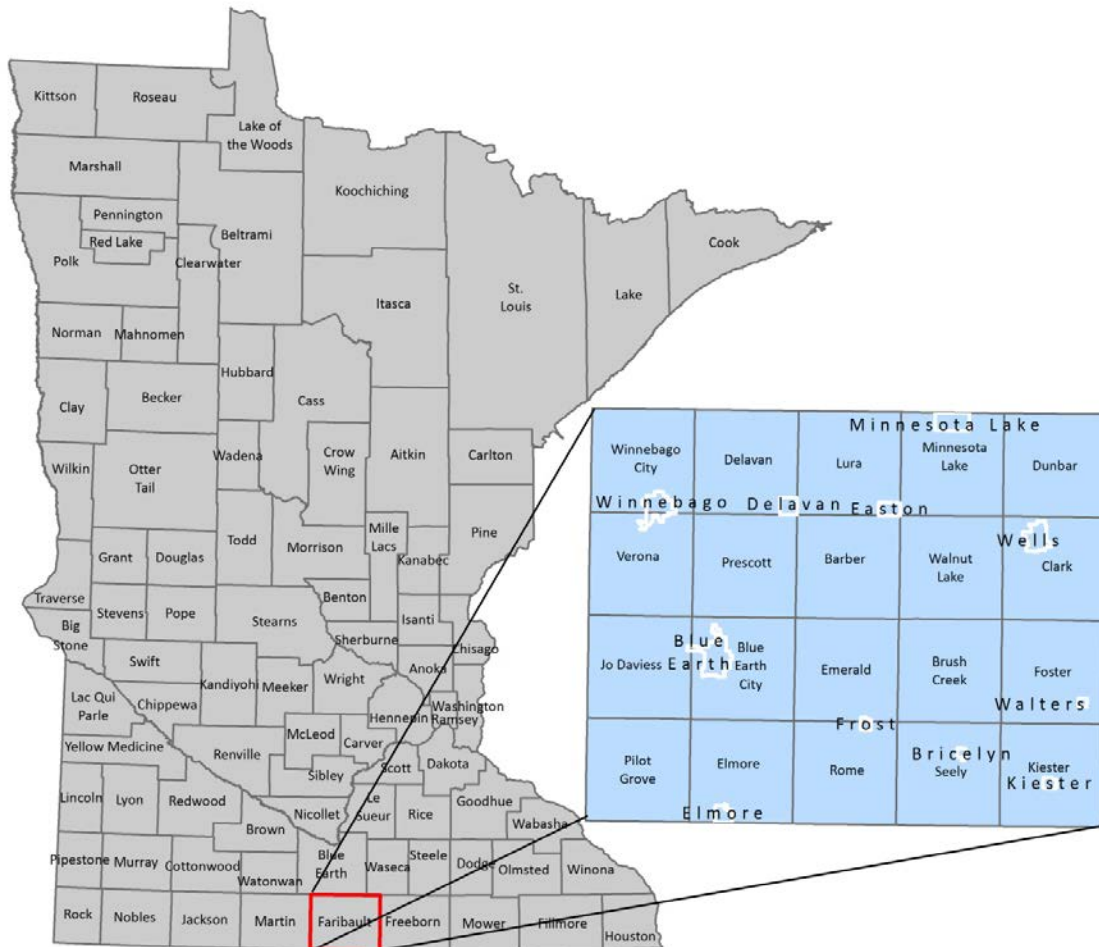


FARIBAULT COUNTY

LOCAL WATER

MANAGEMENT PLAN



2018 – 2027

Prepared by the Local Water Management Advisory Board, Faribault County Water Planner, and the Faribault County Soil and Water Conservation District

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And Advisory Board Members

District 1 – Jeff Bell (Elmore, Jo Daviess, Pilot Grove, Rome, Seely) – Farmer, Soil Health Team

District 2 – Dave Mathews (Blue Earth, Emerald, Prescott)

District 3 – Brett Niebuhr (Brush Creek, Clark, Foster, Kiester, Walnut Lake)

District 4 – Neal Mensing (Delavan, Verona, Winnebago) – Farmer, Soil Health Team

District 5 – Bill Anderson (Barber, Dunbar, Lura, Minnesota Lake) – Contractor, Farmer

Faribault County Commissioners

And Advisory Board Members

District 1 – John Roper (Blue Earth, Elmore, Emerald, Rome)

District 2 – Greg Young (Jo Daviess, Pilot Grove, Verona)

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Local Water Management Plan Lead Agency

Faribault County Soil and Water Conservation District

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2. EXECUTIVE SUMMARY

2.1. Purpose

Faribault County is located on the Minnesota – Iowa border in south central Minnesota. It is surrounded by Blue Earth County to the north, Martin County to the west, and Freeborn County to the east. Faribault County is a primarily agricultural county with a total population of 14,553, according to the 2010 Census. This is a –30% change between 1970 and 2010. Estimated population for 2015 is 14,050. Based on these trends, it is anticipated that the county will continue to see a decline in population in the future.

According to the United States Department of Agriculture, average farm size in 2012 was 473 acres, which has remained consistent since 2002, and is up from 408 acres in 1992. The average age of farmers also went up from 49 in 1992 to 52.5 in 2002 to 57.3 in 2012. These trends show that farm size has leveled off over the last 10 years and fewer young people are returning to the farm to take over operations.

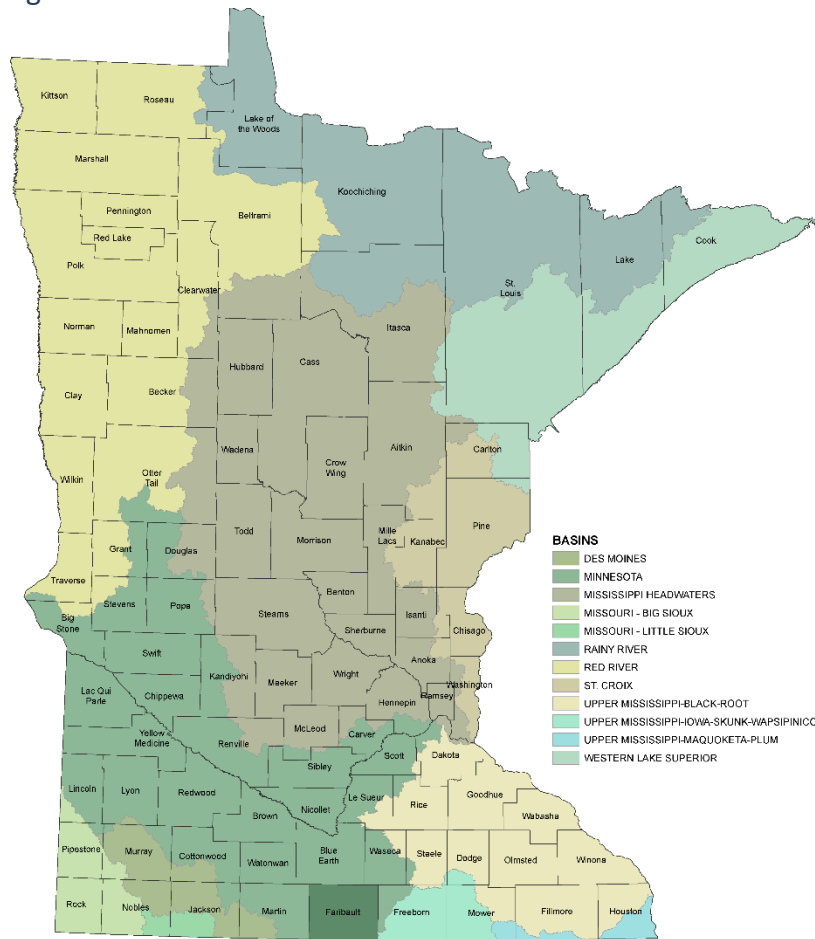
Approximately 31% of the county’s population reside in a rural setting. The largest town and county seat is the City of Blue Earth with a population of 3,353. Faribault County has a total area of 461,600 acres or approximately 720 square miles. In 2012 there was a reported 390,139 acres of land in farms, or 85% of land use in the county, with corn and soybeans as the primary crops. Hogs are the primary livestock in the county. The native vegetation consists of tall and medium prairie grasses. Wooded areas exist around the Blue Earth River and along other streams and lakes.

Faribault County is largely situated within two major watersheds; the Blue Earth River Watershed to the south and west, and the Le Sueur River Watershed to the north. The Blue Earth and Le Sueur River Watersheds are two of the twelve major watersheds making up the Minnesota River Basin. The Winnebago River Watershed includes less than 1 square mile of agricultural land in the south east portion of the county.

Faribault County officially began the Comprehensive Water Management Planning process in August of 1987 when the Faribault County Board of Commissioners authorized the development of a county Comprehensive Water Management Plan. The Faribault County Soil and Water Conservation District was appointed as the coordinating agency for implementation of the plan.

The first Faribault County Water Management Plan was adopted by the Faribault County Board of Commissioners on August 22, 1990 and was a five year plan. The second plan was a 10 year plan adopted in 1997 through 2006. The current ten year plan was adopted January 16, 2007 and a five year amendment was adopted on January 17, 2012. Prior to the extension, the expiration date was December 31, 2016. The new expiration date is December 31, 2017. The Local Water Management Plan 2018-2027 will be the fourth plan adopted by Faribault County.

Figure 1. State of Minnesota River Basins



2.2. List of Priority Concerns

The Faribault County Local Water Management Advisory Board met to develop the Priority Concerns Scoping Document in accordance with the Comprehensive Local Water Management Act; §103B.301-103B.355. This document, included in the appendix, lists the priority concerns selected along with a detailed account of how they were identified.

At the time the Scoping Document was submitted to BWSR for approval, it identified three priority concern areas: altered hydrology, sediment and nutrient transport, and groundwater. Upon further review and approval by the BWSR Board, altered hydrology and sediment and nutrient transport became goals consolidated within one priority concern, surface water quantity and quality. This created consistency with recently submitted bordering county plans.

The following Priority Concerns were selected by the Advisory Board after examining the list of concerns submitted by the citizens, local and state agencies, and became the foundation of the Faribault County Local Water Management Plan. While preparing the plan, it was important to identify priority concerns within each major watershed in preparation for One Watershed One Plan.

2.2.1. Blue Earth River Watershed

1. Protect and restore the quality and manage the quantity of surface water.
2. Protect drinking water supplies and groundwater quality and quantity.

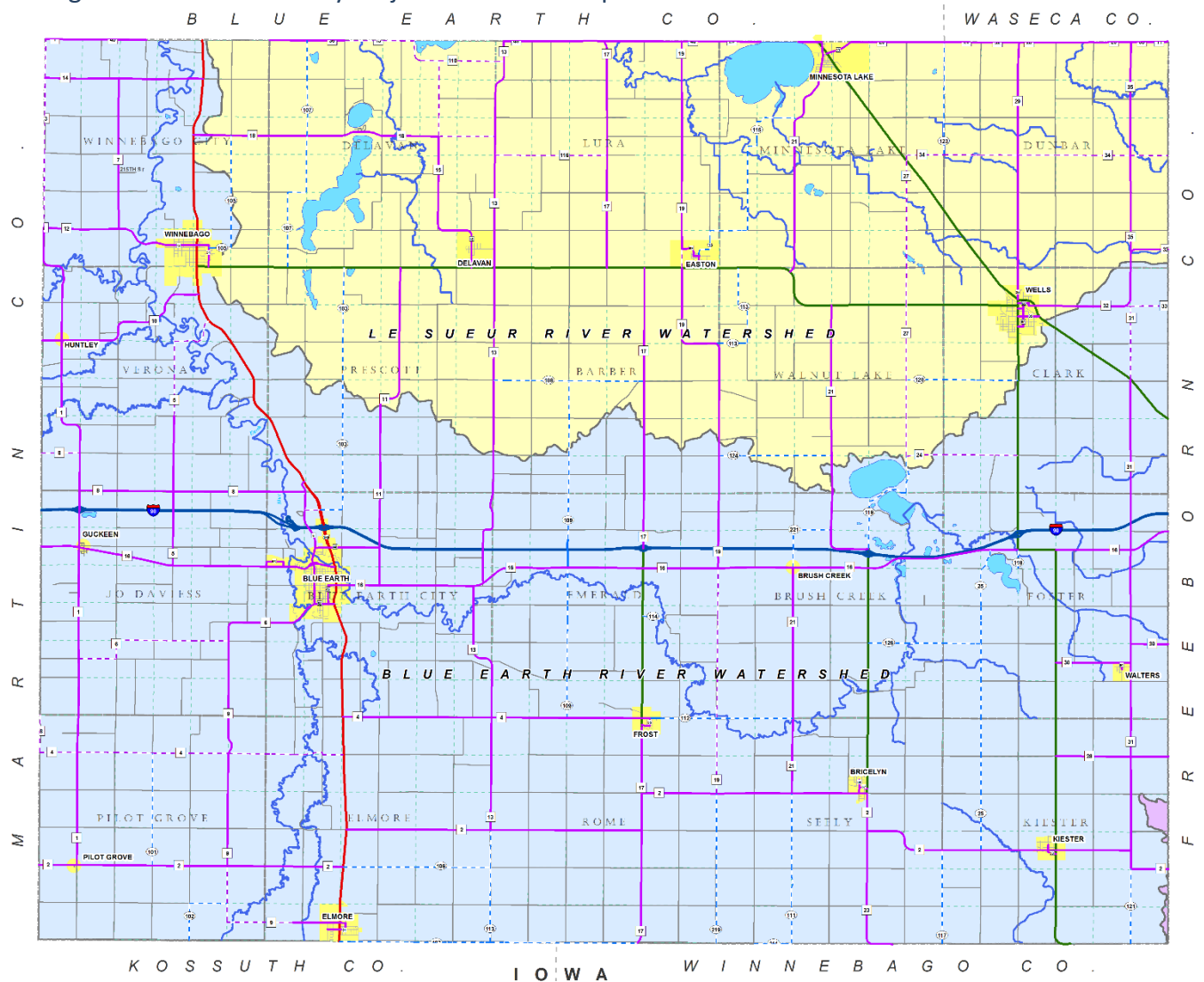
2.2.2. Le Sueur River Watershed

1. Protect and restore the quality and manage the quantity of surface water.
2. Protect drinking water supplies and groundwater quality and quantity.

2.2.3. Countywide

1. Regulatory Controls for all Priority Concerns
2. Studies, Data Acquisition, and Data Management for all Priority Concerns
3. Information Sharing, Education, and Outreach for all Priority Concerns

Figure 2. Faribault County Major Watershed Map



2.3. Summary of Goals with Projected Total Cost

The following priority concerns address ongoing efforts by the elected officials, county departments, organizations, and citizens of Faribault County. They also include new and upcoming goals that, if implemented, will improve the natural resources within both the urban and rural areas of Faribault County.

To fully address these priority concerns there will need to be focused and targeted educational efforts and implementation of practices and projects in both the urban and rural areas of the county. Faribault County has been successful at receiving additional funding for innovative projects, as well as traditional cost-share, easement, and incentive programs to assist with these efforts.

The implementation schedule located within this document further addresses funding needs to accomplish the action items set forth by the Local Water Management Plan Advisory Board. A summary of the anticipated costs to fully implement the Local Water Management Plan are below.

PRIORITY CONCERN	TOTAL COST	ANNUAL COST
PRIORITY CONCERN 1. PROTECT AND RESTORE THE QUALITY AND MANAGE THE QUANTITY OF SURFACE WATER.	\$ 7,821,850	\$ 782,185
PRIORITY CONCERN 2. PROTECT DRINKING WATER SUPPLIES AND GROUNDWATER QUALITY AND QUANTITY.	\$ 177,000	\$ 17,700
REGULATORY CONTROLS FOR ALL PRIORITY CONCERNS	\$ 3,300,000	\$ 330,000
STUDIES, DATA ACQUISITION, AND DATA MANAGEMENT FOR ALL PRIORITY CONCERNS	\$ 85,000	\$ 8,500
INFORMATION SHARING, EDUCATION, AND OUTREACH FOR ALL PRIORITY CONCERNS	\$ 1,347,000	\$ 134,700
TOTAL NEED	\$ 12,730,850	\$ 1,273,085

2.4. Consistency of Plan

Faribault County Soil and Water Conservation District currently possesses or has access to copies of several local, regional and state plans. The priority concerns that were developed for Faribault County directly reflect the goals, objectives, and actions outlined in these other related plans and documents. Related plans include: the Faribault County Zoning Ordinance, Faribault County Comprehensive Plan 2015-2035, adjoining county's Local Water Management Plans, Blue Earth Turbidity TMDL, Blue Earth Fecal Coliform TMDL, Le Sueur River Watershed WRAPS Report, Le Sueur River Watershed TMDL, BWSR's Nonpoint Priority Funding Plan 2014, MPCA Minnesota Nonpoint Source Management Program Plan 2013-2017, MPCA Nitrogen in Minnesota Surface Waters 2013, Nitrogen Fertilizer Management Plan 2013, and Sediment Reduction Strategy for the Minnesota River Basin.

Within the action items of the priority concerns, the possibility of making amendments to other plans and official controls have been recommended by the Advisory Board. These

changes are voluntary and would need to be instigated by the local officials, board representatives, and/or department being affected. The following were suggested considerations by the Local Water Management Plan Advisory Board:

1. Prevent additional impacts of altered hydrology through regulatory controls and better planning of drainage activities.
2. Prevent additional impacts of urban areas and impervious surfaces through regulatory controls and better planning of stormwater management.
3. Prevent additional impacts to surface waters through better land use and regulatory controls.
4. Prevent additional impacts to groundwater through land use and regulatory controls.
5. Stay consistent with state regulation and make appropriate modifications to permits and ordinances.
6. Explore the addition of Special Protection Districts in Zoning Ordinance.

2.5. Planning on a Watershed Level

The Clean Water Act (CWA) requires states to complete a Total Maximum Daily Load (TMDL) study for impaired waters and the United States Environmental Protection Agency (EPA) review and either approve or disapprove these reports. The TMDL study determines reductions of pollutants needed to again meet water quality standards. To comply with the CWA, the Minnesota Pollution Control Agency (MPCA) adopted a Watershed Approach in 2008 to gauge the health of lakes, rivers, and streams in the state's 81 major watersheds. The water quality management cycles for all major watersheds is staggered, with eight to ten watersheds beginning a new cycle each year. By 2017, all watersheds have at least begun their first cycle. Those that began in 2008 will then enter their next cycle.

The watershed approach consists of intense chemical monitoring to identify pollutant levels; biological monitoring including fish populations; watershed assessment including flow; and identifying restoration and protection strategies necessary to restore and protect water quality. Because the vast majority of land within the Blue Earth and Le Sueur River Watersheds is agricultural in Faribault County, most strategies will focus on agricultural best management practices.

In addition, the Minnesota Board of Water and Soil Resources shares a vision for One Watershed, One Plan to align local water planning on a major watershed boundary. One Watershed, One Plan is the next step in the evolution of water planning and will create a prioritized, targeted, and measurable implementation plan. One Watershed, One Plan is intended to replace existing county water plans, however there will likely be a ten year transition period statewide.

2.5.1. Le Sueur River Watershed

The Le Sueur River Watershed drains approximately 711,000 acres (1,110 square miles) within four predominate counties: Blue Earth, Waseca, Faribault, and Freeborn. Smaller portions fall within Steele and Le Sueur Counties. The watershed is

predominately rural with 82% of land in ag cultivation. It is one of 12 major watersheds making up the Minnesota River Basin.

The Le Sueur River begins in Freeborn County and flows 111 miles through Waseca County's gently rolling landscape consisting mostly of farmland, until it cuts down through Blue Earth County's high bluffs to its outlet into the Blue Earth River near Mankato. The Maple, Cobb, and Little Cobb Rivers, along with Rice Creek, are major tributaries of the Le Sueur River in Faribault County. They are located in the north central and north eastern portions of the county where drainage generally flows north into Waseca and Blue Earth Counties. In addition, an extensive ditch and tile system facilitates movement of water throughout the watershed.

Once covered with hardwood forests and long grass prairies, the vast majority of the watershed is now used for crop (corn and soybeans) and livestock production. Lakes and wetlands only comprise 3% of the watershed. About 89% of wetlands have been drained since European settlement.

Data indicates the Le Sueur River Watershed is one of the highest polluting watersheds in the State of Minnesota. In 2008 the Le Sueur River Watershed was one of the first to fall into Minnesota's Watershed Approach. This work included water quality monitoring, pollutant and stressor ID, civic engagement, and lastly restoration and protection strategy development. The final report, known as a Watershed Restoration and Protection Strategies (WRAPS), was completed in 2015. This process and final document helps guide conservation work within the watershed.

Based on intensive water monitoring in 2008-2009, it was identified impaired waters are common throughout the Le Sueur River Watershed. Sources of pollutants/stressors are identified in the WRAPS report. They include:

- Altered hydrology;
- Sediment;
- Nitrogen;
- Phosphorus;
- E. coli/fecal coliform;
- Dissolved oxygen (DO);
- Habitat; and
- Connectivity.

In the Le Sueur River Watershed, nonpoint pollution sources dominate pollutant contributions. Since the watershed and pollutant source contributions are generally dominated by agriculture, reducing pollutant/stressor contributions from agricultural sources is a high priority. However, stormwater management BMPs and lake watershed strategies are also discussed as they have an impact to water quality.

The Faribault County Local Water Management Plan utilizes goals, objectives, and action items to address the above listed pollutants/stressors. They are consistent with the civically and scientifically supported strategies identified in the WRAPS report to restore and protect waters within the Le Sueur River Watershed.

2.5.2. Blue Earth River Watershed

The Blue Earth River Watershed is largely agricultural with 775,415 acres (1,211 square miles) in Minnesota and 224,640 acres (351 square miles) in Iowa. While the watershed includes portions of eight counties in Minnesota, primary counties include Blue Earth, Faribault, Freeborn, Jackson, and Martin. There are 21 cities in the watershed, of which Mankato and Fairmont are the largest and are regulated under a Municipal Separated Storm Sewer System (MS4) permit with the MPCA. Agriculture accounts for 84% of acres with corn/soybeans being the primary crop rotation.

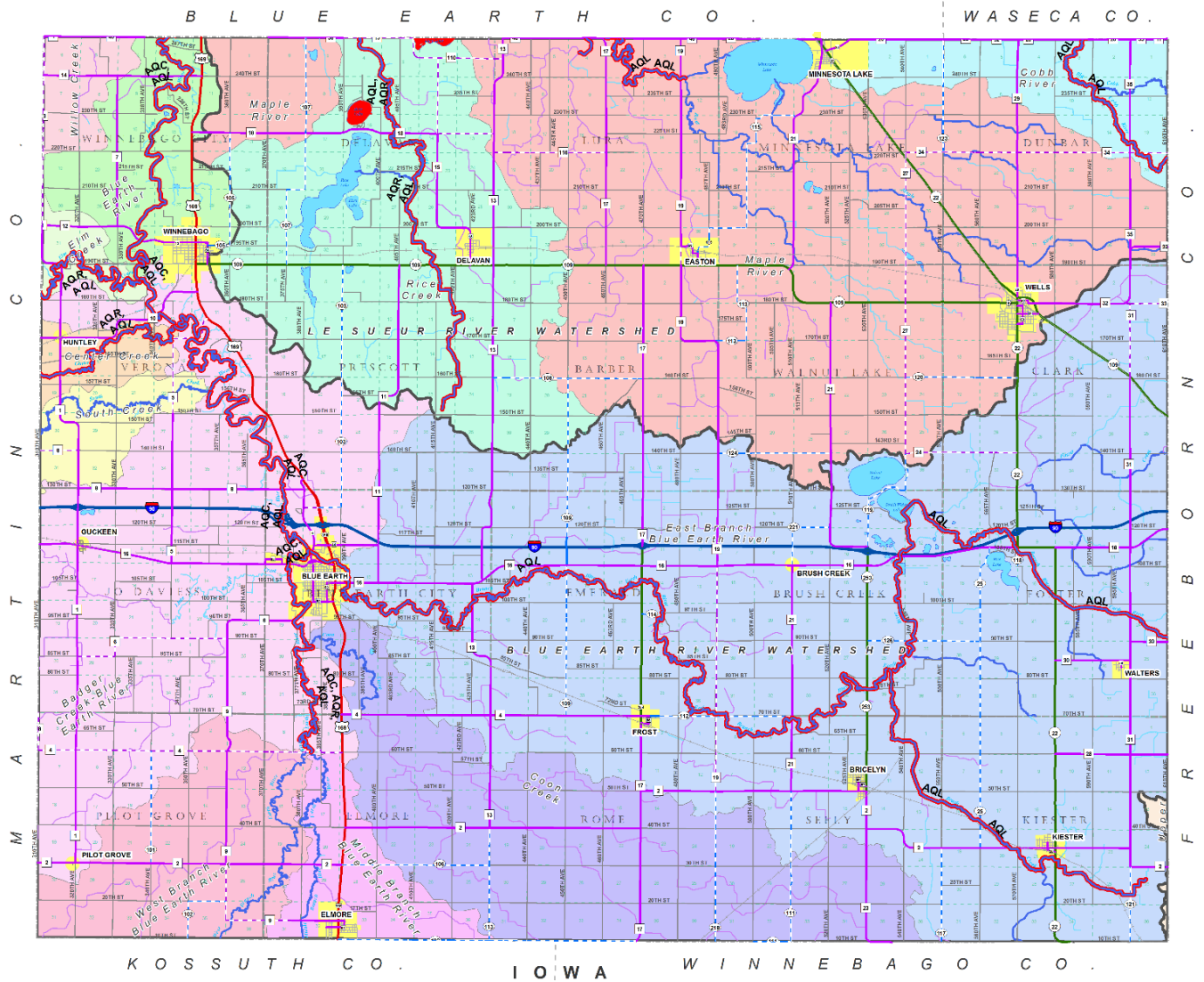
The Blue Earth River begins in northern Iowa and meets with the West Branch Blue Earth River in southern Faribault County. From there, it flows 108 miles northwardly in a meandering course through Faribault into Blue Earth County, past the cities of Blue Earth, Winnebago, and Vernon Center to Mankato, where it enters the Minnesota River. The landscape is primarily flat, although there are some hills, ravines, bluffs, natural prairie, and forest.

The Blue Earth River, along with the city and county, were named for former deposits of bluish-green clay, no longer visible, along the banks of the river. The combination of erodible soils and higher flows has led to greater levels of erosion and a dramatic increase in sediment levels in the river system since European settlement in the late 1800s.

By volume, the Blue Earth is the Minnesota River's largest tributary, accounting for 46% of the Minnesota's flow at the rivers' confluence. It is also a major contributor of sediment to the Minnesota River. As part of the Minnesota River Basin, the Blue Earth River Watershed has been subject to several studies over a course of 20 plus years. However, unlike the Le Sueur River Watershed, the Blue Earth is only in the beginning phases of the watershed approach.

Intensive watershed monitoring began in the Blue Earth River Watershed in 2017. There will be a two year timeframe of monitoring lakes and streams to determine overall health and to identify impaired waters. This will be followed by data assessment; creation of a WRAPS report developing strategies to restore and protect water bodies; and lastly implementing these projects throughout the watershed. In this last phase, the SWCD along with additional local units of government, will take the lead in carrying out implementation plans based on what is learned in earlier steps of the watershed approach, in addition to what is identified in the Faribault County Local Water Management Plan and other pertinent county plans.

Figure 3. Faribault County Minor Watershed & Impaired Waters Map



Minor Watershed

- Badger Creek-Blue Earth River
- Blue Earth River
- Center Creek
- Cobb River
- Coon Creek
- East Branch Blue Earth River
- Elm Creek
- Maple River
- Middle Branch Blue Earth River
- Rice Creek
- South Creek
- Upper Winnebago River
- West Branch Blue Earth River
- Willow Creek

Legend

- Impaired Streams 2016
- Impaired Lakes 2016

Hydrography

- Public Watercourse
- County Ditch
- Other Water
- Lake

- Major Watershed

AQC Aquatic Consumption
AQL Aquatic Life
AQR Aquatic Recreation

Blue Earth River Watershed
Le Sueur River Watershed
Winnebago River Watershed

2.6. Precipitation

The Faribault County SWCD coordinates an intensive network of rain gauge cooperators in conjunction with the Minnesota State Climatology Office. Volunteers collect rainfall information at over 30 sites throughout the county during the months of April through October. Annual precipitation has typically been around 30 inches per year. Monitoring has shown this has increased over time with much of the extra rainfall coming during summer and early fall.

This gradual increase in the total annual amount of precipitation is not the only factor leading to increased stream flows. Intensity, duration, frequency, and seasonality of precipitation are each factors impacting the proportion of rainfall infiltrating into the soil, running over the surface, or running through subsurface tile lines.

The proportion of annual precipitation that falls during large events, greater than 2 inches, is important to stream flow because soil has a limited capacity to absorb water depending on the soil type, vegetation, and previous saturation. Once that limit is reached, additional precipitation will run over the surface or pond in low spots. Watersheds also have a limited capacity to absorb rainfall depending on the amount of water storage in lakes, ponds, wetlands, floodplains, and the soil. Thus, larger events yield proportionally more surface runoff than smaller events which can be entirely absorbed by the watershed.

2.7. Changes and Trends Pertaining to Climate

According to the State Climatology Office, Minnesota's climate is changing. Known facts include that the state has warmed one to three degrees (F) in the last century, floods are becoming more frequent, and ice cover on lakes is forming later and melting sooner. In the coming decades, these trends are likely to continue. Rising temperatures may interfere with winter recreation, extend the growing season, change the composition of trees in the North Woods, and increase water pollution problems in lakes and rivers. The state may have more extreme hot days, which not only harms public health, but alters the growing cycle of crops and impacts yields.

Our climate is changing because the earth is warming. People have increased the amount of carbon dioxide in the air by 40 percent since the late 1700s. Other heat-trapping greenhouse gases are also increasing. These gases have warmed the surface and lower atmosphere of our planet about one degree during the last 50 years. Evaporation increases as the atmosphere warms, which increases humidity, average rainfall, and the frequency of heavy rainstorms in many places, but contributes to drought in others.

In the big picture, greenhouse gases are also changing the world's oceans and ice cover. Carbon dioxide reacts with water to form carbonic acid, so the oceans are becoming more acidic. The surface of the ocean has also warmed about one degree during the last 80 years. Although warmer temperatures cause sea levels to rise, the impact on water levels in the Great Lakes is not yet known. Warmer air also melts ice and snow earlier in spring.

2.7.1. Lakes and Rivers

Higher temperatures and heavier storms could harm water quality in our lakes and rivers. Warmer water tends to cause more algal blooms, which can be unsightly, harm fish, and degrade water quality. Severe storms increase the amount of pollutants that run off from land to end up in our surface waters, so the risk of algal blooms will be greater if storms become more severe. Increasingly severe storms could also cause wastewater sources to overflow into local lakes and/or rivers more often, threatening beach safety and drinking water supplies.

2.7.2. Ecosystems

The ranges of plants and animals are likely to shift as the climate changes. For example, warmer weather could change the composition of forests, rising water temperatures will increase the available habitat for warm water fish such as bass, while shrinking the available habitat for cold water fish such as trout. Declining ice cover and increasingly severe storms would harm both types of fish habitat through erosion and flooding.

Warming could also harm ecosystems by changing the timing of natural processes such as migration, reproduction, and flower blooming. Migratory birds are arriving in Minnesota earlier in spring today than 40 years ago. Along with range shifts, changes in timing can disrupt the intricate web of relationships between animals and their food sources and between plants and pollinators. Because not all species adjust to climate change in the same way, the food that one species eats may no longer be available when that species needs it (for example, when migrating birds arrive). Some types of animals may no longer be able to find enough food.

2.7.3. Agriculture

Changing climate is likely to have both positive and negative effects on agriculture in Minnesota. Warmer weather has extended the growing season by about 15 days since the beginning of the 20th century. Longer frost free growing seasons and higher concentrations of atmospheric carbon dioxide would increase yields of soybeans and wheat during an average year. But increasingly hot summers may reduce yields of corn. In seventy years, southern Minnesota is likely to have 5 to 15 more days per year with temperatures above 95°F than it has today. More severe droughts or floods would also hurt crop yields, making it important to identify potential cropping adjustments.

2.7.4. Air Pollution and Human Health

Changing climate can harm air quality and amplify existing threats to human health. Higher temperatures increase the formation of ground level ozone, a pollutant that causes lung and heart problems. Ozone also harms plants. In some rural parts of Minnesota, ozone levels are high enough to reduce yields of soybeans and winter wheat. The Environmental Protection Agency and Minnesota Pollution Control Agency have been working to reduce ozone concentrations. As the climate changes, continued progress toward clean air will become more difficult.

Hot days can be unhealthy, even dangerous. High air temperatures can cause heat stroke and dehydration, and affect people's cardiovascular and nervous systems. Heat stress is expected to increase as climate change brings hotter summer temperatures and more humidity. Certain people are especially vulnerable including children, elderly, sick, and poor.

3. ASSESSMENT OF PRIORITY CONCERNS

3.1. Relevant Data, Plans & Policies for the Blue Earth and Le Sueur River Watersheds

3.1.1. Priority Concern 1, Goal 1

PRIORITY CONCERN 1. PROTECT AND RESTORE THE QUALITY AND MANAGE THE QUANTITY OF SURFACE WATER.

Goal 1. Address impacts of altered hydrology, decreased evapotranspiration and storage due to vegetation, land use, and drainage changes.

Interconnected forms of altered hydrology are prevalent in Faribault County. Increased flashiness (rapid increases after precipitation events) of rivers and streams are obvious effects of altered hydrology. However, river flow increases are also indicators of other hydrologic alterations including decreases in evapotranspiration (ET) and residence time on the landscape. Decreases in ET and residence time are due to hydrologic alterations including: wetland loss, vegetation change, ditching and tiling, and increased impervious surfaces with storm sewer systems.

The type and timing of vegetation on the landscape determine how much annual precipitation will return to the atmosphere as transpiration, and how much will leave the watersheds as stream flow or infiltrate to groundwater. Vegetation in agricultural and urban areas has changed considerably since European settlement in the 1800s, and with it, the timing and amounts of stream flow.

Very little of Faribault County's natural vegetation remains. Former wetlands and prairie areas are now intensively row cropped. The natural vegetation was first replaced by diverse crops, then predominately corn and soybeans. This change in plant cover from three seasons of transpiration and evaporation to corn and soybeans with primarily summer transpiration has resulted in more precipitation water in spring and fall available for surface and subsurface runoff. That, in addition to higher precipitation levels and subsurface drainage to remove excess water, is resulting in more water volume transported to streams and rivers.

Evapotranspiration changes when plant cover changes. If more precipitation can transpire through plants, then less reaches streams through surface and subsurface runoff. Transpiration from perennials and cover crops begins earlier in the season and ends later in the fall than from corn and soybeans. In the spring there is little to no transpiration from annual crop plants. When precipitation exceeds the soils water holding capacity, the excess will leave the field in drainage tile, as runoff, or percolate to groundwater if the soil profile allows.

Historically people have worked to change how water flows: building dams and dikes, straightening and dredging channels, armoring streambanks, digging ditches, installing

subsurface tile, constructing complex storm sewer systems, and constructing impervious surfaces such as roads and buildings. In order to enable and enhance agricultural production, transportation, and economic development, construction of drainage ditches began even before Minnesota achieved statehood in 1858, with most occurring between 1910 to 1919. Ditches connected the natural stream network to previously unconnected depressions. Precipitation water previously stored in the depressions and soil around them was now rapidly conveyed to streams and rivers. Many of the natural streams themselves were straightened and enlarged to increase transport capacity. Subsurface tile installations have continued up through the present. However, rather than draining individual wet areas, pattern tiling is used to systematically drain entire fields.

While much of Faribault County and Minnesota's land use activities depend on artificial drainage, it can have negative environmental and flooding impacts downstream. For example, recent studies estimate the Le Sueur River's flow has doubled over the past 60 years. Roughly half of this flow originates from tile drainage. The increase in the Le Sueur River's flow is due to hydrologic alterations made by both humans (including installing artificial drainage and changing crop types) and climate (increased precipitation and temperatures). Several studies identify human changes as the primary cause and climatic changes as the secondary cause of this increased river flow. Furthermore, this watershed cannot improve without substantial mitigation of altered hydrology. In addition to high river flow, altered hydrology exhibited in excessively low river base flow is an identified stressor in the Le Sueur River watershed. Base flow is sustained by shallow groundwater and interflow. Simply put, low base flow is indicative of soils being too dry and water tables being too low, partly the result of draining excess water from the landscape. Therefore, these sources are unable to deliver ample water to rivers at dry times of year, when base flow is the only source of river flow.

Adequate drainage is, however, a critical component to a successful farming operation. A key issue is how we look at drainage into the future, single purpose or multipurpose. Multipurpose drainage is engineered drainage systems that provide both private drainage benefits and public water management benefits. While traditional drainage removes excess water from fields through use of ditches and subsurface tile, today, resource professionals, such as SWCDs and the Natural Resource Conservation Service (NRCS), are encouraging utilization of multipurpose drainage practices designed to provide both the benefits of drainage while minimizing negative impacts downstream. The goals of multipurpose drainage are to:

1. Provide adequate drainage for crop planting, productivity, and harvest;
2. Provide more adequate upstream to downstream drainage and protection;
3. Slow water down & reduce damage from flooding;
4. Reduce erosion and keep soil on the land; and
5. Protect and improve water quality.

Since many drainage systems are already in place, addressing multipurpose drainage will likely occur in conjunction with a repair, replacement, or improvement project.

Multipurpose drainage management goals can be achieved through on field and on drainage system practices. Goals will require a partnership between landowners, the County Drainage Authority, and local resource professionals such as SWCD and NRCS. Multipurpose drainage management efforts began several years ago in Faribault County by utilizing these partnerships to explore watershed water quality treatment systems using a mix of management and implementation practices targeted at locations which make the largest impact. This initiative with landowner engagement will continue to grow into the future to achieve multipurpose drainage management goals.

Agricultural drainage in Faribault County consists of 114 public drainage systems and countless miles of private tile. These systems are funded by the benefited landowners and administered by public drainage authorities, in accordance with state drainage law. In Faribault County, the County Commissioners are considered the County Drainage Authority. The costs of establishing, improving, or repairing public drainage systems are assessed in proportion to the value of drainage system benefits determined for each parcel within the drainage system.

Agricultural drainage involves both open ditches and subsurface drain tiles. Within Faribault County there are 275 miles of open ditch and 750 miles of county tile. Agricultural drainage systems in Faribault County date back to the early 1900's and are reaching the end of their functional life span. Systems are aging, overloaded, and in need of improvement or repair. In many cases the systems are under designed and the cost to replace them is too high. These conditions may bring about opportunities into the future. Opportunities to design and install systems in ways that help reduce nutrient loss into surface water and positively affect the timing and flow of drainage water into surface waters. These practices combined with wetland restoration and water retention initiatives can have positive impacts on water quality and quantity in our agricultural landscape.

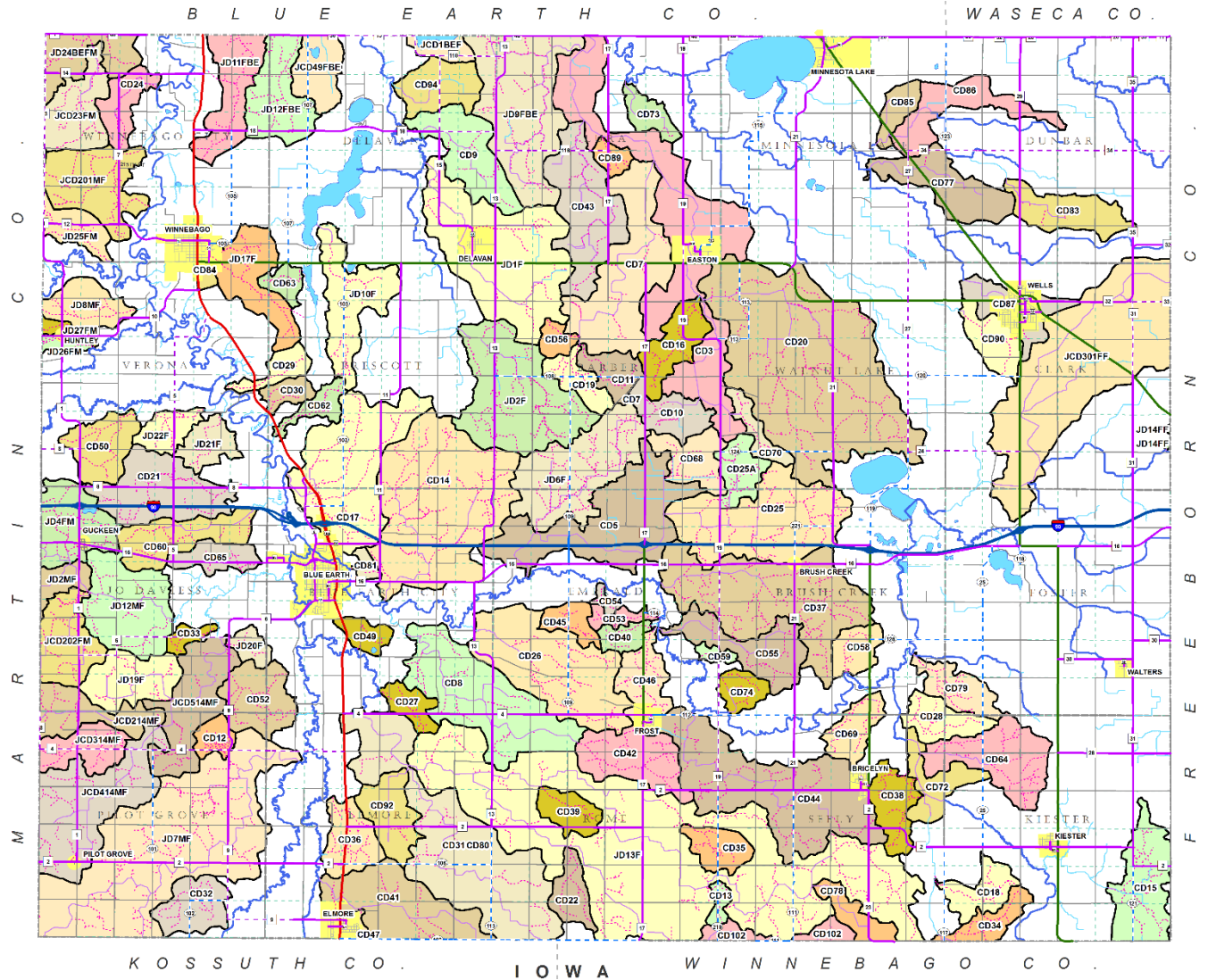
Similar to agricultural drainage systems, natural drainage patterns were also modified when urban areas were developed. Impervious surfaces such as roads and parking lots direct runoff into curb and gutter systems and ultimately storm sewers. The amount of rainfall that can infiltrate into the soil is reduced, which increases the volume of runoff in a watershed. Drainage modifications can increase the velocity of runoff, which decreases the amount of time required to convey it to the outlet of a watershed.

Today, urban areas are encouraged to utilize green infrastructure with all new site planning to mitigate excess runoff. Similar to the agricultural community, urban areas are experiencing pressure on their municipal storm sewer systems. The challenge for most, similar to agricultural drainage, is how to increase capacity of existing systems to meet current runoff volume requirements while keeping water quality goals in mind. Concerns also exist in some municipalities as cross connections allow vast amounts of

storm water into sanitary systems, causing a number of problems including basement backups and emergency bypassing of wastewater facilities.

Improved water quality requires a change in thinking from viewing water as a liability that must be sent off the land and downstream as quickly as possible, to being regarded as a valuable resource and retained. This holds true for both urban and rural settings.

Figure 4. Faribault County Public Drainage System Map



Legend

Hydrography

- Public Watercourse
- County Ditch
- Other Water
- County Tile
- Lake

3.1.2. Priority Concern 1, Goal 2

PRIORITY CONCERN 1. PROTECT AND RESTORE THE QUALITY AND MANAGE THE QUANTITY OF SURFACE WATER.
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Goal 2. Address the quality of surface water through strategies to conserve and manage soil health; strategies to reduce, trap, or treat nutrients and sediment; and information sharing on sustainable farming options.

The need to reduce pollutant loads from primarily agricultural watersheds can be an intimidating challenge, considering the scale of water quality problems. When precipitation arrives at the soil surface, the route it takes determines what pollutants will transport. Pollutant pathways include infiltration, surface runoff, and streambank erosion. In agricultural landscapes the principal pollutants are suspended sediment, phosphorus, nitrate and bacteria.

Sediment starts as soil erosion which moves organic and inorganic matter particles to water bodies during rain events. It can be the result of erosion from field surfaces, construction sites, ravines, or streambanks. Sediment has effects that impact both onsite (where the soil detached) and offsite (where the eroded soil ends up). While some sediment is natural, excessive suspended sediment causes turbidity (cloudiness) in streams and rivers, blocking sunlight from aquatic plants and effecting habitat of aquatic life. Sediment can also fill lakes where it settles out. Prevention of soil erosion is necessary to reduce sediment and other attached pollutants from reaching downstream surface waters. In 2015, the Soil Loss law was passed. The interpretation of this law will most likely dictate how we address soil erosion locally.

Nutrients (phosphorus and nitrogen) are another pollutant causing impairments in streams and rivers. Nitrate nitrogen is applied to agricultural fields in the form of manure and fertilizer for increased yields. It can also be present due to decaying vegetation. The drinking water standard for nitrate is 10 parts per million. Nitrate can impact aquatic life and contributes to hypoxia (low oxygen) in salt water systems, including the Gulf of Mexico. The lag time for seeing positive benefits of nitrate pollution range from years to decades.

Phosphorus is transported to rivers and lakes bound to sediment, especially during high flow, then settles into the river or lake bed. Phosphorus in agricultural areas originates from fertilizers and livestock manure applied to the soil as an essential crop nutrient, and from mineralization of soil organic matter. Urban areas can also be high contributors of phosphorus due to grass clippings and lawn fertilizers. Phosphorus promotes growth of algae particularly in freshwater bodies. Excess phosphorus can be a pollutant of concern for decades because the contaminated sediment bed provides a long term source of phosphorus.

Bacteria in water originates from wildlife and livestock manure, and noncompliant human waste treatment systems. When spread on fields as fertilizer, livestock manure can be carried by precipitation runoff through drain tiles or overland surface flow.

Additionally, practices to address pesticide use and water resource protection have been developed in Minnesota. These practices can reduce pesticide leaching into groundwater or runoff into surface water while giving consideration to the specific needs of farming operations.

Improving water quality in agricultural watersheds requires a variety of tools and there are many practice options available. These include both management practices (nonstructural) and structural best management practices. Two distinct paths of implementation exist – regulatory and voluntary. They both aim to improve and preserve water quality. SWCDs and the NRCS historically have operated with voluntary conservation efforts. However, with the introduction of the Minnesota Buffer Law, Soil Erosion Law, and Nitrogen Fertilizer Management Plan, as examples, this may change in the future.

Land and water management practices protect water bodies and improve water quality by modifying water use and flows. They are most effective when combined in sequence as a treatment train – a series of practices that work together to store or treat water along its entire path from where rain falls, through the soil or drainage system, over the land, and to a water body. Individually, or combined, practices often have multiple benefits. These include improved soil structure and water holding capacity, reduced erosion, better water quality, improved habitat, and reduced flooding.

It will take many land and water best management practices combined to improve water quality, ranging from crop management to large scale water storage. Practices may include in field crop and soil management practices; drainage water management such as alternative tile inlets; surface flow management such as grassed waterways or buffer strips; water storage and infiltration such as saturated buffers, wetlands, or water and sediment control basins (WASCOBs); ditch channel water retention such as structures for water control or two stage ditch; and riparian area restoration and protection.

The first of these practices, proper management of soil, is one of the most effective ways for farmers to increase productivity and profitability while improving the environment. Positive results are often realized within the first year and last long into the future. By farming using soil health principles and systems that include no-till, cover cropping and diverse crop rotations, more farmers are actually increasing their soil's organic matter and improving microbial activity. As a result, farmers are sequestering more carbon, increasing water infiltration, improving wildlife and pollinator habitat, all while harvesting higher yields and increased profitability.

Soil is made up of air, water, decayed plant residue, organic matter, and minerals. Increasing organic matter typically improves soil health since organic matter affects several critical soil functions. Healthy soils are porous, which allows air and water to

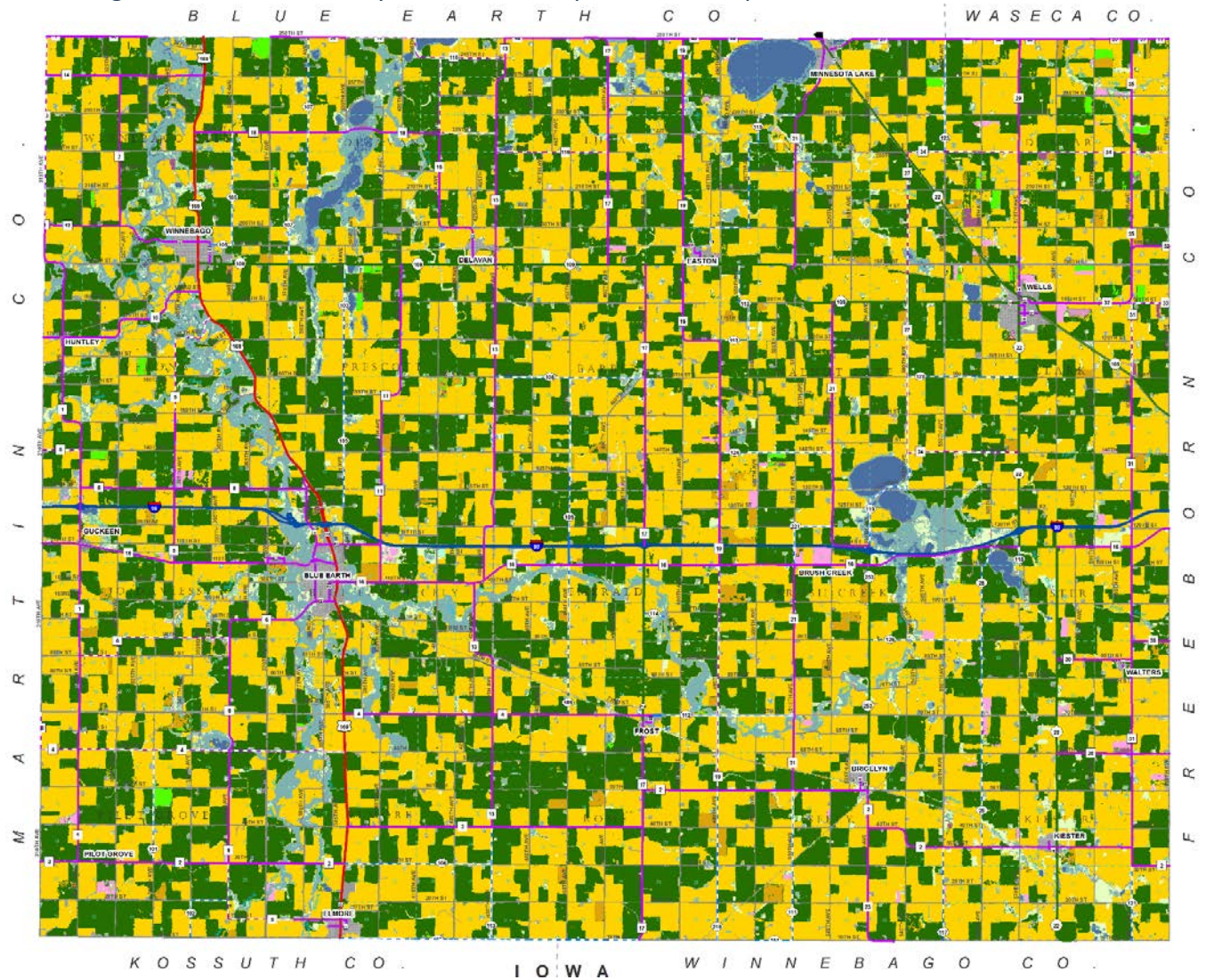
move through them freely. Infiltration and water holding capacity not only depends on the type of soil texture, but also on how those particles are held together and structured. Soil structure is influenced by soil organic matter, tillage practices, vegetation type, and compaction – all of which are influenced by soil management practices.

Healthy soils hold more available water. The soil's water holding capacity reduces runoff that can cause erosion and flooding, and increases the availability of water to plants during droughts. Good infiltration and less need for fertilizers and pesticides keep nutrients and sediment from loading into water bodies and leaching into groundwater.

It's not difficult to improve soil health: till as little as possible, grow as many different species of plants as possible through rotations and a diverse mixture of cover crops, keep living plants in the soil as long as possible with crops and cover crops, and keep the soil surface covered with residue year round. Improving soil health, while not difficult, can take time to achieve as shifts in land management and farming practices are required. Converting from conventional tillage to no-till also takes capital to purchase equipment and is a learning process. Farmers who manage their land in ways that improve and sustain soil health benefit from optimized inputs, sustainable outputs, and increased resiliency. A growing number of farmers are using soil health management systems to improve the health and function of their soil, and resource professionals such as the SWCD and NRCS, are working hand in hand with producers through technical and financial assistance, as well as education and outreach efforts.

Technical, financial, and staff resources are often difficult to retain and obtain, making the targeting of practices critical. Cultivated land makes up approximately 85% of the land use in Faribault County, which leaves a majority of land susceptible to erosion. On the flip side, this also leaves a majority of land available for soil health management. These practices are appropriate everywhere and offer the clearest opportunity to maintain crop production, and cost effectively protect the long term productive capability of the soil resource base of the county into the future.

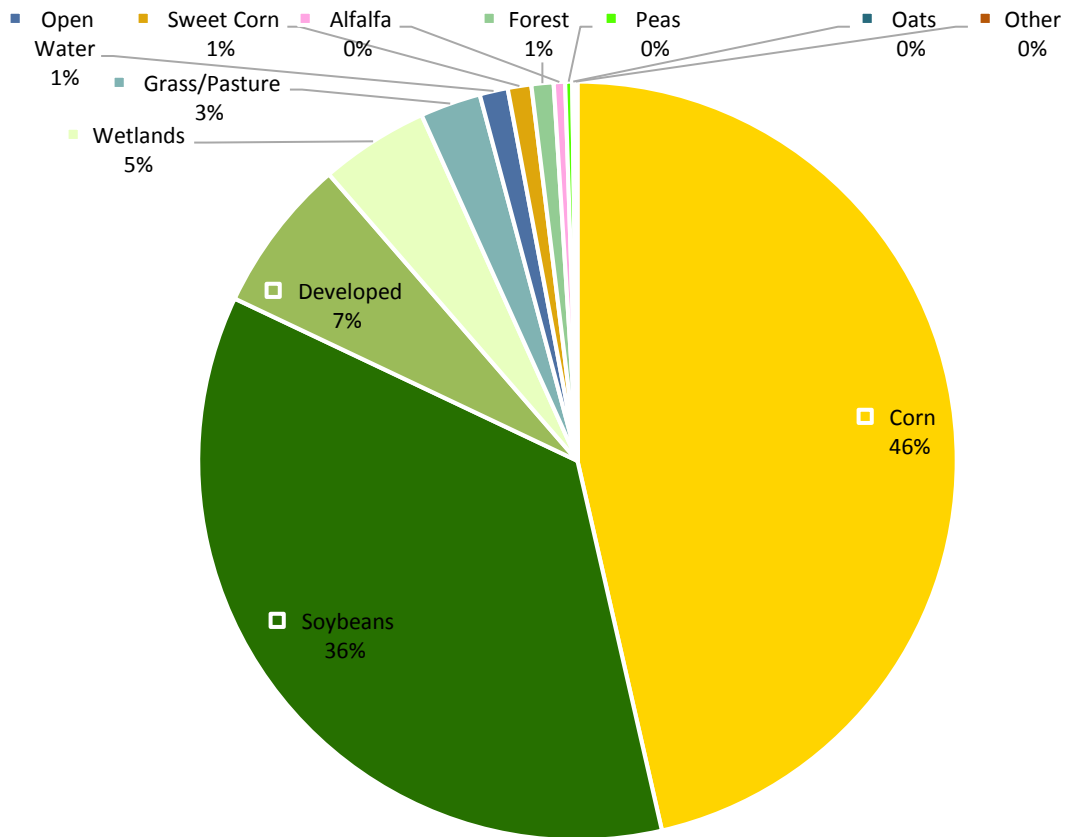
Figure 5. Faribault County Land Use & Cropland Data Map



Legend

- Corn - 46%
- Soybeans - 36%
- Developed - 7%
- Wetlands - 5%
- Pasture/Grass - 3%
- Water - 1%
- Sweet Corn - 1%
- Forest - <1%
- Alfalfa - <1%
- Peas - <1%

Figure 6. Faribault County Land Use & Cropland Data Chart



Category	Acreage	Percentage
Corn	214,493	46.4%
Soybeans	164,544	35.6%
Developed	30,458	6.6%
Wetlands	21,395	4.6%
Grass/Pasture	11,966	2.6%
Open Water	5,550	1.2%
Sweet Corn	4,636	1.0%
Forest	4,358	0.9%
Alfalfa	2,238	0.5%
Peas	1,381	0.3%
Oats	391	0.1%
Other	623	0.1%

3.1.3. Priority Concern 2, Goal 1

PRIORITY CONCERN 2. PROTECT DRINKING WATER SUPPLIES AND GROUNDWATER QUALITY AND QUANTITY.

Goal 1. Address the quality and quantity of groundwater to ensure sustainability for future generations.

Groundwater moves more slowly, follows different patterns, and has different boundaries than surface water. Groundwater is the water below the surface that forms a second system of flow and is stored in deep and shallow aquifers. Faribault County lies mostly within the Late Cambrian to Early Ordovician sedimentary rock which consists of three major rock types; sandstone, shale, and carbonates. The bedrock was deposited layer upon layer in shallow marine waters that flooded southern MN about 500 million years ago.

The protection of groundwater from which all Faribault County's citizens get their drinking water, is an important health and safety issue. Statewide, approximately 10 percent of Minnesota's 2400 community supply wells show at least some contamination resulting from human activities. Fortunately, most contaminant levels are below safe drinking water limits.

Land use activities, both urban and agricultural, can have significant impacts on vulnerable aquifers. Protecting public water supply wells from contamination involves the cooperation of public water suppliers, state and local agencies, property owners, farmers, businesses, and the general public. In order to have a practical and effective plan, cooperation and involvement from all of these groups is important.

Wellhead protection activities prevent well contamination by managing potential contaminant sources in the land area that contributes water to the well. Community and Non-transient Noncommunity Public Water Suppliers are required to develop Wellhead Protection Plans as stated in the Minnesota Groundwater Protection Act and the federal Safe Drinking Water Act. Plans require delineation of a Wellhead Protection Area and Drinking Water Supply Management Area, in addition to creating goals, objectives, and a plan of action to protect the water supply from potential contamination. Wellhead Protection Plans have been completed for 12 communities in Faribault County.

Figure 7. Community and Non-transient Public Water Suppliers (with Wellhead Protection Plan)

Blue Earth	Huntley Well Corporation
Bricelyn	Kiester
Delavan	Minnesota Lake
Easton	Walters
Elmore	Wells
Frost	Winnebago

Transient Noncommunity Public Water Suppliers (such as restaurants and churches) are required to delineate a 200-foot radius around the well, known as an inner wellhead management zone, and then inventory and manage potential contamination sources within the inner wellhead management zone.

Figure 8. Transient Noncommunity Public Water Suppliers (without Wellhead Protection Plan)

Bass Lake Community Church	North Blue Earth Lutheran Church
Community Covenant Church	Pihls Park
Corn Plus Cooperative	Prairie River Camp
Darling International	Riverside Town and Country
Dell Lutheran Church	Seneca Food Corporation
Derby Inn (Guckeen)	St. John's Lutheran Church
Goemann's Station	St. Paul's United Church of Christ
Hope United Methodist Church	Wells Dairy Queen
Immanuel Lutheran Church	Woods Lake Park
Minnesota Regular Baptist Camp	

Private well construction is necessary in order to protect our private water sources from potential contamination sources. Due to soil types and our bedrock geology that covers the majority of the county, private wells are somewhat protected. In order to ensure that this is being done from the start, all wells need to be constructed properly. All wells, both private and public have a particular zone around them where contamination may likely occur. Protection of the “wellhead protection zone” is critical.

Agricultural chemicals may contribute to water pollution from infiltration into groundwater. Groundwater contamination from nitrate presents a potential health risk to people who rely on it for drinking water. In areas with vulnerable groundwater, nitrate may exceed the drinking water standard. If elevated levels are detected, there may be increased probability that other contaminants, such as bacteria or pesticides, are present. Once the standard is exceeded, it can be difficult to reduce the level of contaminants. Therefore it is desirable to prevent contamination from occurring through protective actions in areas of vulnerability. High priorities are sensitive areas where row crops and/or livestock are being produced, including Drinking Water Supply Management Areas.

The potential passing of the MN Nitrogen Fertilizer Rule will have impacts to Faribault County. Statewide, Part 1 of the Rule outlines areas that have been determined highly vulnerable to nitrate loss based on soils and geology. These areas have been mapped on the section scale. There are a handful of sections in the county that are identified as highly vulnerable where fall application would be restricted. In addition, a minimum of two townships, Prescott and Winnebago City, will be subject to Part 2 of the Rule where nitrate testing takes place. Additional nitrogen BMPs could be required if 10% or more of the wells test above the health standard and less than 80% of row crop acres are

using the nitrogen BMPs. If less than 10% of the wells are above the health standard, or if greater than 80% of row crop acres are using nitrogen BMPs, no additional requirements will be needed.

Abandoned or unused wells may pose a potential threat to the health, safety, and environment of Faribault County and its citizens. Unused wells provide a pathway through which contaminants at the surface may move down to the groundwater and contaminate nearby wells. Proper well abandonment is an effective means of protecting groundwater from potential contamination. Faribault County will continue the sealing of abandoned wells in agricultural landscapes and utilize cost-share programs to assist landowners in addressing these issues.

State agencies have prepared maps for counties to assist with local groundwater protection efforts. The maps can be used to prioritize groundwater practice implementation, protection, and restoration efforts. Priority should be given to Drinking Water Supply Management Areas, Wellhead Protection Areas, and areas given a high aquifer sensitivity rating. In these areas alternative management tools such as cover crops, diversity, perennial vegetation, and nitrogen fertilizer management may be required.

In addition, having an adequate supply of drinking water will continue to be important due to growth and development. In the future it will become important to continue water conservation efforts and education; encourage land uses and the installation of best management practices which recharge groundwater; and increase awareness among public officials, landowners, and the general public regarding the interaction between groundwater and surface water sources in order to make informed water management decisions.

3.2. Measurable Goals and Objectives

PRIORITY CONCERN 1. PROTECT AND RESTORE THE QUALITY AND MANAGE THE QUANTITY OF SURFACE WATER.
Goal 1. Address impacts of altered hydrology, decreased evapotranspiration and storage due to vegetation, land use, and drainage changes.
Objective 1. Implement Multipurpose Drainage Management (MDM) practices to mitigate existing impacts from altered hydrology in agricultural areas.
Objective 2. Implement increased vegetation and landscape diversification to mitigate storage loss due to landscape change.
Objective 3. Implement BMPs to reduce impacts from urban areas and impervious surfaces.
Objective 4. Prevent additional impacts of altered hydrology through regulatory controls and better planning of drainage activities.
Objective 5. Prevent additional impacts of urban areas and impervious surfaces through regulatory controls and better planning of stormwater activities.
Objective 6. Acquire data necessary to gain a better understanding of the resources, threats, trends, and status for planning and implementation.
Objective 7. Information sharing, education, and outreach on strategies to mitigate the effects of altered hydrology.
Goal 2. Address the quality of surface water through strategies to conserve and manage soil health; strategies to reduce, trap, or treat nutrients and sediment; and information sharing on sustainable farming options.
Objective 1. Implement management practices to conserve and manage soil health; and reduce, trap, and treat nutrients and sediment.
Objective 2. Implement structural practices to reduce, trap, and treat nutrients and sediment.
Objective 3. Prevent additional impacts to surface waters through better land use and regulatory controls.
Objective 4. Acquire data necessary to gain a better understanding of the resources, threats, trends, and status for planning and implementation.
Objective 5. Information sharing, education, and outreach on strategies to reduce, trap, and treat nutrients and sediment.
PRIORITY CONCERN 2. PROTECT DRINKING WATER SUPPLIES AND GROUNDWATER QUALITY AND QUANTITY.
Goal 1. Address the quality and quantity of groundwater to ensure sustainability for future generations.
Objective 1. Implement practices to protect groundwater quality and quantity.
Objective 2. Prevent additional impacts to groundwater through land use and regulatory controls.
Objective 3. Acquire data necessary to gain a better understanding of the resources, threats, trends, and status for planning and implementation.
Objective 4. Information sharing, education, and outreach on strategies to address groundwater quality and quantity.
REGULATORY CONTROLS FOR ALL PRIORITY CONCERNS
STUDIES, DATA ACQUISITION, AND DATA MANAGEMENT FOR ALL PRIORITY CONCERNS
INFORMATION SHARING, EDUCATION, AND OUTREACH FOR ALL PRIORITY CONCERNS

4. IMPLEMENTATION PROGRAM

4.1. Implementation Program Structure

For each goal and objective the Implementation Program includes:

- 4.1.1. Implementation actions to address the goal;
- 4.1.2. Staff and financial resources needed to carry out the action;
- 4.1.3. Time frame the action will start and be completed;
- 4.1.4. The local unit of government delegated implementation responsibility;
- 4.1.5. The watersheds or groundwater units benefiting from the action; and
- 4.1.6. The anticipated measurable result of the action.

Implementation Program objectives for the two priority concerns are divided into four main categories. These include:

- Implementation;
- Regulatory Controls;
- Studies, Data Acquisition, and Data Management; and
- Information Sharing, Education, and Outreach.

Targeted watersheds within the Blue Earth and/or Le Sueur River Watersheds will be identified within the Implementation Program.

In addition, countywide actions are listed by three categories:

- Regulatory Controls for all Priority Concerns;
- Studies, Data Acquisition, and Data Management for all Priority Concerns; and
- Information Sharing, Education, and Outreach for all Priority Concerns.

This was done to eliminate duplication in the Implementation Program.

4.2. Implementation Program

PRIORITY CONCERN 1. PROTECT AND RESTORE THE QUALITY AND MANAGE THE QUANTITY OF SURFACE WATER.

Goal 1. Address impacts of altered hydrology, decreased evapotranspiration and storage due to vegetation, land use, and drainage changes.

Objective 1. Implement Multipurpose Drainage Management (MDM) practices to mitigate existing impacts from altered hydrology in agricultural areas.

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Provide cost share or incentives to implement strategies that reduce peak flow or store tile line water at locally prioritized locations.	\$ 35,000	2018-2027	SWCD, NRCS, DA	Blue Earth, Le Sueur	Install 5 BMPs.
Implement water retention strategies such as controlled drainage, storage basins, and constructed wetlands at locally prioritized locations.	\$ 75,000	2018-2027	SWCD, NRCS, DA	Blue Earth, Le Sueur	Install 5 saturated buffers. Install 1 storage basin.
Take drained wetland areas out of production through perpetual easement programs, wetland banking programs, or other financial assistance options.	\$ 2,170,000	2018-2027	SWCD, NRCS, FSA, DA	Blue Earth, Le Sueur	Restore 1 wetland on JCD514MF. Restore 5 wetlands through CREP.
Implement structural practices to reduce, trap, and treat nutrients and sediment. (Goal 2, Objective 2, All Actions.)	See Priority Concern 1, Goal 2, Objective 2, All Actions.				
	\$ 2,280,000				

Objective 2. Implement increased vegetation and landscape diversification to mitigate storage loss due to landscape change.

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Increase vegetated cover, including perennials on riparian and marginal lands and field boundaries, through cost share, incentives, easement, or other financial programs.	\$ 150,000	2018-2027	SWCD, NRCS, FSA	Blue Earth, Le Sueur	Increase vegetated cover on 500 acres. Increase trees, grass, or shrubs on field boundaries.
Provide cost share or incentives to incorporate pollinator habitat in perennial vegetation plantings.	\$ 24,000	2018-2027	SWCD, NRCS, FSA	Blue Earth, Le Sueur	Install 40 acres of pollinator habitat.
Enhance vegetated areas including activities that improve habitat and functionality such as prescribed burns, control of invasive species, etc.	\$ 15,000	2018-2027	SWCD, NRCS, FSA	Blue Earth, Le Sueur	Increased maintenance of vegetated areas.
Increase acres enrolled in grassland programs through Farm Bill Assistance Program.	\$ 20,000	2018-2027	SWCD, NRCS, FSA	Blue Earth, Le Sueur	Increase enrollment in grassland programs by 250 acres.
Implement management practices to conserve and manage soil health; and reduce, trap, and treat nutrients and sediment. (Goal 2, Objective 1, All Actions.)	See Priority Concern 1, Goal 2, Objective 1, All Actions.				
	\$ 209,000				

Objective 3. Implement BMPs to reduce impacts from urban areas and impervious surfaces.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Increased involvement with road reconstruction projects to add green infrastructure practices.	\$ 50,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	Involvement with 5 projects in 3 cities.
Provide cost share assistance for public and private green infrastructure projects.	\$ 500,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	Cost share 7 projects/year.
Collaborate with Drainage Authority to provide assistance regarding storm water retention options during drainage system repairs and improvements.	\$ 750,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	CD3 and Easton collaborate on water storage project. Cities collaborate to explore options in neighboring rural areas.
Increase open space areas within municipalities.	\$ 150,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	Cost share for 3 urban parks.
	\$ 1,450,000				
Objective 4. Prevent additional impacts of altered hydrology through regulatory controls and better planning of drainage activities.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Continue Drainage Authority meetings to achieve greater consistency and increased communication well in advance of drainage activities.	\$ 30,000	2018-2027	DA	Blue Earth, Le Sueur	Meet 1/month, 120 meetings.
Continue South Central Drainage Group to achieve greater consistency, increased communication, and collaboration across county lines.	\$ 12,000	2018-2027	DA	Blue Earth, Le Sueur	Meet 2/year, 20 meetings.
Provide notification to state and local partners prior to repairs and improvements of drainage systems in order to obtain recommendations for mitigating altered hydrology.	\$ 720	2018-2027	DA	Blue Earth, Le Sueur	DA to provide 6 notifications.
Early coordination and planning regarding drainage projects to explore opportunities for MDM practices and leverage outside funds authorized by 103E.011, Subp 5.	\$ 6,000	2018-2027	DA, SWCD	Blue Earth, Le Sueur	6 planning meetings. Apply for outside funding as necessary. Hold informational meetings on projects ahead of final hearing.
Require MDM plans be prepared on 100% of improvement projects. Plan will include project identification, feasibility, cost estimation, and recommendations for a no net increase in flow.	\$ 12,500	2018-2027	DA	Blue Earth, Le Sueur	Prepare 5 MDM plans.
Continue redetermination of benefits in a proactive, consistent, and systematic manner.	\$ 179,130	2018-2027	DA	Blue Earth, Le Sueur	Redetermine 20 systems.
Continue to enforce regulations in Zoning Ordinance regarding dikes in floodplain.	\$ 1,000	2018-2027	P&Z	Blue Earth, Le Sueur	Prohibit new dikes in floodplain.
	\$ 241,350				

Objective 5. Prevent additional impacts of urban areas and impervious surfaces through regulatory controls and better planning of stormwater activities.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Provide assistance for ordinances and policies that focus on reducing impervious surface cover.	\$ 25,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	Promotion of impermeable cover ordinance and stormwater fee language.
Continue development of individualized plans for urban areas.	\$ 80,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	Develop subwatershed stormwater improvement reports.
Develop individualized lake watershed plans for lakes with an active lake association or conservation club.	\$ 50,000	2018-2027	SWCD	Le Sueur	Develop 2 plans, Bass Lake and Minnesota Lake.
Encourage lake associations to develop rules on lakeshore vegetation, lawn fertilizer, etc.	\$ 10,000	2018-2027	SWCD	Blue Earth, Le Sueur	Work with all Bass Lake Associations.
Promote Green Streets projects.	\$ 25,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	Promote living streets policy.
Promote Urban Forestry programs.	\$ 25,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	Promote urban forestry policy and education program.
Continue to do biannual needs assessments to identify upcoming projects.	\$ 100,000	2018-2027	SWCD, Cities	Blue Earth, Le Sueur	Meet with each city biannually to review upcoming projects and develop partnerships.
Encourage cities to notify the Drainage Authority when making infrastructure changes that impact water quantity to a public drainage system.	\$ 500	2018-2027	DA, Cities	Blue Earth, Le Sueur	Forward biannual reports to DA and provide partnerships.
	\$ 315,500				
Objective 6. Acquire data necessary to gain a better understanding of the resources, threats, trends, and status for planning and implementation.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Conduct GIS analysis based on hydrologically modified digital elevation models to analyze potential locations for water storage or constructed wetlands.	\$ 25,000	2018-2019	SWCD	Blue Earth, Le Sueur	GIS layer developed.
Partner with University of Minnesota and others to research, design, and monitor MDM practices.	\$ 100,000	2018-2027	SWCD, DA	Blue Earth, Le Sueur	Seek funding to continue monitoring 3 CD62 bioreactors. Explore funding for 1 saturated buffer.
Develop subwatershed best management targeting maps that include a "toolbox" of options.	\$ 10,000	2018-2027	SWCD, DA	Blue Earth, Le Sueur	Develop 10 targeted maps.
Improve county drainage data through drainage records modernization and maintain existing GIS databases.	\$ 100,000	2018-2027	DA, SWCD	Blue Earth, Le Sueur	Maintain GIS databases monthly. Review records during ROB, repair, or improvement processes as needed.
Conduct GIS analysis to identify riparian and marginal cropland, and target areas for habitat corridors.	\$ 10,000	2018-2019	SWCD	Blue Earth, Le Sueur	GIS layer developed.
	\$ 245,000				

Objective 7. Information sharing, education, and outreach on strategies to mitigate the effects of altered hydrology.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Present MDM plan to Drainage Authorities and landowners on 100% of improvement projects.	\$ 5,000	2018-2027	DA, SWCD	Blue Earth, Le Sueur	Present 5 MDM plans.
Provide outreach and education to lake shore residents with an active lake association or conservation club.	\$ 5,000	2018-2027	SWCD, DNR	Le Sueur	Provide outreach to 2 lakes, Bass Lake and Minnesota Lake. Score your Shore.
Provide outreach and education opportunities for urban elected officials and residents.	\$ 5,000	2018-2027	SWCD	Blue Earth, Le Sueur	Educate on impervious runoff, water storage, and lawncare practices.
Provide outreach and education to landowners within the benefited area of public drainage systems.	\$ 25,000	2018-2027	SWCD	Blue Earth, Le Sueur	Increase information on ROB, buffers, etc.
Provide information sharing and education to local elected officials including Drainage Authorities.	\$ 25,000	2018-2027	SWCD, DA	Blue Earth, Le Sueur	Increase knowledge of conservation efforts via a yearly newsletter.
Promote Minnesota's wetland bank for agriculture.	\$ 1,000	2018-2027	SWCD	Blue Earth, Le Sueur	Work with 1 landowner regarding banking.
Promote practices that reduce flow, store water, and increase vegetation.	\$ 5,000	2018-2027	SWCD, DA, NRCS	Blue Earth, Le Sueur	Promote both agricultural and urban stormwater management via fair booth, radio spot, newsletter.
Engage and involve producers and landowners in identifying and selecting options to mitigate the effects of altered hydrology for their farm and drainage system.	\$ 150,000	2018-2027	SWCD, DA, NRCS	Blue Earth, Le Sueur	Involve producers and landowners through events, Soil Health Team, and planning at the County Drainage System or small watershed scale.
Utilize Farm Bill Assistance staff to promote grassland opportunities for private land conservation and vegetative plantings that incorporate pollinator habitat.	\$ 50,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Sign up 150 acres into grassland program.
	\$ 271,000				
Goal 2. Address the quality of surface water through strategies to conserve and manage soil health; strategies to reduce, trap, or treat nutrients and sediment; and information sharing on sustainable farming options.					
Objective 1. Implement management practices to conserve and manage soil health; and reduce, trap, and treat nutrients and sediment.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Convert environmentally sensitive ag land to perennial cover through perpetual easement or other funding program.	\$ 20,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Sign up 10 landowners. Promote CREP, CRP, and other easement programs.
Provide cost share or incentives for conservation based management practices including: reduced tillage methods; targeted nutrient rates; single and multi-species cover crops on short season crops (canning crops) and corn/soybean fields.	\$ 125,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Recruit 5 new producers/year. Promote multi-species cover crops for multiple benefits. Provide cost share for 1st 3 years as a low risk "trial period."
Increase voluntary adoption of unfunded management practices to improve soil health.	\$ 15,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Convert 3 producers/year after "trial period" funding ends.

Provide cost share or incentives for landowners to implement buffers on "other waters" or around field intakes.	\$ 30,000	2018-2022	SWCD, NRCS	Blue Earth, Le Sueur	Implement 100 acres of buffer.
Administer AgBMP Loan Program funds to increase conservation tillage, implement manure handling systems, and other projects to prevent or mitigate nonpoint source pollution.	\$ 350,000	2018-2027	SWCD	Blue Earth, Le Sueur	Work with 10 producers on AgBMP Loan Program.
	\$ 540,000				
Objective 2. Implement structural practices to reduce, trap, and treat nutrients and sediment.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Provide current and explore new financial assistance options including cost share, incentives, or benefits to implement structural BMPs.	\$ 200,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Apply for funding as necessary. Explore alternative funding sources other than traditional state and federal.
Replace open tile intakes with alternative tile intakes.	\$ 32,500	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Provide funding to replace 50 intakes.
Replace side inlets with conservation based inlets on county drainage systems.	\$ 250,000	2018-2027	DA, SWCD	Blue Earth, Le Sueur	Replace side inlets with conservation based inlets on all cleanout projects.
Implement structural BMPs on prioritized sites to manage overland flow or field runoff.	\$ 40,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Install 4 WASCObS or waterways.
Provide cost share or incentives to treat tile drainage water to reduce nutrient transport to surface waters.	\$ 60,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Install 4 saturated buffers or bioreactors.
Implement streambank stabilization strategies at prioritized sites.	\$ 50,000	2018-2027	SWCD, NRCS, DA	Blue Earth, Le Sueur	Implement 1 streambank project.
Implement BMPs identified in MDM plans to reduce erosion and sedimentation, and improve water quality.	\$ 200,000	2018-2027	SWCD, NRCS, DA	Blue Earth, Le Sueur	Implement 1 MDM plan.
Implement in ditch treatment at prioritized locations when repair or improvement is explored.	\$ 150,000	2018-2027	DA, SWCD	Blue Earth, Le Sueur	Implement a 2 stage ditch project.
Implement Multipurpose Drainage Management (MDM) practices (Goal 1, Objective 1, All Actions).	See Priority Concern 1, Goal 1, Objective 1, All Actions.				
	\$ 982,500				
Objective 3. Prevent additional impacts to surface waters through better land use and regulatory controls.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Implement policy on county drainage systems to utilize a conservation based inlet when replacing side inlets and leverage outside funds authorized by 103E.011, Subp 5. when available.	\$ 1,000	2018	DA, SWCD	Blue Earth, Le Sueur	Amend and implement updated county drainage policy.
Support 100% compliance with MN Buffer Law.	\$ 150,000	2018-2027	County, P&Z, DA, SWCD	Blue Earth, Le Sueur	100% compliance with MN Buffer Law.

Include "Other Waters" not regulated through the MN Buffer Law or Shoreland Ordinance in Water Plan.	\$ 2,500	2018	SWCD, County	Blue Earth, Le Sueur	Include "Other Waters" section in Water Plan.
Address soil erosion through soil loss programs.	\$ 50,000	2018-2027	SWCD	Blue Earth, Le Sueur	Create and implement soil erosion and soil loss program.
Promote use of construction site erosion control measures.	\$ 1,000	2018-2027	P&Z, SWCD	Blue Earth, Le Sueur	Provide information on MPCA permitting process to applicants.
Inspect required drainage systems and collect GPS location for violations, conditions, and potential BMPs each year.	\$ 250,000	2018-2027	DA	Blue Earth, Le Sueur	Inspect 20% of systems each year. GPS locations shared with DA and SWCD in GIS format.
Utilize the Soil Health Team to create list of current funding obstacles.	\$ 500	2018-2019	SWCD	Blue Earth, Le Sueur	Share list of obstacles (ex. timeframe, seeding rates, etc) with funders and legislature to implement procedure for agencies to review or change standards.
	\$ 455,000				
Objective 4. Acquire data necessary to gain a better understanding of the resources, threats, trends, and status for planning and implementation.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Conduct GIS analysis based on hydrologically modified digital elevation models to analyze potential locations for targeted BMPs at the field scale.	\$ 25,000	2018-2019	SWCD	Blue Earth, Le Sueur	Local GIS layer developed.
Secure long term water quality monitoring at the subwatershed level.	\$ 150,000	2018-2019	SWCD, MPCA	Blue Earth, Le Sueur	Prioritize subwatersheds based on data obtained through coordination amongst monitoring agencies.
Track water quality data at system outlets to establish a baseline level.	\$ 50,000	2018-2027	SWCD, MPCA	Blue Earth, Le Sueur	Determine a baseline level of water quality results.
Utilize water monitoring equipment to provide information to landowners regarding the discharge of tile drainage water.	\$ 5,000	2018-2027	SWCD	Blue Earth, Le Sueur	SWCD to assist 100 landowners.
Maintain inventory of septic systems and maintenance records.	\$ 50,000	2018-2027	P&Z, SWCD	Blue Earth, Le Sueur	GIS layer updated.
Maintain inventory of feedlots and spreading acres.	\$ 50,000	2018-2027	P&Z, SWCD	Blue Earth, Le Sueur	GIS layer updated.
Develop subwatershed targeting maps identifying a "toolbox" of options (Goal 1, Objective 6, Action 3).	See Priority Concern 1, Goal 1, Objective 6, Action 3.				
Partner with monitoring efforts in conjunction with the MPCA watershed approach to restoring and protecting water quality.	\$ 25,000	2018-2021	SWCD	2018-2020 Blue Earth, 2019-2021 Le Sueur	Collect bi/monthly water quality tests for sites within the Blue Earth River Watershed. Work with the MPCA on the Phase II monitoring efforts for the LeSueur River Watershed

Support the collection of tillage transect data.	\$ 20,000	2018-2027	SWCD, Others	Blue Earth, Le Sueur	Support funding or efforts of other entities to conduct tillage transect in county every other year.
Partner to locally research cover crop establishment, soil organic matter changes, water infiltration, and local success stories.	\$ 10,000	2018-2027	SWCD	Blue Earth, Le Sueur	Partner with Faribault County Soil Health team to hold field or farm scale trials and test plots.
Promote long term soil health and nutrient management trials and field testing of BMPs over time.	\$ 10,000	2018-2027	SWCD, MDA	Blue Earth, Le Sueur	Utilize partners, such MDA Nutrient Management Initiative, to install trials, secure testing equipment, and monitoring assistance.
Research systems that would allow the local SWCD's to track and gather data on BMP's being implemented without public funding.	\$ 10,000	2018-2027	SWCD	Blue Earth, Le Sueur	Follow up on management practice implementation after 5 years, 10 years, etc.
Develop conservation plans on specific areas prone to excessive soil loss.	\$ 50,000	2018-2027	NRCS, SWCD	Blue Earth, Le Sueur	SWCD obtain training to write conservation plans.
Utilize Soil Health Team to document economics and profitability regarding soil health.	\$ 2,500	2018-2022	SWCD	Blue Earth, Le Sueur	Create generic examples of financial balance sheets to show actual costs related to various farming methods and a cost benefit analysis of practices.
Promote and implement the MN Agricultural Water Quality Certification Program, and future conservation programs aimed at recognizing producers using conservation practices to protect water quality and soil health.	\$ 75,000	2018-2027	SWCD	Blue Earth, Le Sueur	Interview 50 producers. Certify 20 producers.
Encourage voluntary citizen stream and lake monitoring to gain a better understanding of local waterbody conditions.	\$ 5,000	2018-2027	MPCA, SWCD	Countywide	Provide support to 10 volunteers. Publicize recruitment materials and advertisement.
	\$ 537,500				
Objective 5. Information sharing, education, and outreach on strategies to conserve and manage soil health; and reduce, trap, and treat nutrients and sediment.					
Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Identify and support leaders in the farming community to increase farmer led demonstrations, promotions, and field days.	\$ 25,000	2018-2027	SWCD	Blue Earth, Le Sueur	Secure potential funding source for meetings, per diems, and field days.
Partner with Faribault County Soil Health Team to develop a Soil Health Plan.	\$ 5,000	2018, 2020, 2022, 2024, 2026	SWCD	Blue Earth, Le Sueur	Adopt a bi-annual Soil Health Plan.

Soil Health Team host farm field days, shop talks, and other events to share local data, research, new technology, and experiences.	\$ 75,000	2018-2027	SWCD	Blue Earth, Le Sueur	Hold 4 events/year, utilize local "experts" to speak. Promote to schools and youth organizations. Explore an Ag or Soil Health Day at County Fair.
Promote cover crops on short season crops (canning crops) and corn/soybean fields to keep soil covered and a living root in the ground as long as possible.	\$ 50,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Partner with Seneca Foods to host 1 event per year that promote cover crops on canning crop fields.
Host field days focused on targeted soil structural practices.	\$ 25,000	2018-2027	SWCD	Blue Earth, Le Sueur	Host 1 field day per year.
Promote MN Agricultural Water Quality Certification Program.	\$ 25,000	2018-2027	SWCD, MDA	Blue Earth, Le Sueur	SWCD staff to employ staff for outreach of program.
Promote tillage practices and alternative erosion control practices with minimal soil disturbance.	\$ 5,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Highlight tillage practices each year that leave 30% crop residue through events and media.
Promote the benefits of increased soil biology and soil structure.	\$ 5,000	2018-2027	SWCD, NRCS	Blue Earth, Le Sueur	Promote soil biology and soil structure through events, media, and demonstration site data.
Promote fertilizer and manure application efficiencies, including recommended rates, placement and timing of application, and setbacks.	\$ 2,500	2018-2027	P&Z, SWCD, MDA, MPCA	Blue Earth, Le Sueur	Promote fertilizer and manure application rates and setbacks.
Develop strong public-private partnerships in the agricultural sector to optimize opportunities.	\$ 5,000	2018-2027	SWCD	Blue Earth, Le Sueur	Make necessary conservation connections with the private sector.
Establish demonstration sites and feature local success stories.	\$ 10,000	2018-2027	SWCD	Blue Earth, Le Sueur	Monthly spotlight on soil health or local producers in newspapers, radio segments, or YouTube videos of local producers.
Engage and involve producers and landowners in identifying specific practices and options for their farm and drainage system.	\$ 20,000	2018-2027	DA, SWCD	Blue Earth, Le Sueur	Increased local involvement and planning at the County Drainage System or small watershed scale.
Provide information and outreach on Subsurface Sewage Treatment System Program and maintenance.	\$ 10,000	2018-2027	P&Z, SWCD	Blue Earth, Le Sueur	Send information to homeowners on maintenance 3 years after system installed. Target homeowners with holding tanks.
Stay educated and aware of 3rd crop or alternative crop opportunities.	\$ 20,000	2018-2027	SWCD	Blue Earth, Le Sueur	Provide demonstrations and information on a yearly basis.
Provide benefits of native vegetation choices for buffers.	\$ 12,500	2018-2019	SWCD, NRCS	Blue Earth, Le Sueur	Promote benefits including deeper roots and nutrient uptake through Buffer Law.
	\$ 295,000				

PRIORITY CONCERN 2. PROTECT DRINKING WATER SUPPLIES AND GROUNDWATER QUALITY AND QUANTITY.

Goal 1. Address the quality and quantity of groundwater to ensure sustainability for future generations.

Objective 1. Implement practices to protect groundwater quality and quantity.

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Identify and target practices within Wellhead Protection areas.	\$ 75,000	2018-2027	Cities, MDH	Blue Earth, Le Sueur	Partner with cities to complete 5 practices.
Provide cost share to seal unused wells in agricultural landscapes and prioritized locations.	\$ 16,000	2018-2027	SWCD, MDH	Blue Earth, Le Sueur	Seal 40 wells.
Adoption of Nitrogen Fertilizer Plan for townships with more than 10% of wells failing to meet less than 10mg/L nitrate level.	\$ 20,000	2018-2022	MDA, SWCD, Local Advisory Team	Winnebago, Prescott Townships	Winnebago and Prescott Townships 5 year implementation strategy as needed.
Implement BMP practices which recharge groundwater.	See Priority Concern 1, Goal 1, Objective 1-3, All Actions.				
	\$ 111,000				

Objective 2. Prevent additional impacts to groundwater through land use and regulatory controls.

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Review available groundwater appropriation permits for potential impacts to surface water, natural resources, and nearby wells.	\$ 1,000	2018-2027	DNR, P&Z, Cities	Blue Earth, Le Sueur	Review DNR permits
Review land use permits to ensure required well isolation distances are met.	\$ 1,000	2018-2027	P&Z, Cities	Blue Earth, Le Sueur	P&Z review through permitting process.
Consider wellhead protection areas in land use decisions.	\$ 5,000	2018-2027	P&Z, Cities	Blue Earth, Le Sueur	Provide education on WHP and proper land uses.
Include wellhead protection measures in local ordinances.	\$ 2,500	2018-2027	P&Z, Cities	Blue Earth, Le Sueur	Promote 2 cities to establish ordinances on wellhead protection.
Support county SSTS loan and grant programs.	\$ 5,000	2018-2027	P&Z, SWCD, County	Blue Earth, Le Sueur	Administer 25 SSTS low income loans to homeowners.
Require proper abandonment of unused SSTS.	\$ 2,500	2018-2027	P&Z, Cities	Blue Earth, Le Sueur	Require SSTS Abandonment form be completed.
Encourage urban areas to develop well sealing programs and utilize cost share opportunities, including MDH.	\$ 500	2018-2027	Cities, MDH	Blue Earth, Le Sueur	Include MDH information at biannual needs assessment meetings with cities.
	\$ 17,500				

Objective 3. Acquire data necessary to gain a better understanding of the resources, threats, trends, and status for planning and implementation.

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Request to the DNR the importance of completing the hydro-geologic atlas for the county.	\$ 500	2018	DNR, SWCD	Blue Earth, Le Sueur	Creation of Faribault County hydro-geologic atlas.
Continue observation well monitoring.	\$ 10,000	2018-2027	SWCD, DNR	Blue Earth, Le Sueur	Increase observation well monitoring sites from 1 to 3. SWCD staff monitor 1/month.
Continue to inventory well sealing and drilling records.	\$ 250	2018-2027	MDH, DNR, SWCD	Blue Earth, Le Sueur	Utilize online MDH County Well Index.

Support ongoing data collection efforts to enhance future wellhead protection activities.	\$ 1,000	2018-2027	MDH, DNR, Cities	Blue Earth, Le Sueur	Involvement with MDH as necessary.
Acquire nitrate conditions in private wells.	\$ 1,000	2018-2019	SWCD, MDH	Blue Earth, Le Sueur	Hold 2 public testing days, targeting townships outside of MDA Township Testing Program.
	\$ 12,750				

Objective 4. Information sharing, education, and outreach on strategies to address groundwater quality and quantity.

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Educate township officials and landowners prior to MDA Township Testing Program.	\$ 1,500	2018	SWCD	Winnebago, Prescott Townships	40% of private well testing kits returned to MDA through the Township Testing Program.
Promote cost share to seal unused wells.	\$ 2,500	2018-2027	Cities, SWCD	Blue Earth, Le Sueur	Cost Share 10 well sealing projects.
Promote water conservation education through MDH and other programs.	\$ 250	2018-2027	Cities, SWCD	Blue Earth, Le Sueur	Provide partnership between MDH and cities to ensure knowledge of funding programs.
Provide resources and opportunities about local drinking water quality and encourage private well testing.	\$ 500	2018-2027	SWCD	Blue Earth, Le Sueur	Provide local resources on private well testing as requested.
Develop and implement educational programs regarding groundwater protection, such as nitrogen fertilizer management.	\$ 10,000	2018-2027	MDA, SWCD	Blue Earth, Le Sueur	Host yearly event focused on nitrogen management.
Encourage and explore Alternative Management Practices in highly sensitive groundwater areas, or where high nitrate concentrations already exist.	\$ 10,000	2018-2027	MDA, SWCD, Townships	Winnebago, Prescott Townships	Provide cost share for cover crops, diversifying rotation, conversion to perennial crop, or retiring the land in Winnebago and Prescott Townships. 5 year implementation strategy as needed.
Conduct training sessions and workshops for farmers that have agricultural production activities within sensitive areas and drinking water supply management areas.	\$ 10,000	2018-2027	MDH, SWCD, Townships	Blue Earth, Le Sueur	Work with townships to host yearly event.
Encourage infiltration practices which recharge groundwater.	\$ 1,000	2018-2027	MDH, SWCD, Townships	Blue Earth, Le Sueur	Promote infiltration practices in both agricultural and urban areas.
	\$ 35,750				

REGULATORY CONTROLS FOR ALL PRIORITY CONCERNS

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Stay consistent with state regulation and make appropriate modifications to local permits and ordinances.	\$ 25,000	2018-2027	P&Z, SWCD	Countywide	Maintain updated ordinance.
Implement Wetland Conservation Act.	\$ 100,000	2018-2027	SWCD	Countywide	Program implemented by staff.
Implement and update local Shoreland Ordinance.	\$ 25,000	2018-2027	P&Z	Countywide	Program implemented by staff.

Implement local Floodplain Ordinance.	\$ 25,000	2018-2027	P&Z	Countywide	Program implemented by staff.
Implement local Subsurface Sewage Treatment System Program and Ordinance.	\$ 250,000	2018-2027	P&Z, SWCD	Countywide	Program implemented by staff.
Implement local Feedlot Program and Ordinance.	\$ 350,000	2018-2027	P&Z, SWCD	Countywide	Program implemented by County Feedlot Officer.
Implement Minnesota Buffer Law.	\$ 1,500,000	2018-2027	P&Z, DA, SWCD	Countywide	Program implemented by staff.
Implement local Soil Erosion and Soil Loss Law.		2018-2027	SWCD	Countywide	Program implemented by staff.
Implement Drainage Law 103E.	\$ 1,000,000	2018-2027	DA	Countywide	Program implemented by staff.
Explore the addition of Special Protection Districts within the Zoning Ordinance.	\$ 25,000	2023-2027	P&Z	Countywide	Add Special Protection Districts within the Zoning Ordinance.
	\$ 3,300,000				

STUDIES, DATA ACQUISITION, AND DATA MANAGEMENT FOR ALL PRIORITY CONCERNS

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Use best available resources to prioritize, target, and measure implementation.	\$ 25,000	2018-2027	SWCD	Countywide	Identify 10 areas.
Designate staff hours to assist with GIS, data and map development.	\$ 25,000	2018-2027	SWCD	Countywide	GIS staff resources
Conduct GIS analysis, targeting tools, and watershed modeling based on hydrologically modified digital elevation models.	\$ 25,000	2018-2027	SWCD	Countywide	GIS staff resources
Update and maintain culvert inventories created for LiDAR and GIS analysis.	\$ 10,000	2018-2027	SWCD	Countywide	2018 culvert inventory in GIS format. 2019 - 2027 maintain existing culvert inventory.
	\$ 85,000				

INFORMATION SHARING, EDUCATION, AND OUTREACH FOR ALL PRIORITY CONCERNS

Action	Resources	Time Frame	Responsibility	Watershed	Measurable Result
Provide information to citizens, producers, landowners, and contractors through events, meetings, hearings, field days, workshops, trainings, mailings, 1 on 1 contact, website, social media, newsletters, and radio ads.	\$ 60,000	2018-2027	SWCD, NRCS, P&Z, DA	Countywide	Update website and social media. Run weekly radio spot. Distribute 1 newsletter/year to all residents.
Explore opportunities to increase public participation, knowledge, and awareness.	\$ 5,000	2018-2027	SWCD, NRCS, P&Z, DA	Countywide	Field Days, surveys, mailings.
Develop programs, field days, and trainings aimed at targeted audiences to enhance skills, awareness, and knowledge.	\$ 50,000	2018-2027	SWCD, NRCS, P&Z, DA	Countywide	Host 1 field day, program, or training/year.
Raise awareness and provide education to PreK-12 students, such as 5th Grade Environmental Day Camp, storm drain stenciling, and classroom activities.	\$ 15,000	2018-2027	SWCD	Countywide	Coordinate Environmental Day Camp 1/year for 250 students.

Increase capacity to promote civic engagement efforts throughout watersheds to a broad array of participants.	\$ 500,000	2018-2027	SWCD	Countywide	Education and Outreach Coordinator.
Collaborate with stakeholders, agencies, and other partners on monitoring, assessment, and implementation efforts with MPCA's watershed approach.	\$ 250,000	2018-2027	SWCD	Countywide	Staff and elected official participation.
Hold Water Plan Task Force meetings for prioritizing, targeting, and measuring progress in implementing the goals, objectives, and actions of the Water Plan.	\$ 5,000	2018-2027	SWCD	Countywide	Meet 1/year, 12 meetings.
Promote increased communication and collaboration with neighboring counties and SWCDs.	\$ 50,000	2018-2027	SWCD, P&Z, DA	Countywide	Meet as Area VI and GBERBA organizations.
Encourage alignment with One Watershed One Plan.	\$ 150,000	2018-2027	SWCD, P&Z, DA	Countywide	Meet goals as directed.
Improve local government and state agency communication through work group participation, committees, and other means.	\$ 50,000	2018-2027	SWCD	Countywide	Staff and elected official participation.
Maintain precipitation observation network to continue understanding of climate and rainfall.	\$ 2,000	2018-2027	SWCD	Countywide	Coordinate observation network of 25 volunteers.
Foster new relationships or enhance existing relations with the agricultural sector.	\$ 50,000	2018-2027	SWCD, DA	Countywide	Continue Faribault County Soil Health Team. Continue partnership with ag organizations.
Consider and implement multifaceted approaches when working with agricultural producers to improve communication and relationships.	\$ 50,000	2018-2027	SWCD, DA	Countywide	Increase involvement of landowners.
Engage and involve producers and landowners in identifying and selecting options for their farm and drainage system.	\$ 50,000	2018-2027	SWCD, DA	Countywide	Increase involvement of landowners.
Engage local partners on conservation implementation such as NRCS, conservation groups, lake associations.	\$ 5,000	2018-2027	SWCD	Countywide	Provide updates as needed or on a monthly basis at SWCD Board Meeting.
Provide opportunities to absentee and women landowners not actively involved in agriculture.	\$ 50,000	2018-2027	SWCD, NRCS, FSA	Countywide	Hold 1 Women in Ag Workshop/year.
Promote the activities and programs offered through the SWCD.	\$ 5,000	2018-2027	SWCD	Countywide	Increase awareness of the function and mission of the SWCD.
	\$ 1,347,000				

5. APPENDIX

5.1. County Comprehensive Land Use Plan ([hyperlink](#))

The [Comprehensive Land Use Plan](#) for Faribault County was updated in 2015. The purpose of the plan is to describe and analyze the important elements of the county in current terms, to determine the issues surrounding these specific elements, and to set goals and strategies that will help local policy makers as they guide the public through current issues into the foreseeable future.

5.2. 11x17 Maps of Figures

- 5.1.1. Figure 3. Faribault County Major Watershed & Impaired Waters Map
- 5.1.2. Figure 4. Faribault County Public Drainage System Map
- 5.1.3. Figure 5. Faribault County Land Use Map

5.3. Other Watercourses - as required by MN Statutes 103F.48 (Buffer Law)

The Minnesota Buffer Law requires buffers or alternative practices to provide riparian protection for public waters and public drainage systems as identified on the DNR Buffer Protection Map. The Buffer Law recognizes that “other watercourses” which are not found on the Buffer Protection Map may benefit from installation of buffers or alternative practices to protect or improve water quality. It also established a process for SWCDs to initiate a local process that is incorporated into the Local Water Management Plan.

The Faribault County SWCD took the following steps to develop, adopt, and submit a “other watercourses” map:

1. Consulted with the local water management authorities within its jurisdiction.
2. Considered watershed data, water quality and land use information.
3. Assessed the water quality benefits that buffers or alternative practices could provide to local water resources that were not included on the Buffer Protection Map.
4. Prepared a rationale for inclusion or exclusion of waters that were not included on the Buffer Protection Map prior to local adoption of the summary of watercourses.
5. Adopted a resolution by the SWCD Board establishing the summary of watercourses in map form and submitted it to all local water management authorities within their jurisdiction and to BWSR by July 1, 2017.

5.4. List of Acronyms

5.5. Priority Concerns Scoping Document

B L U E E A R T H C O .

W A S E C A C O .

FARIBAULT COUNTY MINNESOTA

FIGURE 3. FARIBAULT COUNTY MINOR WATERSHED & IMPAIRED WATERS MAP

Legend

AQC Aquatic Consumption
AQL Aquatic Life
AQR Aquatic Recreation

Impaired Streams 2016

Impaired Lakes 2016

Hydrography

Public Watercourse

County Ditch

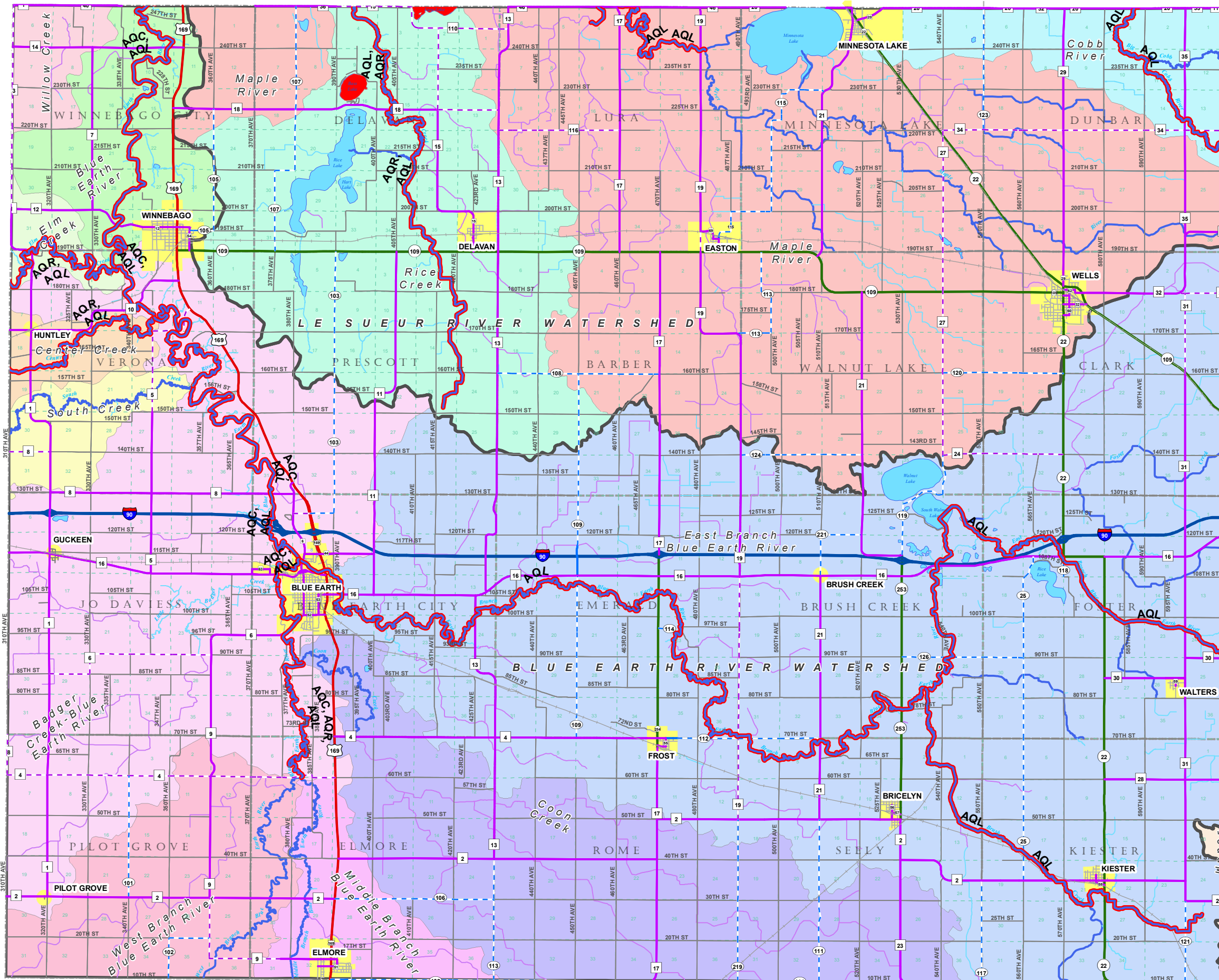
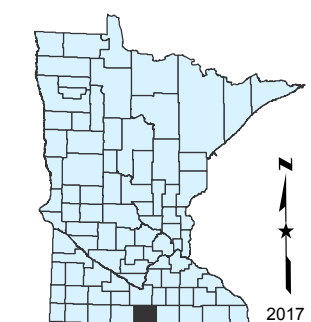
Other Water

Lake

Blue Earth River Watershed
Le Sueur River Watershed
Winnebago River Watershed

Minor Watershed

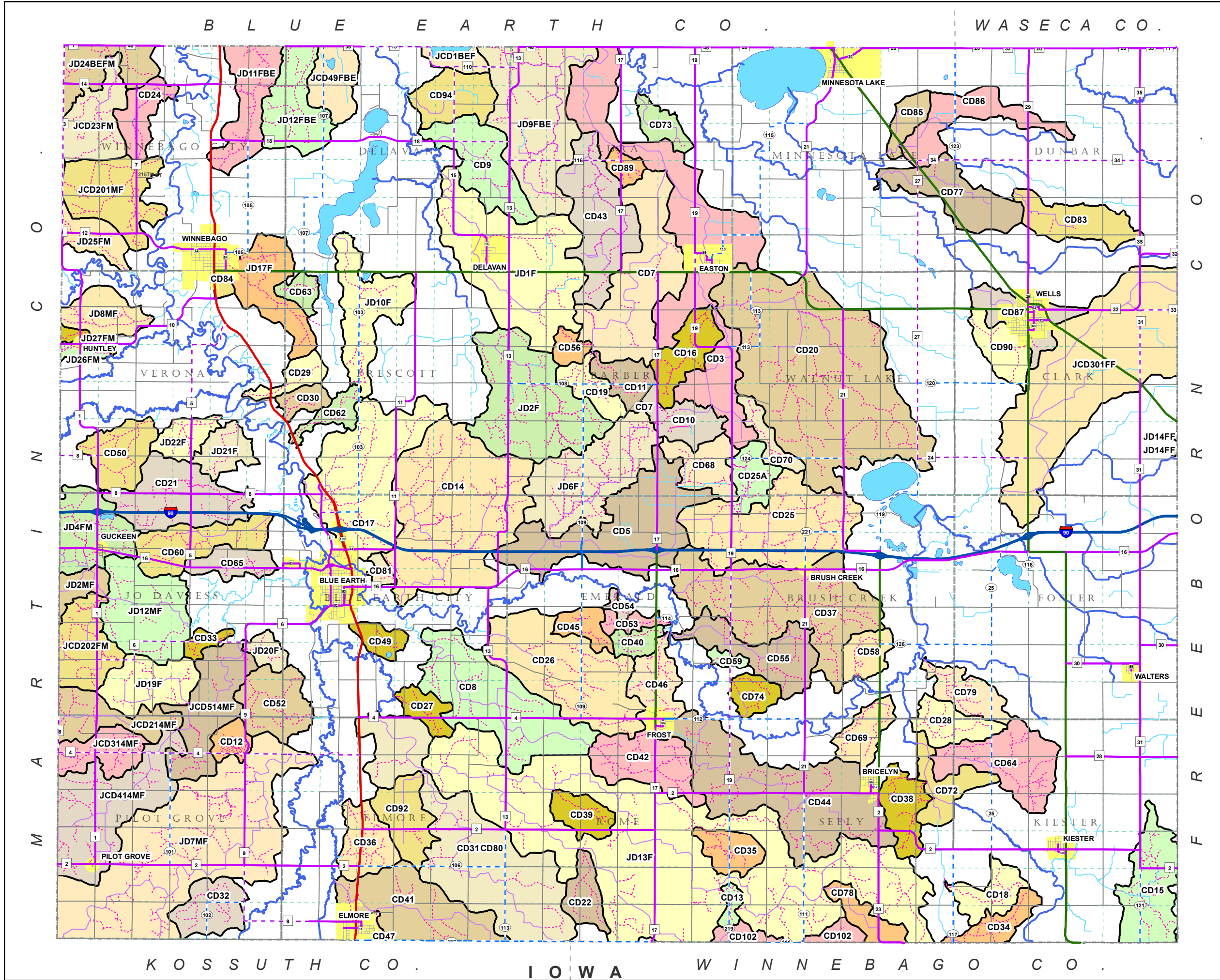
Badger Creek-Blue Earth River
Blue Earth River
Center Creek
Cobb River
Coon Creek
East Branch Blue Earth River
Elm Creek
Maple River
Middle Branch Blue Earth River
Rice Creek
South Creek
Upper Winnebago River
West Branch Blue Earth River
Willow Creek



K O S S U T H C O .

I O W A

W I N N E B A G O C O .



FARIBAULT COUNTY MINNESOTA

FIGURE 4. FARIBAULT COUNTY PUBLIC DRAINAGE SYSTEMS MAP

Legend

Hydrography

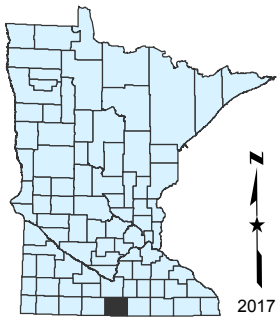
- Public Watercourse
- County Ditch
- Other Water
- County Tile
- Lake

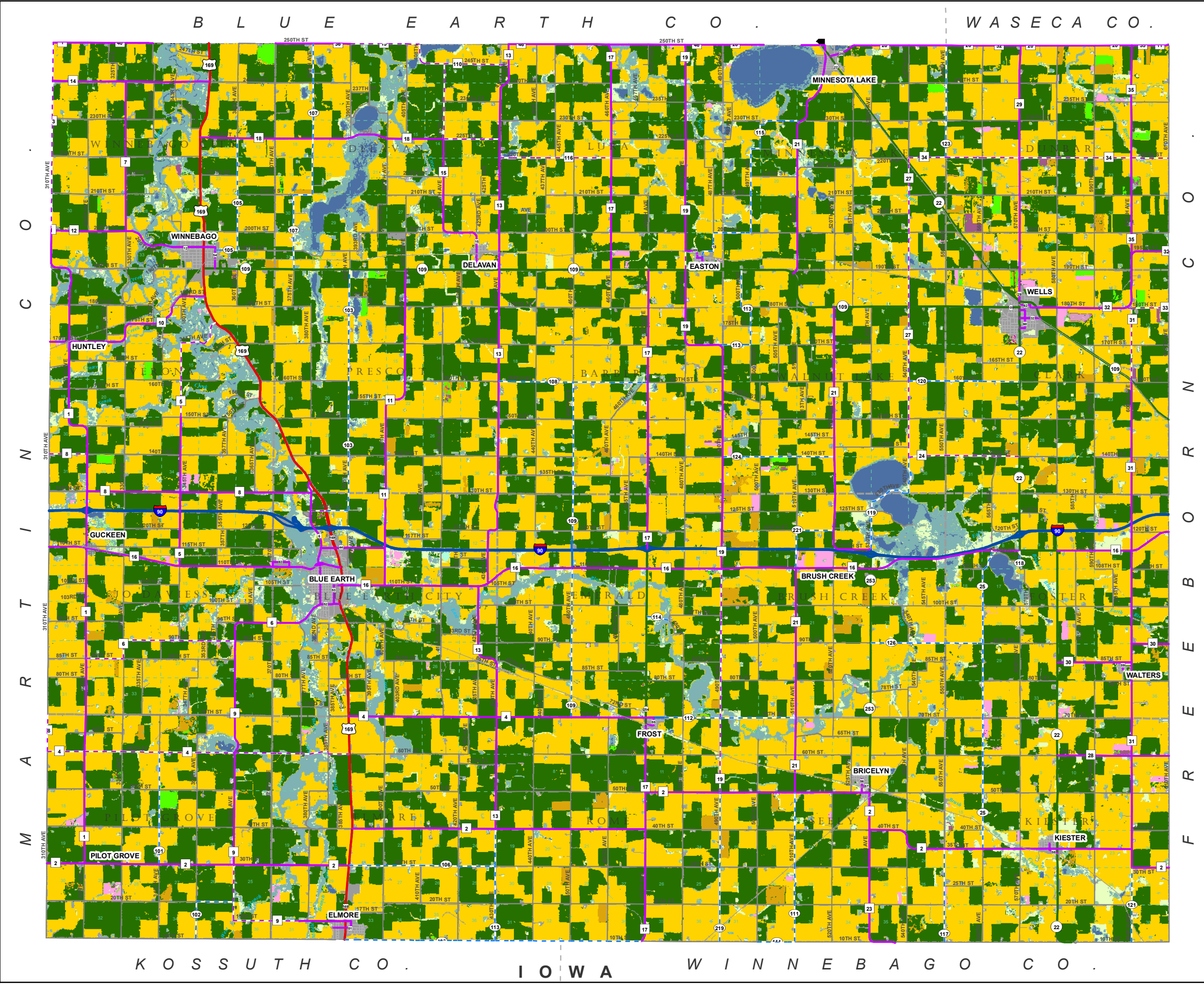
Agricultural drainage in Faribault County consists of 114 county drainage systems. Within these systems are 275 miles of county open ditch and 750 miles of county tile.

County drainage systems are funded by the benefited landowners and administered by public drainage authorities, in accordance with state drainage law. In Faribault County the County Commissioners are considered the County Drainage Authority.

The costs of establishing, improving, or repairing public drainage systems are assessed in proportion to the value of drainage system benefits determined for each parcel within the drainage system.

In addition, within Faribault County's borders are 265 miles of public (protected) waters, 150 miles of other waters (streams), and countless miles of private tile.





FARIBAULT COUNTY MINNESOTA

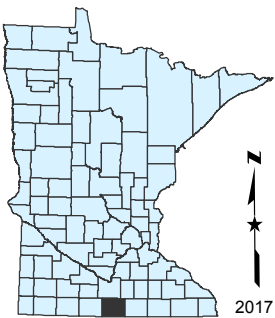
FIGURE 5. FARIBAULT COUNTY
2016 LAND USE &
CROPLAND DATA MAP

National Agricultural Statistics Service (NASS) Cropland Data 2016

The United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) Cropland Data Layer (CDL) Program is a unique agricultural-specific land cover geospatial product that is reproduced annually in participating states. The CDL Program builds upon NASS' traditional crop acreage estimation program and integrates Farm Service Agency (FSA) grower-reported field data with satellite imagery to create an unbiased statistical estimator of crop area at the state and county level for internal use. It is important to note that the internal acreage estimates produced using the CDL are not simple pixel counting. It is more of an 'Adjusted Census by Satellite.'

Legend

- Corn - 46%
- Soybeans - 36%
- Developed - 7%
- Wetlands - 5%
- Pasture/Grass - 3%
- Water - 1%
- Sweet Corn - 1%
- Forest - <1%
- Alfalfa - <1%
- Peas - <1%






FARIBAUT COUNTY



DNR BUFFER PROTECTION MAP & OTHER WATERS

LEGEND

MN BUFFER LAW FEATURES

-  16.5' Buffer
Public Open/Shallow Ditch
-  50' Buffer
Public Waters Waterway
-  Public Waters Basin/Wetland

OTHER WATERS FEATURES

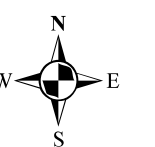
-  Other Waters Waterway
-  Other Waters Basin/Wetland

MISCELLANEOUS FEATURES

-  Township
-  City

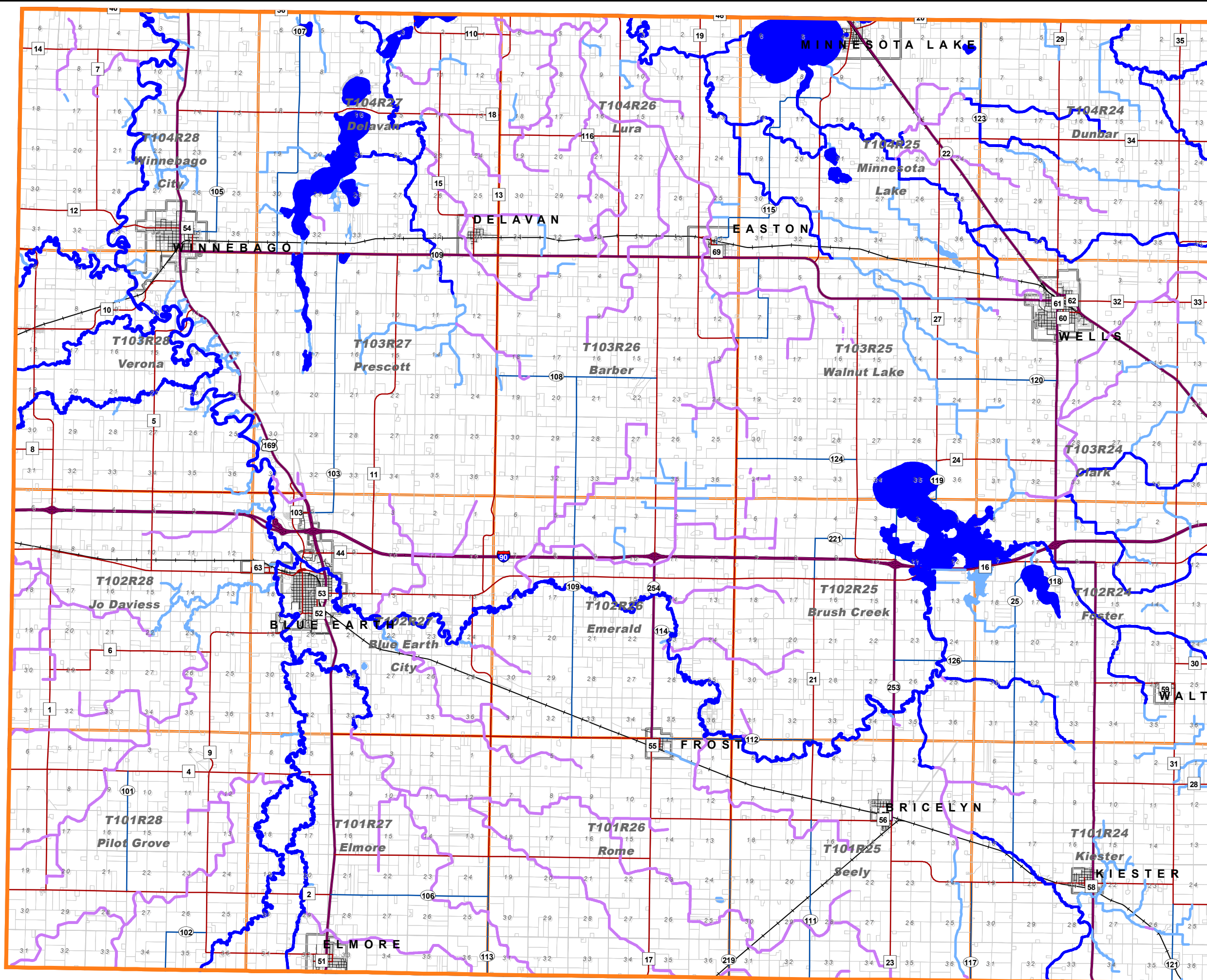
This map was prepared from existing data and records available as of the date of preparation and is subject to revision. Faribault County SWCD does not warrant or guarantee accuracy of the GIS data. The data is meant for reference purposes only and should not be used for official decisions.

DATE: May 15, 2017



1 in = 2.3 miles

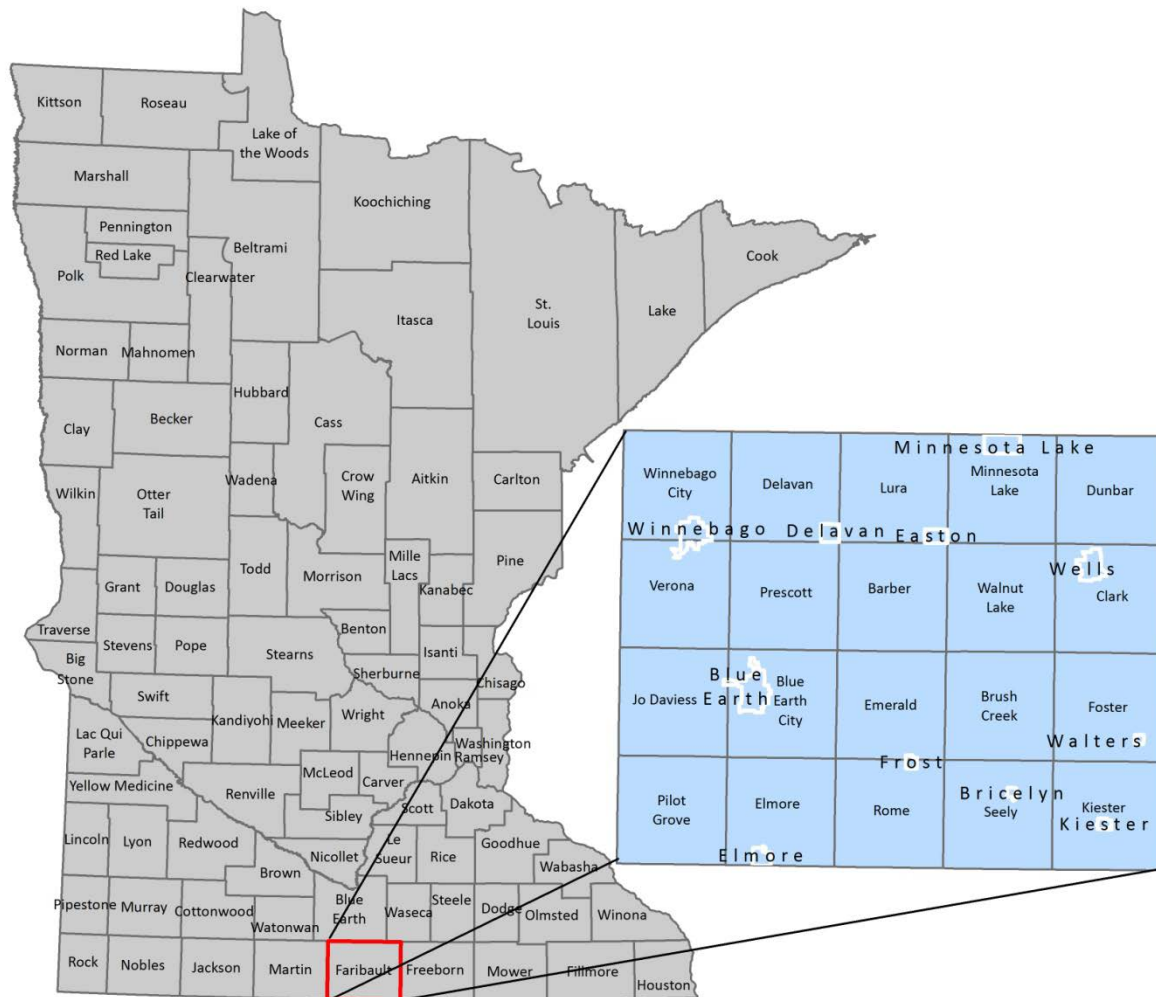
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ACRONYMS	
AGENCIES	
State	
BWSR	Board of Water and Soil Resources
DNR	Department of Natural Resources
MDA	Minnesota Department of Agriculture
MDH	Minnesota Department of Health
MDOT	Minnesota Department of Transportation
MPCA	Minnesota Pollution Control Agency
Federal	
EPA	Environmental Protection Agency
FSA	Farm Service Agency
NRCS	Natural Resources Conservation Service
USDA	United States Department of Agriculture
USF&WS	United States Fish and Wildlife Service
Regional/Local	
DA	Drainage Authority
GBERBA	Greater Blue Earth River Basin Alliance
LGU	Local Government Unit
SCDG	South Central Drainage Group
P&Z	Planning and Zoning
SWCD	Soil and Water Conservation District
PROGRAMS	
State	
1W1P	One Watershed One Plan
AgBMP	Agriculture Best Management Practices Loan Program
CLMP	Citizens Lake Monitoring Program
CREP	Conservation Reserve Enhancement Program
C-S	Cost-Share Program
CSMP	Citizen Stream Monitoring Program
DWSMA	Drinking Water Supply Management Area
MAWQCP	MN Agricultural Water Quality Certification Program
MS4	Municipal Separated Storm Sewer System
NPEA	Nonpoint Engineering Assistance
NRBG	Natural Resources Block Grant
PWI	Public Waters Inventory
SSTS	Subsurface Sewage Treatment Systems
WCA	Wetland Conservation Act
WHP	Wellhead Protection Program
WRAPS	Watershed Restoration and Protection Strategies

Federal	
CRP	Conservation Reserve Program
CSP	Conservation Stewardship Program
CWA	Clean Water Act
EQIP	Environmental Quality Incentives Program
NPDES	National Pollutant Discharge Elimination System
TMDL	Total Maximum Daily Load
WRP	Wetland Reserve Program
PRACTICES	
BMP	Best Management Practice
MDM	Multipurpose Drainage Management
WASCOB	Water and Sediment Control Basin
TERMS	
DEM	Digital Elevation Model
ET	Evapotranspiration
GIS	Geographical Information System
GPS	Geographical Positioning System
HUC	Hydrologic Unit Code
LiDAR	Light Detection and Ranging
MMP	Manure Management Plan
ROB	Redetermination of Benefits

FARIBAULT COUNTY PRIORITY CONCERNS SCOPING DOCUMENT



**A precursor to the
FARIBAULT COUNTY
LOCAL WATER MANAGEMENT PLAN**

July 20, 2016

The following Priority Concerns Scoping Document for the Faribault County Local Water Management Plan was developed in accordance with changes to the Comprehensive Local Water Management Act; Statutes: 103B.301-.335. This document lists the priority concerns selected by the Faribault County Local Water Management Advisory Board along with a detailed account of how these concerns were identified and selected.

A. INTRODUCTION

Faribault County is located on the Minnesota – Iowa border in south central Minnesota. It is surrounded by Blue Earth County to the north, Martin County to the west, and Freeborn County to the east. Faribault County is a primarily agricultural county with a total population of 14,553, according to the 2010 Census. This is a –30% change between 1970 and 2010. Estimated population for 2015 is 14,050. Based on these trends, it is anticipated that the county will continue to see a decline in population in the future.

According to the United States Department of Agriculture, average farm size in 2012 was 473 acres, which has remained consistent since 2002, and is up from 408 acres in 1992. The average age of farmers also went up from 49 in 1992 to 52.5 in 2002 to 57.3 in 2012. These trends show that farm size has leveled off over the last 10 years and fewer young people are returning to the farm to take over operations.

Approximately 31% of the county's population reside in a rural setting. The largest town and county seat is the City of Blue Earth with a population of 3,353. Faribault County has a total area of 461,600 acres or approximately 720 square miles. In 2012 there was a reported 390,139 acres of land in farms, or 85% of land use in the county, with corn and soybeans as the primary crops. Hogs are the primary livestock in the county. The native vegetation consists of tall and medium prairie grasses. Some wooded areas are along streams and lakes.

Faribault County is situated within two major watersheds; the Blue Earth River Watershed to the south and west, and the Le Sueur River Watershed to the north. The Blue Earth and Le Sueur River Watersheds are two of the twelve major watersheds making up the Minnesota River Basin.

Faribault County officially began the Comprehensive Water Management Planning process in August of 1987 when the Faribault County Board of Commissioners authorized the development of a county Comprehensive Water Management Plan. The Faribault County Soil and Water Conservation District was appointed as the coordinating agency for implementation of the plan.

The first Faribault County Water Management Plan was adopted by the Faribault County Board of Commissioners on August 22, 1990 and was a five year plan. The second plan was a 10 year plan adopted in 1997 through 2006. The current ten year plan was adopted January 16, 2007 and is set to expire in December of 2016. A five year amendment was adopted on January 17, 2012. The Local Water Management Plan 2017-2026 will be the fourth plan adopted by Faribault County.

B. LIST OF PRIORITY CONCERNS

A priority concern is an issue, resource, subwatershed, or demographic area that has been identified as a priority by the plan authority. The Faribault County Local Water Management Plan will assess Priority Concerns by major watershed in preparation for One Watershed One Plan.

Blue Earth River Watershed

1. ***Altered hydrology*** - addressing impacts of human altered hydrology, decreased evapotranspiration and storage due to vegetation, land use and drainage changes through multipurpose drainage management, urban stormwater and water retention strategies.
2. ***Sediment and nutrient transport*** – addressing the quality of surface water through strategies to conserve and manage soil health; strategies to reduce, trap, or treat nutrients and sediment; and information sharing on sustainable farming options.
3. ***Groundwater*** – addressing the quality and quantity of groundwater to ensure sustainability for future generations through wellhead protection, well sealing, and nitrogen fertilizer management in sensitive areas where row crops or livestock are being produced, including Drinking Water Supply Management Areas.

Le Sueur River Watershed

1. ***Altered hydrology*** - addressing impacts of human altered hydrology, decreased evapotranspiration, and storage due to vegetation, land use and drainage changes through multipurpose drainage management, urban stormwater and water retention strategies.
2. ***Sediment and nutrient transport*** – addressing the quality of surface water through strategies to conserve and manage soil health; strategies to reduce, trap, or treat nutrients and sediment; and information sharing on sustainable farming options.
3. ***Groundwater*** – addressing the quality and quantity of groundwater to ensure sustainability for future generations through wellhead protection, well sealing, and nitrogen fertilizer management in sensitive areas where row crops or livestock are being produced, including Drinking Water Supply Management Areas.

C. PRIORITY CONCERN IDENTIFICATION

The following outlines the process that Faribault County utilized to gather input for developing the priority concerns.

June 16, 2015: Faribault County adopted the Faribault County Comprehensive Plan 2015-2035. The purpose of this plan is to describe and analyze the important elements of the county, determine issues surrounding each element, and to set goals and strategies for these elements that will help local policy makers as they guide the public through current issues into the future. Sections of this plan pertinent to the Local Water Management Plan include Environmental

Concerns, Critical Facilities and Essential Services, and Land Use. Within these sections strengths, opportunities, weaknesses, and threats were created as part of an extensive series of public input sessions. A total of 6 sessions were held between April and October 2013, and over 80 individuals provided input. Finally an effort was made to take the vision that was created through the public process and transform goals and strategies into a workable set of implementation standards.

January 19, 2016: Faribault County Board of Commissioners passed a resolution to update the Faribault County Local Water Management Plan.

April 22, 2016: A notice of Decision to Revise and Update the Local Water Management Plan and invitation to submit Priority Concerns Input, water related land resources plans, and official controls were sent to local units of government, adjacent counties, and state review agencies including: Faribault County Cities, Townships, adjoining County Water Planners and SWCD's, the Greater Blue Earth River Basin Alliance, Department of Agriculture, Department of Health, Department of Natural Resources, Minnesota Pollution Control Agency, and Board of Water and Soil Resources.

June 3, 2016: Sent out a letter to the Advisory Task Force notifying them of the revision and update of the Local Water Management Plan.

June 29, 2016: Sent out a letter to the Advisory Task Force reminding them of Task Force meeting and requesting they complete a short survey to rank the importance of concerns facing resources in Faribault County.

July 7, 2016: The Faribault County Local Water Management Advisory Task Force met to discuss the water plan update process, their role, and review and discuss the list of priority concerns that had been received from citizens, local government units, and state agencies. After review and discussion, the task force selected the top concerns to address in the Local Water Management Plan update.

July 9, 2016: Official notice of the public meeting to comment on selected priority concerns was placed as a legal advertisement in the Faribault County Register.

July 19, 2016: A public meeting was held in the Commissioner Meeting Room at the Faribault County Courthouse in Blue Earth.

Summary of Proceedings (July 19, 2016 Public Meeting): A public meeting to hear input on the selected priority concerns of the Faribault County Local Water Management Plan was held on July 19, 2016 at 10:00 a.m. in the Commissioner Meeting Room at the Faribault County Courthouse in Blue Earth. Those attending the meeting were:

John Roper, County Commissioner
Tom Warmka, County Commissioner
Tom Loveall, County Commissioner

Greg Young, County Commissioner
Bill Groskreutz, County Commissioner
Troy Timmermann, County Attorney
John Thompson, County Auditor
Faribault County Register
Michele Stindtman, Water Plan Coordinator/SWCD Program Administrator
Brandee Douglas, SWCD Assistant Program Administrator

The meeting was called to order by Chairman Tom Warmka. Michele Stindtman and Brandee Douglas began the meeting with a summary of the Water Planning Process and an overview of the Local Water Management Advisory Task Force meeting. The top priority concerns selected by the Advisory Task Force for the county were presented and discussed. Once these items are expanded, and goals and action items developed, these priority concerns should cover nearly all public comment received. It was the consensus of the group that these concerns were the top priorities for the county and would be submitted to state review agencies in the Scoping Document.

Chairman Warmka asked for any additional comment on the Local Water Management Plan or the selected priority concerns. No public comment was made.

Citizen Input:

Faribault County Comprehensive Plan 2015-2035 Results:

A total of 6 sessions were held between April and October 2013, and over 80 individuals provided input. Sections of this plan pertinent to the Local Water Management Plan include Environmental Concerns, Critical Facilities and Essential Services, and Land Use. Although a full report of summaries, initiatives, trends, and concerns appears in the Faribault County Comprehensive Plan 2015-2035, a summary of future considerations, goals and objectives is as follows:

Future Environmental Considerations, Goals, and Objectives

Faribault County will need to stay consistent with state regulations, and make appropriate modifications to their permits and ordinances.

- Floodplain
- Shoreland and Shoreland Preservation Areas
- Special Protection Districts
- Feedlots
- Septics

Groundwater Resource Protection and Implementation

- Continue observation well monitoring;
- Continue to offer well sealing aid to landowners;
- Continue to inventory well sealing and drilling records;
- Continue to pursue and provide financial incentives to landowners and homeowners;

- Address above ground storage tanks in accordance with Minnesota State Fire Code;
- Enforce regulation, if necessary, to protect groundwater through the DNR waters appropriations permit process.

Watershed Planning and Implementation

- New Water Plan that aligns with BWSR's One Watershed One Plan process;
- Continuation of the South Central Drainage Group;
- Involvement with watershed management development.

Education efforts

- Soil Health
 - Utilize existing materials for education of landowners.
- Groundwater concerns;
- Nitrates;
 - Buffers
- Environmental concerns.

Prairie Conservation Plan

- Protection
 - Maintain habitat through conservation easements on private land or acquisition of public land.
- Restoration
 - Grassland and wetland reconstruction to contribute to functional systems and viable species populations.
- Enhancement
 - Activities that improve habitats and functionality of a grassland or wetland (prescribed burning, conservation grazing/haying, control of invasive species).

Surface Water Concerns

- Utilize Geographic Information Systems (GIS) to inventory subwatersheds and target areas for best management practices and water retention;
- Continue to support the MPCA's Citizen Stream Monitoring Program (CSMP) and Citizen Lake Monitoring Program (CLMP) to expand monitoring efforts within Faribault County;
- Utilize LeSueur River Watershed TMDL Study results and implementation strategies;
- Utilize Blue Earth River Watershed TMDL Study results and implementation strategies;
- Utilize MPCA's Nitrate Strategies resulting from the Nitrates Surface Water Study; and
- Update ordinances that have direct effects on nonpoint source issues.

Nitrates

- Updating ordinances in accordance with updated State Statues;
- Seek funding for the implementation of Best Management Practices;
- Continue to establish the one rod (16.5') buffer on county ditches as required;

- Consider setting and enforcing existing buffer policies based on the waterbody's classification.

Critical Facilities and Essential Services Considerations, Goals, and Objectives

Wastewater Facilities

- Maintain and upgrade existing wastewater ponds and facilities as needed.
- Pursue funding opportunities for repairs and upgrades.
- Septic System Compliance.
- Update ordinances in accordance with State Statutes.

Drainage

- Continue to educate on ditch systems, benefits, and processes.
- Continue to monitor and provide technical resources.
- Continue and expand partnerships within the Urban areas.

Land Use Considerations, Goals, and Objectives

Promote a balanced diversity in the use of land.

- Identify and protect sensitive areas.

Protect vulnerable areas and the unique cultural/historical identity of Faribault County.

- Identify historic and natural preservation areas and implement initiatives to protect them.
 - Educate residents on the importance of protecting these areas.
 - Future land use regulations should protect the natural preservation and wildlife areas.

Local, State, and Federal Agency written responses received:

MN Department of Health, Source Water Protection Unit, submitted by Amanda Strommer, Principal Planner

Concern 1. Drinking Water Quality (Groundwater) - highest priority is public water suppliers. All cities have wellhead protection plans and were listed under Non-Vulnerable/Protected Aquifer.

- Consider wellhead protection areas in land use decisions.
- Support locating and properly sealing abandoned wells.
- Locally discuss and evaluate how to use WRAPS and 1W1P in the future to target and prioritize drinking water protection activities.
- Support ongoing data collection efforts to enhance future wellhead protection activities.

Concern 2. Groundwater Quantity - highest priority is entire county.

- Encourage water conservation efforts and education.
- Encourage land uses and the installation of best management practices which recharge groundwater.

- Increase awareness among public officials, landowners, and the general public regarding the interaction between groundwater and surface water sources in order to make informed water management decisions.

Board of Water and Soil Resources, submitted by Mark Hiles, Board Conservationist

- Include the Drainage Authority as a stakeholder and include projects and activities consistent with multipurpose drainage criteria.
- Consider high-level state priorities, keys to implementation, and criteria for evaluating proposed activities in the Nonpoint Priority Funding Plan.
- Utilize the Minnesota Nutrient Reduction Strategy when considering implementation efforts to address phosphorus and nitrogen. Consider the Sediment Reduction Strategy for the Minnesota River.

Minnesota Pollution Control Agency, submitted by Paul Davis and Joanne Boettcher

Concern 1. Agricultural Drainage Improvement Projects/Altered Hydrology - highest priority is all county drainage systems

- Communication and education on the impacts of improvement projects.
- Education for alternative landuse and management practices that reduce the need for improvement projects.
- Discussion and action of ditch management that goes beyond the minimum requirements of current drainage statute.
- Find ways to utilize ditch funds and other public and private sources that focus on volume reduction.

Concern 2. Increasing the number of acres farmed using soil health principles (ex. nutrient management, cover crops, minimal tillage, crop rotations) - highest priority is all agricultural land.

- Education and field days.
- Restructuring financial incentive programs and/or insurance.
- Identify and support leaders in the farming community to try different practices.

Concern 3. Stormwater management in smaller communities not regulated by MS4 rules - highest priority is cities with ponds and lakes that provide storm water outlets.

- Education of urban BMP's that promote management of lawn waste and fertilizer application.
- Education on practices to improve storm water quality and reduction of quantity.

Concern 4. Participation in Watershed Restoration and Protection Strategies process.

- Create new lines of communication and networks to better convey information and ideas to change the way we do watershed work.

Minnesota Department of Ag, submitted by Rob Sip, Environmental Policy Specialist

Concern 1. Drainage Water Management (DWM).

- Encourage landowners and farmers to implement DWM practices and management plans.
- Develop Multipurpose Drainage Management Plans.

Concern 2. Water Storage.

- Develop a water storage plan for both public drainage systems and private on-farm storage.

- Communicate on the development of a water storage plan with landowners.
- Obtain flow data and set flow goals agreed upon by landowners within each public ditch system or subwatershed.
- Prioritize public ditch systems or subwatersheds based on flow goals with input from landowners.
- Assess where short-term and long-term water storage projects can be located, including smaller scale (wetland restoration) or larger scale (constructed impoundment).
- Develop an implementation plan or schedule to discuss funding considerations.

Concern 3. Wind and Water Erosion.

- Focus and renew efforts to reduce wind and water erosion, and that efforts continue to implement more conservation practices in priority areas.
- Implement windbreaks and vegetative plantings that also incorporate pollinator habitat to serve dual purposes.
- Implement cover crops, residue management, and other soil health initiatives.
- Utilize tools such as PTM App.

Concern 4. Lake Management.

- Prioritize lake management and protection efforts.

Concerns identified through MDA Water Planning Assistance Website:

Concern 1. Agricultural Drainage, Wetlands and Water Retention

Concern 2. Agricultural Chemicals and Nutrients in Ground and Surface Water.

Concern 3. Livestock and Manure Management.

Concern 4. Agricultural Land Management.

Concern 5. Targeting BMPs, Aligning Local Plans and Engaging Agriculture.

Task Force Survey Results - Agricultural Land:

	Very Concerned	Somewhat Concerned	Not Concerned	Total
Loss of land from streambank erosion	55.56% 10	33.33% 6	11.11% 2	18
Loss of land from flooding	22.22% 4	55.56% 10	22.22% 4	18
Loss of land from habitat/natural areas (buffers, wetlands, easements, CRP)	22.22% 4	50.00% 9	27.78% 5	18
Reduced productivity from declining soil health	55.56% 10	33.33% 6	11.11% 2	18
Reduced productivity from soil erosion caused by wind	61.11% 11	27.78% 5	11.11% 2	18
Reduced productivity from soil erosion caused by water	66.67% 12	27.78% 5	5.56% 1	18

Rivers and Streams:

	Very Concerned	Somewhat Concerned	Not Concerned	Total
Streambank erosion from high volumes and flooding	55.56% 10	33.33% 6	11.11% 2	18
Infrastructure/housing losses from flooding	22.22% 4	50.00% 9	27.78% 5	18
Decreased recreation from poor water quality	55.56% 10	38.89% 7	5.56% 1	18
Decreased habitat from poor water quality	61.11% 11	33.33% 6	5.56% 1	18
Decreased habitat from inconsistent flow (flooding/streams running dry)	61.11% 11	33.33% 6	5.56% 1	18
Insufficient capacity to carry runoff/flood volumes	50.00% 9	22.22% 4	27.78% 5	18
Downstream impacts from sediment and nutrients (Lake Pepin, Hypoxia in Gulf of Mexico)	50.00% 9	44.44% 8	5.56% 1	18
Downstream flooding from increased flow (outside Faribault County)	38.89% 7	55.56% 10	5.56% 1	18

Lakes:

	Very Concerned	Somewhat Concerned	Not Concerned	Total
Decreased recreational opportunities from poor water quality	55.56% 10	38.89% 7	5.56% 1	18
Excess nutrients in lakes	61.11% 11	33.33% 6	5.56% 1	18
Aquatic Invasive Species in lakes	55.56% 10	38.89% 7	5.56% 1	18
Development pressure on lake shores	27.78% 5	44.44% 8	27.78% 5	18

Groundwater:

	Very Concerned	Somewhat Concerned	Not Concerned	Total
Drinking water contamination	55.56% 10	44.44% 8	0.00% 0	18
Drinking water depletion from overuse	55.56% 10	38.89% 7	5.56% 1	18
Drinking water depletion from altered hydrology/inadequate recharge opportunities (loss of wetlands)	61.11% 11	38.89% 7	0.00% 0	18

Wetlands:

	Very Concerned	Somewhat Concerned	Not Concerned	Total
Reduction in flood storage from altered hydrology (ag & urban drainage)	55.56% 10	38.89% 7	5.56% 1	18
Reduction in habitat areas from loss of wetlands	44.44% 8	50.00% 9	5.56% 1	18

Habitat/Natural Areas:

	Very Concerned	Somewhat Concerned	Not Concerned	Total
Reduced habitat from loss of natural areas	47.06% 8	41.18% 7	11.76% 2	17
Reduced recreation opportunities from loss of natural areas	47.06% 8	41.18% 7	11.76% 2	17

What best describes you:

Answer Choices	Responses
Citizen	0.00% 0
Producer	16.67% 3
Local Unit of Government	50.00% 9
State Agency	27.78% 5
Other (please specify)	5.56% 1
Total	18

Other stakeholder written comments:

No additional written comments were received from stakeholders.

D. PRIORITY CONCERN SELECTION

A priority concern is an issue, resource, subwatershed, or demographic area that has been identified as a priority by the plan authority.

The following Priority Concerns were selected by the Task Force after examining the list of concerns submitted by the citizens, local and state agencies, and will be the foundation of the Faribault County Local Water Management Plan. Priority concerns were selected by major watershed in preparation for One Watershed One Plan.

It is not possible to address all concerns, however the ones selected are broad enough to cover most concerns submitted, yet focused enough to achieve goals and objectives with the staff and funding that is available at the time.

Blue Earth River Watershed

1. **Altered hydrology** - addressing impacts of human altered hydrology, decreased evapotranspiration and storage due to vegetation, land use and drainage changes through multipurpose drainage management, urban stormwater and water retention strategies.
2. **Sediment and nutrient transport** – addressing the quality of surface water through strategies to conserve and manage soil health; strategies to reduce, trap, or treat nutrients and sediment; and information sharing on sustainable farming options.
3. **Groundwater** – addressing the quality and quantity of groundwater to ensure sustainability for future generations through wellhead protection, well sealing, and nitrogen fertilizer management in sensitive areas where row crops or livestock are being produced, including Drinking Water Supply Management Areas.

Le Sueur River Watershed

1. **Altered hydrology** - addressing impacts of human altered hydrology, decreased evapotranspiration and storage due to vegetation, land use and drainage changes through multipurpose drainage management, urban stormwater and water retention strategies.
2. **Sediment and nutrient transport** – addressing the quality of surface water through strategies to conserve and manage soil health; strategies to reduce, trap, or treat nutrients and sediment; and information sharing on sustainable farming options.
3. **Groundwater** – addressing the quality and quantity of groundwater to ensure sustainability for future generations through wellhead protection, well sealing, and nitrogen fertilizer management in sensitive areas where row crops or livestock are being produced, including Drinking Water Supply Management Areas.

Existing water resource plans and official controls received:

No plans or official controls were received from any of the state review agencies or local units of government.

Identification of related plans priority concerns:

The Soil and Water Conservation District currently possesses or has access to copies of several local, regional and state plans. The priority concerns that were developed for Faribault County directly reflect the goals, objectives, and actions outlined in these other related plans and documents.

These include: the Faribault County Zoning Ordinance, Faribault County Comprehensive Plan 2015-2035, adjoining county's Local Water Management Plans, Blue Earth Turbidity TMDL, Blue Earth Fecal Coliform TMDL, Le Sueur River Watershed WRAPS Report, Le Sueur River Watershed TMDL, BWSR's Nonpoint Priority Funding Plan 2014, MPCA Minnesota Nonpoint Source Management Program Plan 2013-2017, MPCA Nitrogen in Minnesota Surface Waters 2013, Nitrogen Fertilizer Management Plan 2013, Sediment Reduction Strategy for the Minnesota River Basin.

E. PRIORITY CONCERNS NOT ADDRESSED BY THE PLAN

Additional concerns that were submitted, but not included in the Local Water Management Priority Concerns Scoping Document, are those that are already or may potentially be addressed by other entities and groups, which work closely with the Soil and Water Conservation District, or those deemed unfeasible or beyond the SWCD control.

For example, restructuring financial incentive programs and/or insurance is something the SWCD can lobby for but outside of SWCD control. Some water storage goals such as obtaining flow data for each public drainage system or subwatershed, setting flow goals, and prioritizing based on flow goals would be unfeasible during the 10 year period of the Local Water Management Plan. Many actions specific to manure management and livestock issues are included in the Faribault County Feedlot Ordinance (Section 22 Faribault County Zoning Ordinance), and those specific to septic systems are found in the Faribault County Subsurface Sewage Treatment System Ordinance (Section 23 Faribault County Zoning Ordinance).

In addition, it is important to note that the implementation of all types of practices whether it be for water storage (large or small), or to reduce the delivery of sediment and nutrients is fully dependent upon state and federal programs, policies, and the availability of funding.

Future Steps that will be taken:

While the county is waiting for approval of this document from the Board of Water and Soil Resources, Faribault County will be working to define goals, objectives and actions that will address each of the priority concerns.

Upon approval of this document, the county will follow the timeline that has been established for completion of the final Water Resources Management Plan. As required by Minnesota Statute, a public hearing will be held to validate the focus of the final plan. The plan will then be submitted to the state for final approval. When the plan is approved at the state level, it will be presented and adopted by the Faribault County Board of Commissioners, and the implementation of the plan will begin.