlands in watersheds with a high proportion of land in public ownership are likely to have a high value for public recreation.

Significant wildlife use.

Wetlands in watersheds with current or historical records of use by significant numbers or species of wildlife or fish are likely to have high value for public recreation and commercial uses.

Local Comprehensive Wetland Protection and Management Plan

Currently the Wetland Conservation Act (WCA) is the primary “tool” used for wetland management. A major weakness of the WCA is its administration on a site by site basis. A comprehensive view of function and value within local context is absent from WCA. There is a common belief that a lot of effort and expense goes into wetlands of lesser value because of the ‘one-size-fits-all’ approach to protection of wetlands.

Local units of government were given the authority to develop a comprehensive wetland protection and management plan as an alternative to following parts of the State's WCA rules. These plans allow sequencing flexibility, replacement location flexibility, and integration of wetland protection into local land use controls.

A *Comprehensive Wetland Protection and Management Plan* for Blue Earth County has the potential to protect and preserve existing wetlands, as measured by acreage as well as functions and values, from direct, indirect and cumulative adverse impacts. Without adequate protection measures at the local government level, conversion of agricultural land and natural areas to urban land uses results in a permanent loss of or damage to all natural resources including wetlands. To provide a proactive, workable wetland management strategy, the area and context of a wetland can be assessed by comparing the characteristics of urban, rural or natural environment settings as described in the *Minnesota Wetland Conservation Plan*. The comparison can include the context of the wetland as it exists both before development and a realistic view of post-development impacts.

Urban development is viewed as a significant threat to the limited amount of existing wetlands remaining in Blue Earth County. The northeast corner of the County includes the area within and around the Cities of Mankato, Eagle Lake and Madison Lake. This area has the highest density of lakes and wetlands in the County. The major watersheds included in the northeast priority area include the Middle Minnesota River Watershed and also includes adjacent portions of the lower Le Sueur River and lower Blue Earth River. The Minneopa Creek watershed and Indian Creek Watershed are also priority areas due to proximity to urban development and population centers.

Through continued development of the *Greenprint* Plan, the County will be identifying and assessing overlapping and complementary natural resources needs through a comprehensive planning process involving representatives of broad interests and stakeholders. The advantage of a *Greenprint*-based Wetland Management Plan is that it uses a predefined assessment of wetland functions and public values based on comprehensive priorities and it establishes a baseline for management policies. WCA sequencing and replacement principles can be guided by those criteria identified within the plan. Improving and developing regulatory programs within wetland corridors can be part of the implementation plan.

WILDLIFE

Wildlife Habitat

Wildlife Habitat - Forest

The extensive network of rivers in the County provides forested, riparian habitat corridors of varying widths. The forested areas in the County are found mainly along steep slopes, waterways and ox-bows where farming is not practical due to steepness, wetness or other accessibility issues. These forested, mainly riparian, corridors are long and relatively narrow as they follow the rivers. Widening the forest habitat in some areas would benefit some wildlife species.

The type, location and density of forest land cover in the County have fluctuated based on many factors, including agricultural practices and disease. The historic Big Woods

extended into Blue Earth County in the far northeast corner. The Big Woods were cleared for agriculture and homes by homesteading pioneers. Dutch Elm disease destroyed most elm trees on both the urban and rural landscape in the 1960s and 1970s. In the 1970s and 1980s pasture land was converted to crop land, but some pastures were either planted with trees or trees were allowed to grow. Both urban development and agricultural land use continue to encroach on wooded areas and wooded slopes.

Wooded areas are minimally protected through local ordinances. The City of Mankato has a new Woodland Preservation Ordinance intended to protect valuable wooded areas. Shoreland areas are protected from vegetative alterations and clearing by Shoreland Ordinance of the County Code. Violations of this ordinance are a common problem as home owners remove trees to increase their view of the lake or river. Logging activities also occur in the County.

Wildlife Habitat – Prairie and Wetlands

Prairie, wetland and upland habitats are far less common in the County as a result of agricultural use and urban development. Continued drainage of wetlands for urban development divides the remaining, larger wetlands into smaller and smaller pieces. The resultant smaller wetlands are fragments sometimes referred to as habitat patches.

Wildlife species habitat conditions are critical to the development of healthy populations. Habitat needs vary and may be very different at critical points in the life cycle of many species. Connection of wetland habitat patches with diverse conditions within and between wetlands to form wetland complexes is the most desirable for wildlife habitat. Wetlands adjacent to lakes are critical habitat for quality fisheries.

An understanding of the value of corridors containing wetland complexes is the basis of the Greenprint. The *Greenprint* vision, when incorporated in local planning and policy, will *reconnect* fragmented habitat.

Wildlife and Recreation

Minneopa State Park, most County parks and many of the City parks are located next to rivers, streams, lakes and wetlands. Scenic vistas, water access, wildlife viewing, exercise and other outdoor experiences are provided by these publicly owned parks collectively. As the population continues to shift from rural to urban, providing opportunities for these experiences will be increasingly important. Budget constraints at the State and local government level limit opportunities to acquire land, develop parks, expand parks and establish wildlife conservation and fishing areas in the County.

The County continues to develop and improve parks for conservation and wildlife habitat. The Indian Lake Conservation Area, for example, is a wetland restoration and replacement site developed into a park and is connected to a heavily used local and regional trail system. The County has also started using native vegetation and rain gardens in parks to improve wildlife habitat. Constructing canoe accesses with new bridges and trails with many roadways has become somewhat of a standard practice in the County.

The City of Mankato is redeveloping the Minnesota River corridor, including the Sibley Park area on the Blue Earth River, to bring residents and visitors closer to the rivers. The Mankato Trail also connects the Minnesota River, the City's Rasmussen Park, the

County's Red Jacket Trail and the County Indian Lake Conservation Area. The Indian Creek watershed is an important part of the area providing opportunities for residents to view wildlife habitat in woodland and wetland settings. Indian Creek is also part of the Minnesota River flood control project protecting Mankato and North Mankato.

State parks, including Minneopa State Park along the Minnesota River west of Mankato and the Sakatah Trail, are important park systems for regional and local parks and open space planning. Connecting natural areas and establishing trails along the Minnesota River corridor is part of State, regional and local plans to improve water quality, increase wildlife and enhance recreation experiences.

IMPLEMENTATION PLAN

Wetlands and Wildlife

Water Plan Management Goal:

Maximize opportunities to protect, enhance and restore wetlands and other natural areas to improve surface and ground water quality, fisheries, wildlife habitat, recreation and land conservation.

PRIORITY CONCERN:

Most of the County's pre-settlement wetlands were lost due to drainage for the development of agricultural land use, homes, communities and transportation. While all land uses can harm the ecological value of wetlands, urban development is likely the greatest threat to permanent loss of wetland quantity and quality in Blue Earth County at this time. The natural services provided by healthy wetlands are important for many purposes from flood control, water quality, and wildlife. Identifying, assessing and prioritizing wetland areas for protection and enhancement and restoring wetlands is a continuation of the County's Greenprint Plan and are priorities of the *Water Management Plan 2008-2013*.

GUIDING PRINCIPLES:

- » Wetlands filter and absorb polluted surface water runoff before it enters lakes and rivers downstream.
- » Wetlands serve as holding areas for water, reducing flood damage and soil erosion downstream.
- » Wetlands help to maintain stream flows and may help recharge underground water supplies.
- » Wetlands provide permanent or seasonal habitat, and provide food for fish and wildlife.
- » Wetlands provide recreational benefits including fishing, hunting, bird-watching and hiking.
- » Wetland complexes with a diversity of wetland types, water depth, vegetation and sizes have high value for wildlife and water quality.
- » Conversion of land for urban development is a threat to wetlands, wildlife and other natural resources in Blue Earth County.
- » More than 80 percent of the pre-settlement wetlands in Blue Earth County have been lost as a result of drainage for agricultural and urban land use.

ONGOING ACTIVITIES:

The County and SWCD will continue their administrative and technical roles associated with the Wetland Conservation Act (WCA). The County and SWCD will continue to encourage water retention and wetland restoration and work with local conservation organizations, the DNR, USFWS and others as appropriate and within the constraints of staff resources.

The County's administration of the WCA is funded through the NRBG, County funds and wetland determination fees paid by the land owner/developer. The SWCD's participation in WCA is partially funded through an annual transfer of \$5,000 NRBG WCA funds to the SWCD from the County.

WATER MANAGEMENT PLAN:

The multiple water quality benefits inherent to the function of wetlands naturally lead to wetland restoration being a high priority for addressing water quality problems. Other sections of the *Water Management Plan 2008-2013* contain objectives and actions related to the public value of wetlands for water retention and other benefits. To maximize the function and value of wetlands, native planting will be a priority where appropriate and as funding allows.

Through continued development of the *Greenprint Plan*, the County will be identifying and assessing overlapping and complementary natural resources needs through a comprehensive planning process involving representatives of broad interests and stakeholders. The County will be combining existing data sets such as the Duck's Unilimited Restorable Wetland, the County LiDAR topography, the County 1993 Wet Areas Inventory, and the USDA SSURGO Soils in a GIS model to prioritize wetland restoration areas.

Objective 1: Continue to administer the Wetland Conservation Act (WCA).

Action 1: Continue to administer the WCA, including TEP and with the DNR on WCA enforcement.

Objective 2: Continue to identify, assess and prioritize high priority areas for protection, enhancement and restoration of wetlands and wildlife habitat.

There will be an early emphasis to complete this objective in the northeast area of the County, including the City of Mankato, City of Eagle Lake, City of Madison Lake, LeRay Township, Jamestown Township, Lime Township, Mankato Township, and South Bend Township in portions of the Middle Minnesota River watershed and the adjacent lower Le Sueur River and lower Blue Earth River watersheds.

Action 1: Continue to work with DNR Fisheries, DNR Wildlife staff and US Fish and Wildlife Service to identify, assess and prioritize specific areas important for wetland habitat, lake shore habitat, and other conservation practices.

Action 2: Work with local wildlife conservation organizations to identify, assess and prioritize specific areas important for wetland habitat, lake shore habitat, and other conservation practices.

Action 3: Continue to work with representatives of broad interests and stakeholders to identify, assess and prioritize wetland, lake shore habitat and other conservation areas.

Action 4: Evaluate the need for a Comprehensive Wetland Management Plan and ordinance in all or parts of Blue Earth County.

Objective 2: Encourage wetland and wildlife protection and other conservation strategies in park, open space, transportation, stormwater and land use plans.

Action 1: Work with municipalities and townships in conjunction with stormwater implementation objectives and other planning projects to identify areas for wetland protection and enhancement within, adjacent and near the city limits.

Action 2: Continue to work with the County Public Works and Parks in conjunction with other planning projects to incorporate natural resources in transportation and park and open space plans.

Objective 3: Identify and incorporate ground water recharge areas in wetland and other conservation plans.

Action: As described in the Groundwater Section of the Water Management Plan, the County views protection of ground water a very high priority. Additional data is needed to identify, assess and prioritize ground water recharge areas to target wetland protection and restorations.

Actions related to wetlands from County Drainage Ditch Section of the plan:

Identify, assess and prioritize County ditch systems and areas within County Ditch systems for retention, wider ditch buffers and other strategies to improve surface and ground water quality.

Increase water retention and wetland restoration in County ditch drainage systems by 30 percent.

