

FREEBORN COUNTY



COMPREHENSIVE WATER PLAN AMENDMENT TO IMPLEMENTATION 2016-2021

**FREEBORN COUNTY
COMPREHENSIVE WATER PLAN
2016-2021**

Prepared by Freeborn County with assistance from Freeborn County Environmental Services, Freeborn County Soil and Water Conservation District, City of Albert Lea, and the Shell Rock River Watershed District.

The Freeborn County Comprehensive Water Plan supports the project goals and objectives listed in the Shell Rock River Watershed District Water Plan. The Turtle Creek Watershed District Plan and the Cedar River Watershed District Plan.

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Preface

The Citizens of Freeborn County share a good fortune of living in an area rich in water resources. Generations of families have weaved this land into their homes. A strong tradition of stewardship for land and water protection is reflected in this fourth-generation water plan. The amendments to this 2016-2021 plan were designed to guide those land and water decisions. It outlines a five-year strategy for addressing these issues.

Protection of the water resources is primarily a responsibility of federal, state and local officials. Freeborn County officials support this water planning strategy and have accomplished resource planning through this local water plan. The citizen partnership in application of water planning goals results in a “protect and improve” attitude toward our surface and ground water resources. We have gained a spirit of cooperation and will continue to foster those accomplishments.

I invite your review of the 2016-2021 Comprehensive Water Plan and seek your assistance in implementation of this plan. Your involvement is critical in protecting, preserving and restoring water quality in Freeborn County.

Wayne Sorensen
Environmental Services Supervisor

Freeborn County Water Planning Advisory Committee Members:

Rachel Wehner	Environmental Health Coordinator, Freeborn County
Wayne Sorensen	Environmental Services Supervisor, Freeborn County
Mark Goskeson	Solid Waste Officer/SSTS Tech, Freeborn County
Winston Beiser	Ditch Inspector, Freeborn County
Courtney Christensen	Shell Rock River Watershed District
Andy Henschel	Shell Rock River Watershed District
Jennifer Mocol-Johnson	Board Conservationist, BWSR
Mark Schaetzke	District Manager, Freeborn County SWCD
Jerad Stricker	Shell Rock River Watershed District
Phillip Wacholz	City of Albert Lea

List of Acronyms

AIS	Aquatic Invasive Species
AMA	Aquatic Management Area
AU	Animal Unit
ACOE	United States Army Corps of Engineers
BMP	Best Management Practice
BWSR	Board of Water and Soil Resources
CLMP	Citizen Lake Monitoring Program
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
CFO	County Feedlot Officer
CWP	Clean Water Partnership
DA	Drainage Authority
DNR	Department of Natural Resources
EQIP	Environmental Quality Incentives Program
FSA	Farm Service Agency
FEMA	Federal Emergency Management Agency
GIS	Geographic Information Systems
ITPH	Imminent Threat to Public Health
IBI	Index of Biotic Integrity
ISTS	Individual Sewage Treatment System
MDH	Minnesota Department of Health
MECA	Minnesota Erosion Control Association
MPCA	Minnesota Pollution Control Agency
NPDES	National Pollutant Discharge Elimination System
NRBG	Natural Resource Block Grant
NFIP	National Flood Insurance Program
NRCS	Natural Resource Conservation Service
PMZ	Priority Management Zone
PWS	Public Water Supply
RUSLE II	Revised Universal Soil Loss Equation
SSTS	Subsurface Sewage Treatment System
SRF	State Revolving Fund
STORET	STORage and RETrieval
SWCD	Soil and Water Conservation District
SWPPP	Stormwater Pollution Prevention Program
TMDL	Total Maximum Daily Load
USFWS	United States Fish and Wildlife Service
USDA	United State Department of Agriculture
U of M	University of Minnesota
WHPP	Wellhead Protection Plan
WRAPS	Watershed Restoration and Protection Strategy
WCA	Wetland Conservation Act
WMA	Wildlife Management Areas
1W1P	One Watershed, One Plan

Executive Summary

Background of Water Plan Process

Freeborn County is a gateway into southern Minnesota. Interstates 35 and 90 bisect the County north to south and west to east respectively. The County is bordered by the State of Iowa to the south, Faribault County to the West, Waseca County and Steel Counties to the north and Mower County to the east. Freeborn County has a land area of 720 square miles. According to the Minnesota State Demographic Center, the 2015 population of Freeborn County was estimated to be 30,642. Freeborn County is comprised of 14 incorporated cities and 20 townships. The County Seat is the City of Albert Lea, which is located approximately 100 miles south of Minneapolis, Minnesota. Some 81-percent of productive land is farmed or used for rotational animal pastures in Freeborn County.

USDS Farm Service Agency policy requires that producers participating in several programs submit an annual report regarding all cropland use on their farms. For the end of year cropland totals for 2015, there were 362,982 total acres planted in Freeborn County.

This Water Plan update is Freeborn County's fourth amendment of the original document. On June 23, 1986, the Freeborn County Board of Commissioners passed a resolution authorizing the development of a Comprehensive Water Plan. After four years of planning, public engagement and review by the Minnesota Board of Water and Soil Resources (BWSR), the first Comprehensive Water Plan was approved on December 18, 1990.

There have been 3 subsequent amendments to the Comprehensive Water Plan in 1997, 2006 and in 2012. The last amendments adopted in 2012, (2011 Mid-Term Amendment Comprehensive Water Plan 2006-2015) carried the State approved Comprehensive Water Plan to December 31, 2015.

Freeborn County is committed to sound water quality management and recognizes the State's watershed management transition from Local Comprehensive Water Plans to larger scale watershed based plans – known as One Watershed One Plan. Until that time when watershed-wide One Watershed One Plans are approved that cover the jurisdictional authority of Freeborn County; Freeborn County intends to update the current Comprehensive Water Plan. On August 4, 2015, the Freeborn County Board of Commissions passed a resolution requesting an extension of the effective date of the current County Comprehensive Local Water Management Plan and was granted a one-year extension to update its Plan by December 31, 2016. This update completes that process.

Purpose

The purpose of this updated Comprehensive Water Plan for Freeborn County is:

- 1) To focus efforts on identified existing and potential priority concerns and/or opportunities for protection, management, and development of related water resources and land resources.
- 2) To continue to develop, update and implement this water plan of action to promote sound management of our resources using Best Management Practices.
- 3) To intensify land use practices aimed at effective environmental protection.

- 4) To provide a guidance document for local decision makers.
- 5) To regulate land use practices for the development, management and protection of water and related land resources.

Further, BWSR provides guidance documents that help guide Counties to effectively develop and implement Comprehensive Local Water Plans. According to BWSR, the purpose of the Local Water Management Plan is to address potential and existing water resource related issues and how they can be protected, sustained and enhanced in Freeborn County. The Local Water Management Act of Minnesota (Minn. Stat. 103B.301 to 103B.355) states that the following guidelines will be met in this document:

- The plan must cover the entire county.
- The plan must address problems in the context of watershed units and groundwater systems.
- The plan must be based upon principals of sound hydrologic management of water, effective environmental protection, and efficient management.
- The plan must be consistent with local water management plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or groundwater system.
- Cover a period of at least five years and not more than 10 years.
- Fully utilize existing water and related land resources plan; including plans related to agricultural land preservation programs.

Priority Concerns Addressed in this Plan Amendment Including Projected Cost

The following is a list of priority concerns including projected costs as developed by the Water Planning Advisory Committee:

Aquifers- Groundwater Concerns. \$75,400

Surface Water Concerns. \$16,596,100

Watershed/Impaired waters
DNR Shoreland
Aquatic Invasive Species (AIS)

Soil Erosion and Soil Quality Concerns. \$138,000

Waste Disposal and Management Concerns. \$613,200

SSTS
Feedlots
Solid Waste

Drainage Concerns. \$1,004,000

Municipal Wastewater and Storm Water Concerns. \$80,000

Priority Concerns – Summary of Goals

The following is a summary of the specific goals developed per each priority concern. The complete list of goals, objectives and actions start on page 17. Unless otherwise specified, locations of action items are county wide.

Aquifer – Groundwater Concerns Goals Summary

Goal #1

Protect aquifer from contamination by water wells.

Goal #2

Protect Groundwater from Depletion and Degradation.

Surface Water Concerns Goals Summary

(Watershed/Impairment)

Goal #1

Address impaired and unimpaired surface waters.

Goal #2

Manage watersheds to reduce bacteria, nutrients, chemicals, and sediments from entering surface waters.

Goal #3

Manage watersheds to control surface water runoff.

Goal #4

Partner with other agencies to improve surface waters.

Goal #5

Improve water quality of lakes.

Goal #6

Provide recreational opportunities on public waters.

(Shoreland)

Goal #7

Protect and preserve existing shorelands.

(Aquatic Invasive Species)

Goal #8

Support Aquatic Invasive Species (AIS) prevention programs.

Soil Erosion and Soil Quality Concerns Goals Summary

Goal #1

Protect and preserve topsoil.

Goal #2

Control soil erosion.

Waste Disposal and Management Concerns Goals Summary

(SSTS)

Goal #1

Protect surface water and ground water from subsurface sewage treatment system (SSTS) contamination.

(Feedlots)

Goal #2

Protect surface water and groundwater resources from feedlot/ animal waste contamination.

Goal #3

Manage animal manure for land applications.

(Solid Waste)

Goal #4

Protect surface water and ground water from mixed solid waste contamination.

Goal #5

Protect surface water and ground water from hazardous waste pollution.

Drainage Concerns Goals Summary

Goal #1

Maintain drainage systems while improving agricultural productivity as well as improving drainage water quality, understanding the systems are a part of a larger tributary system.

Wetlands

Goal #2

Preserve existing and create wetlands.

Municipal Wastewater and Stormwater Goals Summary

Goal #1

Protect surface water and groundwater from municipal wastewater and stormwater contamination.

Plan Consistency

Freeborn County examined State agency, the Freeborn County Soil and Water Conservation District (SWCD) annual work plans and watershed management plans and rules located within Freeborn County to ensure consistency with their water resource management efforts. The plan attempts to account for the work of many agencies involved in the implementation of similar goals, objectives and actions as part of their mission.

The SWCD was formed to address the conservation needs of agricultural land in Freeborn County. Following the provisions of Minnesota Statute, Chapter 103C, the SWCD is governed by a Board of Supervisors, comprised of five elected members. The Board of Supervisors sets policy and gives direction to SWCD staff who carry about programs and services of the District. The focus of the SWCD is soil erosion reduction, water quality improvement and wildlife habitat enhancement.

There are three active watershed organizations within Freeborn County. The Shell Rock River Watershed District was established in 2003 under the authority of Minnesota Statutes, Chapter 103D. The District's mission is to implement reasonable and necessary improvements to water related and other natural resources of the District. The Shell Rock River Watershed District has adopted District Rules to protect and enhance water quality within the its jurisdiction; ensure that proper decisions are made of managing streams, rivers, wetlands, lakes, groundwater and related land resources; and accomplish the purposes of the District. The Freeborn County Comprehensive Water Plan supports the project goals and objectives listed in the Shell Rock River Watershed District Water Plan. The plan is set to expire in 2025.

One Watershed One Plan Opportunity in the Cedar River Watershed

The One Watershed One Plan (1W1P) started as a policy recommendation from the Local Government Water Roundtable and was followed by legislation in 2012 that authorized BWSR to adopt methods to allow comprehensive plans, local water management plans, or watershed management plans to serve as substitutes for one another; or to be replaced by a Comprehensive Watershed Management Plan. In general, the 1W1P program aligns local water planning on major watershed boundaries with state

strategies toward prioritized, targeted and measurable implementation plans. In time, the 1W1P is intended to replace the existing county water plans (including this plan) for the entire watershed planning boundary. Through adoption of the 1W1P is it anticipated the watershed (specifically the Cedar River Watershed District) will be able to better leverage resources to complete TMDLs, WRAPS and other important information.

The Cedar River Watershed District was established in 2007 to address concerns about area flooding and water quality. The District covers about 435 square miles, including portions of Mower, Dodge, Steele and Freeborn counties.

In September 2016, the Cedar River Watershed District was awarded a One Watershed, One Plan (1W1P) grant from BWSR. The grant will enable the Cedar River Watershed District to better organize and develop focused implementation plans on the watershed scale. The 1W1P grant enables the Cedar River Watershed District (and local governments supporting the Watershed) to participate in development of a plan. As the plan is being adopted, local governments will help devise implementation strategies to meet the goals of the plan.

Within the Cedar River Watershed is Turtle Creek. The Turtle Creek Watershed District was established in 1968 and includes portions of Freeborn and Mower Counties. The Turtle Creek Watershed District revised and updated its Watershed Management Plan in 2005 in accordance with Minnesota Statutes 103B and 103D and the requirements of Minnesota Rules Chapter 8410. The District has responsibilities under 103B and 103D to assess and manage land and water resources. The plan is set to expire in 2018.

The following are policy statements and goals of the Turtle Creek Watershed Management Plan: Watershed Management – manage the watershed from an effective Watershed Management Plan that addresses goals and that meets the needs of the watershed public. Water Quality – encourage and implement practices to improve and project the quality of surface water in the District. Water Quantity Management – effectively manage the flow of floodwaters in the District. Education – provide the residents and landowners with information to assure the protection and improvement of the Turtle Creek Watershed. Lastly the overall goal of the managers is to make the wisest possible use and conservation of the District’s water and related resources. The watershed plan is intended to be the guide for accomplishment of this goal.

As stated above, the three Watershed District’s Management Plans were part of Freeborn County’s local water plan review process. Where appropriate, the Watershed District’s Managements Plans contained goals and objectives that were incorporated into this amendment. All three Watershed Districts play an essential part in Freeborn County’s local water planning. The pursuit of water resource protection is a common goal in all Water Management Plans. Freeborn County supports the efforts of the Shell Rock, Cedar River and Turtle Creek Watershed Districts in the protection of our water resources.

The following is the comprehensive list of all available relevant data, plans and policy documents that were reviewed o help develop targeted and measurable goals and actions for each of the priority concerns:

- Revised Regional Total Maximum Daily Load Evaluation of Fecal Coliform Bacteria Impairments in the Lower Mississippi River Basin in Minnesota (Minnesota Pollution Control Agency, 2006)
- City of Albert Lea Storm Water Pollution Prevention Program SWPPP (City of Albert Lea, 2006)

- Assessment Report of Selected Lakes Within the Le Sueur River Watershed Minnesota River Basin. (Minnesota Pollution Control Agency, 2010)
- Turbidity Total Maximum Daily Load Study Greater Blue Earth River Basin (Minnesota State University Mankato Water Resources Center, 2012)
- Le Sueur River Watershed Biotic Stressor Identification (Minnesota Pollution Control Agency, 2014)
- Le Sueur River Watershed Priority Management Zone Identification Project (Minnesota Pollution Control Agency, 2014)
- Le Sueur River Watershed Total Maximum Daily Load (Minnesota Pollution Control Agency, 2015)
- Le Sueur River WRAPS Report (Minnesota Pollution Control Agency, 2015)
- Cedar River Watershed District Watershed Management Plan (2009)
- Turtle Creek Watershed District Watershed Management Plan (2003)
- Shell Rock River Watershed District 2014 Second Generation Water Management Plan (2015)
- Shell Rock River Watershed District Biotic Stressor Identification Report (Minnesota Pollution Control Agency, 2014)
- Shell Rock River Total Maximum Daily Load Implementation Plan (Shell Rock River Watershed District, 2013)
- Cedar River Watershed District Stressor Identification Report (Minnesota Pollution Control Agency, 2016)
- Freeborn County Soil and Water Conservation District Annual Plans (2014, 2015, 2016)
- Freeborn Lake Enhancement Plan Draft (Minnesota Department of Natural Resources, 2016)

Assessment of and Implementation Program for Priority Concerns

Limits to Data – Studies not Started or Completed

A challenge in developing targeted and measured actions items pertaining to each of the priority concerns is a lack of high quality, scientifically vetted data. The following is a list of ongoing or yet to be initiated studies pertaining to waterbodies listed as impaired within Freeborn County.

Lake Geneva

- Cedar River Basin Turbidity and Excess Nutrients TMDL in Multiple County, project # PRJ06272-001, in progress started 3/19/08, project target end date, 2011.
- Cedar River Major Watershed (Headwaters) WRAP Strategy, project # PRJ07667-001, in progress started 12/1/15, project end date 2013.

Lake Freeborn

- Greater Blue Earth Basin Turbidity TMDL, project # PRJ05748-001, review in progress, project end date 2010.
- Minnesota River: Turbidity, project # PRJ05660-001, review in progress, project end date 2010.

Pickeral Lake

- Cedar River Basin Turbidity and Excess Nutrients TMDL in Multiple County, project # PRJ06272-001, in progress started 3/19/08, project target end date, 2011.

Albert Lea Lake

- Cedar River Basin Turbidity and Excess Nutrients TMDL in Multiple County, project # PRJ06272-001, in progress started 3/19/08, project target end date, 2011.

Fountain Lake (North, East and West Bays)

- Cedar River Basin Turbidity and Excess Nutrients TMDL in Multiple County, project # PRJ06272-001, in progress started 3/19/08, project target end date, 2011.

White Lake

- Cedar River Basin Turbidity and Excess Nutrients TMDL in Multiple County, project # PRJ06272-001, in progress started 3/19/08, project target end date, 2011.

Cobb River

- Greater Blue Earth Basin Turbidity TMDL, project # PRJ05748-001, review in progress, project end date 2010.
- Minnesota River: Turbidity, project # PRJ05660-001, review in progress, project end date 2010.

Le Sueur River

- Greater Blue Earth Basin Turbidity TMDL, project # PRJ05748-001, review in progress, project end date 2010.
- Minnesota River: Turbidity, project # PRJ05660-001, review in progress, project end date 2010.

Bancroft Creek

- Cedar River Basin Turbidity and Excess Nutrients TMDL in Multiple County, project # PRJ06272-001, in progress started 3/19/08, project target end date, 2011.

Blue Earth River

- Blue Earth Major River Watershed WRAPS Strategy, project # PRJ07666-001, in progress started 9/30/14, project target end date, 2021.
- Greater Blue Earth Basin Turbidity TMDL, project # PRJ05748-001, review in progress, project end date 2010.
- Minnesota River: Turbidity, project # PRJ05660-001, review in progress, project end date 2010.

Woodbury Creek

- Cedar River Basin Turbidity and Excess Nutrients TMDL in Multiple County, project # PRJ06272-001, in progress started 3/19/08, project target end date, 2011.
- Cedar River Major Watershed (Headwaters) WRAP Strategy, project # PRJ06272-001, in progress stated 3/19/08, project end date 2011.

Unnamed Creek (Unnamed Creek to Turtle Creek)

- Cedar River Basin Turbidity and Excess Nutrients TMDL in Multiple County, project # PRJ06272-001, in progress started 3/19/08, project target end date, 2011.
- Cedar River Major Watershed (Headwaters) WRAP Strategy, project # PRJ06272-001, in progress stated 3/19/08, project end date 2011.

Available Data

As stated in the Executive Summary, the following is the comprehensive list of all available relevant data, plans and policy documents that were scanned to help develop targeted and measurable goals and actions for each of the priority concerns:

- Revised Regional Total Maximum Daily Load Evaluation of Fecal Coliform Bacteria Impairments in the Lower Mississippi River Basin in Minnesota (Minnesota Pollution Control Agency, 2006)
- City of Albert Lea Storm Water Pollution Prevention Program SWPPP (City of Albert Lea, 2006)
- Assessment Report of Selected Lakes Within the Le Sueur River Watershed Minnesota River Basin. (Minnesota Pollution Control Agency, 2010)
- Turbidity Total Maximum Daily Load Study Greater Blue Earth River Basin (Minnesota State University Mankato Water Resources Center, 2012)
- Le Sueur River Watershed Biotic Stressor Identification (Minnesota Pollution Control Agency, 2014)
- Le Sueur River Watershed Priority Management Zone Identification Project (Minnesota Pollution Control Agency, 2014)
- Le Sueur River Watershed Total Maximum Daily Load (Minnesota Pollution Control Agency, 2015)
- Le Sueur River WRAPS Report (Minnesota Pollution Control Agency, 2015)
- Cedar River Watershed District Watershed Management Plan (2009)
- Turtle Creek Watershed District Watershed Management Plan (2005)
- Shell Rock River Watershed District 2014 Second Generation Water Management Plan (2015)

- Shell Rock River Watershed District Biotic Stressor Identification Report (Minnesota Pollution Control Agency, 2014)
- Shell Rock River Total Maximum Daily Load Implementation Plan (Shell Rock River Watershed District, 2013)
- Cedar River Watershed District Stressor Identification Report (June 2016)
- Freeborn County Soil and Water Conservation District Annual Plans (2014, 2015, 2016)
- Freeborn Lake Enhancement Plan Draft (Minnesota Department of Natural Resources, 2016)
- Bear Lake Management Plan (Minnesota Department of Natural Resources, 2012)
- Geneva Lake Management Plan (Minnesota Department of Natural Resources, 2002)

The MN DNR has conducted several lake management plans in Freeborn County including plans for Freeborn Lake, Bear Lake and Geneva Lake.

Despite a limit of completed high quality, scientifically vetted data, in 2014, the MPCA and the SWCDs located within the Le Sueur River Watershed (including the Freeborn County SWCD) partnered to identify priority management zones (PMZ) for the purposes of water quality restoration and protection.

The identification of the PMZs were accomplished through the local application of SWCD and County staff using technical resources, including GIS, that identified potential ravine and gully erosion issues, which helped define areas contributing disproportionately to water quality concerns.

Landowners and operators in Freeborn County were selected locally through multiple sources, SWCD and County staff. Staff developed a list of interview questions pertaining to water quality, causes of impairments, farm/operator specific questions regarding their land, conservation programs and BMPs, tiling, nutrients and livestock.

The interview process resulted in the identification of thirty-nine potential BMP projects located within the Cobb Creed and Boot Creek sub watershed of the LeSueur Watershed. Most the identified projects include water and sediment control basins, grass waterways, side inlets and inlet filters, cover crops and filter strips. Where appropriate the overall BMP programs have been, or will hope to be in the future, incorporated into the targeted and measurable actions associated with the priority concerns.

These projects have been prioritized by type, though landowner participation affects timeline.

Prioritization Order	Project Type	Number of Projects
1	Wetland Restoration	3
2	RIM Buffer	5
3	Feedlot Runoff	6
4	WASCB	7
5	Grassed Waterway	6 (2 completed)
6	Filter Side Inlet	3
7	Filter Strip	3
8	Manure Storage	1
9	Tree Planting	1
0	Cover Crop	2 (2 Completed)
0	Grade Stabilization	2 (2 Completed)

The project did result in the development of a figure for Freeborn County that identifies high priority resource concerns based on the location of impaired streams and lakes, highly erodible soils and soils sensitive to aquifers. The figure is located on the following page.

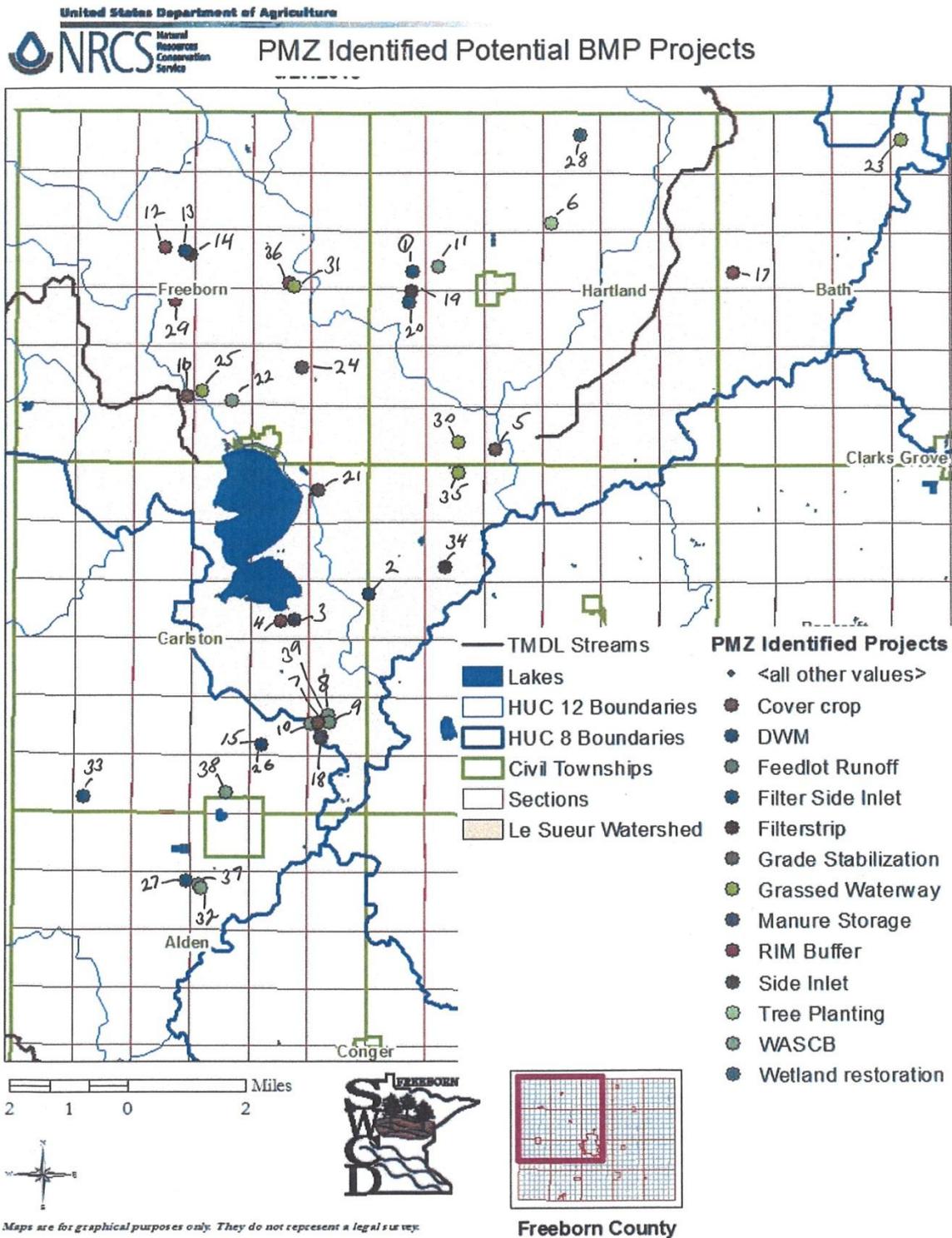
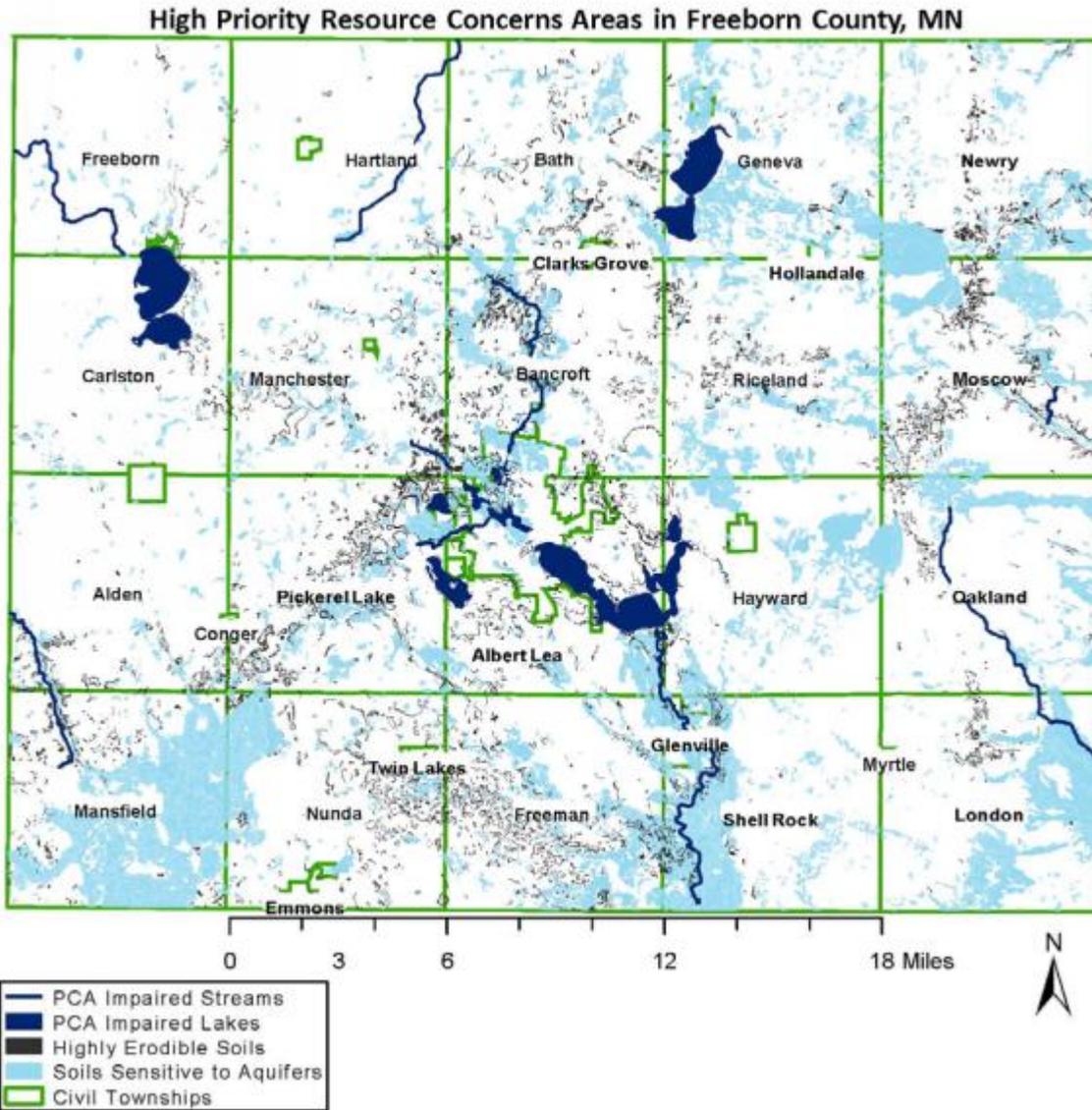


Figure Generated for the PMZ Project Between the MPCA and Freeborn County SWCD



Source: Le Sueur River Watershed Priority Management Zone Identification Project (Minnesota Pollution Control Agency, 2014)

Watersheds and Watershed Management in Freeborn County

As stated in the Executive Summary, there are three active watershed organizations within Freeborn County, the Shell Rock River Watershed District, the Cedar River Watershed District and the Turtle Creek Watershed District. The Shell Rock River Watershed District was established in 2003 under the authority of Minnesota Statutes, Chapter 103D. The District's mission is to implement reasonable and necessary improvements to water related and other natural resources of the District.

The Shell Rock River Watershed District has adopted District Rules to protect and enhance water quality within the its jurisdiction; ensure that proper decisions are made of managing streams, rivers, wetlands, lakes, groundwater and related land resources; and accomplish the purposes of the District.

The Cedar River Watershed District was established in 2007 to address concerns about area flooding and water quality. The District covers about 435 square miles, including portions of Mower, Dodge, Steele and Freeborn counties. In September 2016, the Cedar River Watershed District was awarded a One Watershed, One Plan (1W1P) grant from BWSR. The grant will enable the Cedar River Watershed District to better organize and develop focused implementation plans on the watershed scale. The 1W1P grant enables the Cedar River Watershed District (and local governments supporting the Watershed) to participate in development of a plan. As the plan is being adopted, local governments will help devise implementation strategies to meet the goals of the plan.

Through adoption of the 1W1P, it is anticipated the watershed (specifically the Cedar River Watershed District) will be able to better leverage resources to complete TMDLs, WRAPS and other important information.

Within the Cedar River Watershed is Turtle Creek. The Turtle Creek Watershed District was established in 1968 and includes portions of Freeborn and Mower Counties. The Turtle Creek Watershed District revised and updated its Watershed Management Plan in 2005 in accordance with Minnesota Statutes 103B and 103D and the requirements of Minnesota Rules Chapter 8410. The District has responsibilities under 103B and 103D to assess and manage land and water resources. The plan is set to expire in 2018.

The following are policy statements and goals of the Turtle Creek Watershed Management Plan – manage the watershed from an effective Watershed Management Plan that addresses goals and that meets the needs of the watershed public. Water Quality – encourage and implement practices to improve and project the quality of surface water in the District. Water Quantity Management – effectively manage the flow of floodwaters in the District. Education – provide the residents and landowners with information to assure the protection and improvement of the Turtle Creek Watershed. Lastly the overall goal of the managers is to make the wisest possible use and conservation of the District's water and related resources. The Watershed Plan is intended to be the guide for accomplishment of this goal.

The Watershed District's Management Plans were part of Freeborn County's local water plan review process. The Watershed District's Managements Plans contained goals and objectives that were incorporated into this amendment. The Watershed Districts play an essential part in Freeborn County's local water planning. The pursuit of water resource protection is a common goal in all three Water Management Plans.

The following are policy statements and goals of the Turtle Creek Watershed Management Plan: Watershed Management – manage the watershed from an effective Watershed Management Plan that addresses goals and that meets the needs of the watershed public. Water Quality – encourage and implement practices to improve and protect the quality of surface water in the District. Water Quantity Management – effectively manage the flow of floodwaters in the District. Education – provide the residents and landowners with information to assure the protection and improvement of the Turtle Creek Watershed. Lastly the overall goal of the managers is to make the wisest possible use and conservation of the District’s water and related resources. The watershed plan is intended to be the guide for accomplishment of this goal.

As stated above, the three Watershed District’s Management Plans were part of Freeborn County’s local water plan review process. Where appropriate, the Watershed District’s Managements Plans contained goals and objectives that were incorporated into this amendment. All three Watershed Districts play an essential part in Freeborn County’s local water planning. The pursuit of water resource protection is a common goal in all Water Management Plans. Freeborn County supports the efforts of the Shell Rock, Cedar River and Turtle Creek Watershed Districts in the protection of our water resources.

The figure on the following page illustrates the geographic extent of the watersheds in Freeborn County. Following the figure, a general description of the location of the watersheds are presented.

Blue Earth River Watershed. The west central part of Freeborn County lies within the Blue Earth River Major Watershed; the local drainage is from East to West along Foster Creek and the East Fork of the Blue Earth River.

Le Sueur River Watershed. The northwestern portion of Freeborn is primarily within the Le Sueur River Watershed. Regional drainage is from South to North along the Le Sueur River and South to Northwest along the Big Cobb River and Cobb Creek.

Cannon River Watershed. The northeastern edge of Freeborn County lies within the Cannon River Major Watershed which drains to the North.

Cedar River Watershed. The eastern part of Freeborn County lies primarily within the Cedar River Major Watershed. The regional drainage is from West to Southeast along Deer Creek, Mud Lake Creek, Woodbury Creek and Turtle Creek.

Shell Rock River Watershed. The central portion of Freeborn County is within the Shell Rock River Watershed. In this area the local drainage is from North to South and major drainage channels are Bancroft Creek, Peter Lund Creek, Goose Creek and the Shell Rock River.

Winnebago River Watershed. The southwestern portion of Freeborn County lies primarily within the Winnebago River Major Watershed. In this area the regional drainage is from North to South toward the Minnesota – Iowa border. Local drainage is toward Steward and Lime Creeks.

Priority Concerns in Freeborn County

The following is a list of priority concerns addressed in this plan.

- Aquifers- Groundwater Concerns
- Surface Water Concerns
- Soil and Erosion Concerns
- Waste Disposal and Management Concerns
- Drainage Concerns
- Municipal Wastewater and Storm Water Concerns.

Assessment. Aquifers – Groundwater Concerns

Freeborn County lies within the sedimentary bedrock hydrogeologic area of east-central and southwestern Minnesota. While the glaciers did advance over this area, the sand deposits left in their wake are only used for water supply on a limited basis. The bedrock layers deposited in ancient seas are the primary aquifers in this area. These aquifers generally produce great volumes of water with few limitations.

In Freeborn County, groundwater exists in unconsolidated glacial deposits and in the underlying bedrock. These bedrock aquifers are among the highest water yielding in the United States. These groundwater supplies contained within the bedrock aquifer are adequate for present and foreseeable needs. Estimated water yields in glacial outwash range from 100 to 500 gallons per minute. An aquifer is any geologic unit that is capable of storing and yielding fresh water in usable quantities. Groundwater is usually held in an aquifer, at significant pressure, by the presence of a confining bed above the aquifer. A bedrock aquifer system is a multiple aquifer system that is composed of two or more bedrock aquifers that act hydraulically as a single unit.

The aquifers that underlie Freeborn County are the:

- Cedar Valley – Maquoketa – Galena System
- St. Peter – Prairie du Chien – Jordan System
- Franconia – Ironton – Galesville System
- Mt. Simon – Hinckley System

Current data suggests good hydraulic connection between these bedrock units within each of the four aquifer systems. Most domestic and farm water wells draw supplies from the uppermost bedrock aquifer (Cedar Valley – Maquoketa – Galen Limestones). Specific aquifer recharge or discharge sites have not been identified in this county. A geologic atlas of Freeborn County presents subsurface geologic and hydrologic data is available for review in the Environmental Services Department. The Freeborn County Geologic Atlas has not yet been converted to a digital form and added to the State's GIS system. The following table identifies bedrock layers within Freeborn County.

Bedrock Layers of Freeborn County

Bedrock Name	Description	Bedrock Thickness
Cedar Valley	Primarily Carbonate rock, fine grained limestone or dolomite with some shale and shaley units. Cedar Valley Limestone was deposited during the Devonian age on top of Ordovician age Maquoketa and Galena limestones. Its base marks a major erosional unconformity with the underlying bedrock units.	>300 feet
Maquoketa	Carbonate unit, composed of limestone and dolomite that is often shaley or contains layers of shale.	80 feet
Galena	The carbonate unit that consists mostly of limestone and dolomite with some silty, sandy, and shaley units.	300 feet
Decorah	Primarily a uniform bed of green shale. The top and bottom of the Decorah shale consists of alternating layers of limestone and shale that mark the transition between the underlying Platteville limestone and overlying Galena limestone.	50-60 feet
Platteville-Glenwood	Composite formations are classified as separate bedrock formations based on major differences in lithologic characteristics. Platteville formation is a thin sedimentary limestone. Glenwood is a thin shale formation also encountered in a sedimentary environment.	35 feet
St. Peter	Medium grained quartz sandstone. The lower portion of the St. Peter formation may contain beds of silt or shale.	80-110 feet
Prairie du Chien	Dolomite and sandy dolomite with some thin shale layers and quartz sandstone layers.	350 feet
Jordan	Medium to coarse grained quartzose and sandstone. The base of the Jordan sandstone may contain shale.	80 feet
St. Lawrence	May contain several rock types including dolomite, siltstone, shale, sandstone, and glauconite. Usually characterized by layers of shale, siltstone, and dolomite.	80 feet
Franconia	Fine-grained, glauconitic sandstone. The upper part of the formation may contain shale and dolomite layers similar to the St. Lawrence formation.	120 feet
Ironton-Galesville	Medium to coarse grained quartz sandstone. Classified as separate bedrock formations, although both sandstone units are sources of groundwater.	>60 feet
Eau Claire	Primarily shale and siltstone. Contact with the underlying Mt. Simon sandstone is transitional.	>100 feet
Mt. Simon	Deepest bedrock unit discussed. Characterized as a medium to course grained quartzose sandstone.	Undetermined

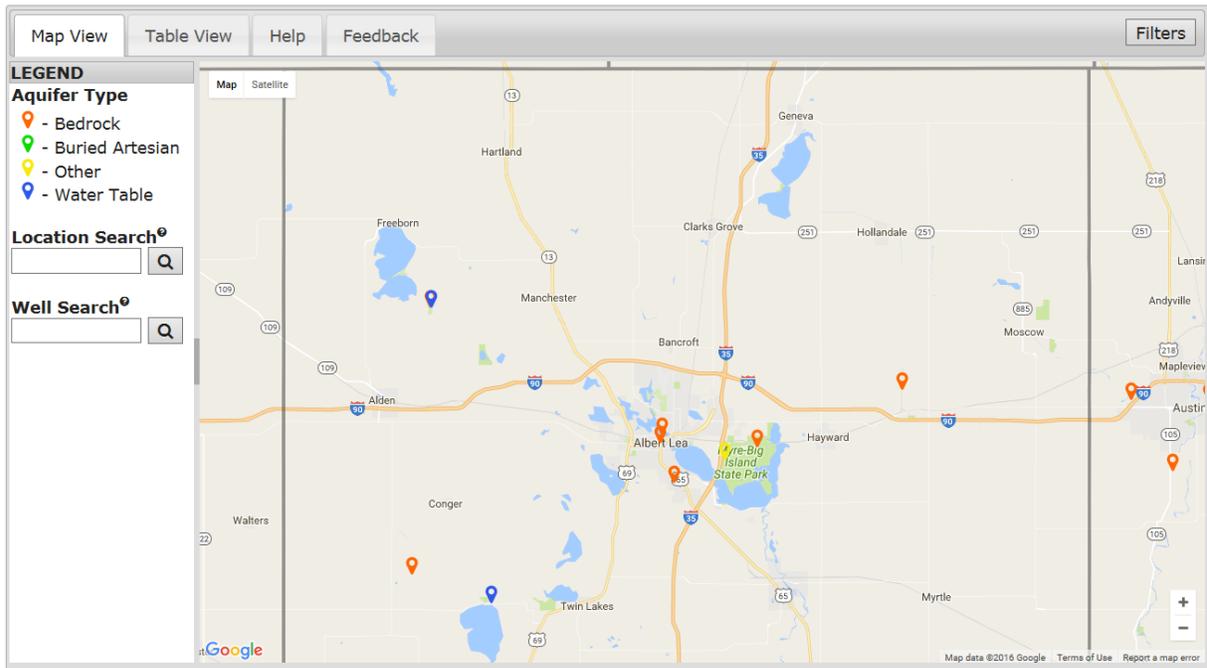
Source: Geologic Atlas of Freeborn County, MN

This area also faces its geologic challenges. Cave, sinkhole and karst features found in southeastern Minnesota (including portions of Freeborn County) can allow quick contamination of groundwater. Many of the surface water features are connected and fed by the ground water sources.

Since 1944, the DNR has managed a statewide network of water level observation wells. Data from these wells are used to assess groundwater resources, determine long term trends, interpret impacts of pumping and climate, plan for water conservation, evaluate water conflicts, and otherwise manage the water resource. There are eight such Cooperative Groundwater Monitoring (CGM) wells located within Freeborn County. The Freeborn County SWCD is under contract with the DNR to measure five of the eight wells monthly and report the readings to the DNR. Readings are also obtained from volunteers at several locations.

The DNR has created an on-line mapping application that illustrates wells that are part of the state-wide CGM within Freeborn County. The following figure illustrates the location of the CGM wells located within Freeborn County.

Location of CGM wells within Freeborn County Cooperative Groundwater Monitoring (CGM)



Source: <http://www.dnr.state.mn.us/waters/cgm/index.html>

Ground water refers to the water beneath the land surface that fills the spaces in rock and sediment. For the most part, ground water comes directly from precipitation or surface water that infiltrates below the land surface. In turn, ground water flows into many streams and lakes, allowing streams to flow beyond rain and snowmelt periods and sustain lake levels during dry spells. Most commonly, we obtain ground water from wells.

Private wells within the county also need protection from potential contamination sources. Many human activities such as urban development, industrial processing, agriculture, chemical spills, and even individual wastewater treatment systems have caused ground water contamination in areas that previously had clean, potable ground water.

Abandoned or unused wells may pose a potential threat to the health, safety, and environment of Freeborn 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.

The Minnesota Department of Agriculture (MDA) is statutorily responsible for the management of pesticides and fertilizer other than manure to protect water resources. The MDA implements a wide range of protection and regulatory activities to ensure that pesticides and fertilizer are stored, handled, applied for disposed of in a manner that will protect human health, water resources and the environment.

The MDA works with the University of Minnesota to develop pesticide and fertilizer Best Management Practices (BMPs) to protect water resources, and with farmers, crop advisers, farm organizations, other agencies and many other groups to educate, promote, demonstrate and evaluate BMPs, to test and license applicators, and to enforce rules and statutes. The MDA has broad regulatory authority for pesticides and has authority to regulate the use of fertilizers to protect ground water. The MDA is the lead agency for all aspects of pesticide and fertilizer environmental and regulatory functions as directed in the Groundwater Protection Act (Minnesota Statute 103H). These include but are not limited to the following:

- Serve as lead agency for groundwater contamination from pesticide and fertilizer nonpoint source pollution.
- Conduct monitoring and assessment of agricultural chemicals (pesticides and nitrates) in ground and surface waters.
- Oversee agricultural chemical remediation sites and incident response.
- Regulate use, storage, handling and disposal of pesticides and fertilizer.

The Minnesota Department of Health stresses assistance and working with water suppliers to assure compliance with the Federal Safe Drinking Water Act. The Minnesota Drinking Water Protection Program protects public health by ensuring a safe and adequate supply of drinking water at all public water systems. These systems include municipalities, manufactured housing developments, businesses, schools, and other facilities that serve water to more than 25 people on a regular basis. MDH does this through carrying out provisions of the Safe Drinking Water Act in Minnesota.

One part of this program is source water protection. MDH staff work with public water suppliers in protecting their source of drinking water whether that be lakes, rivers or groundwater. Specifically related to groundwater, Minnesota has a wellhead protection program where the source aquifers are assessed to their vulnerability to contamination and management strategies are developed by the public water supplies to protect their wells and the groundwater aquifers from contamination. All 63 public water suppliers in Freeborn County use groundwater for drinking water supplies. Detail for each system regarding wells, source aquifer, and source water vulnerability/ susceptibility to contaminant from the land surface can be found in the source water assessments on the MDH website.

MDH has been working with community systems throughout the State for the last several years to develop detailed wellhead protection plans. Where Drinking Water Supply Management Areas have been delineated, these maps can also be accessed from the source water assessments. The accompanying table indicates where the fourteen Freeborn County community systems are in the wellhead protection planning process.

Status of Freeborn County Communities in Wellhead Protection Planning Process

Community Public Water Suppliers	Wellhead Protection Planning Status
Albert Lea	Amended approve in 2016
Alden	Plan completed in 2012
Clarks Grove	Not yet phased into WHP program
Conger	Not yet phased into WHP program
Emmons	Not yet phased into WHP program
Freeborn	Not yet phased into WHP program
Geneva	Not yet phased into WHP program
Glenville	Plan completed in 2012
Hartland	Not yet phased into WHP program
Hayward	Not yet phased into WHP program
Hollandale	Not yet phased into WHP program
Manchester	Not yet phased into WHP program
Myrtle	Not yet phased into WHP program
Twin Lakes	Not yet phased into WHP program
Elmwood Terrance	Not yet phased into WHP program

Source: MDH

The county’s role in wellhead protection is to review these plans and if needed, utilize county authorities and programs to collaborate with the public water suppliers to protect their source aquifer.

Further, the MDH Well Management Program administers the Minnesota Well Code MN Rules Chapter 4725. The Well Management Program protects both public health and groundwater by assuring the proper construction of new wells and borings, and the proper sealing of unused wells and borings.

Implementation Program of Goals, Objectives and Actions. Aquifers - Groundwater Concerns.

Goal #1

Protect aquifer from contamination by water wells.

Objective

1. Require proper construction, maintenance, and abandonment of water wells.

Action to achieve goal

1. Through the County permitting process, help support Minnesota Rules Chapter 4725 "Guide to Water Wells and Borings" during construction, maintenance, and abandonment of water wells.

Partners: Freeborn County, MDH

Timeline: ongoing

Cost: \$1000/yr.

Potential Funding Sources: State funds

2. Through the County permitting process, permit demolitions, requiring proper well sealing to ensure groundwater stays protected and no wells are contaminated.

Partners: Freeborn County, MDH

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: County permit fees

3. Assist in the development of inventory and mapping of existing water wells to prioritize abandonment policy and ensure no abandoned wells are contaminating groundwater.

Partners: Freeborn County, MDH

Timeline: 2018

Cost: \$3,000/yr.

Potential Funding Sources: State funds

4. Assist Public Water Suppliers with implementing wellhead protection plans to ensure groundwater protection.

Partners: Freeborn County, SWCD, MDH

Timeline: as needed

Cost: \$2000/yr.

Potential Funding Sources: State funds

Location: Cities

5. Review and update the County's Land Use Policy Plan to consider addressing wellhead protection efforts.

Partners: Freeborn County, MDH

Timeline: 2020

Cost: \$50,000

Potential Funding Sources: Levy, State and Federal funds

Objective

2. Seal abandoned/ unused wells.

Action to achieve goal

1. Seek and make available cost-share funding for well sealing.

Partners: Freeborn County, Shell Rock River Watershed District, SWCD

Timeline: ongoing

Cost: \$5,000/yr.

Potential Funding Sources: State funds, BMP loans, State cost share funds

Objective

3. Educate and create awareness of water quality to prevent degradation of drinking water from private wells.

Action to achieve goal

1. Offer water testing on private wells to determine the sanitary quality as defined by MN Department of Health - Drinking Water Standards.

Partners: Freeborn County

Timeline: ongoing

Cost: \$5,000/yr.

Potential Funding Sources: State funds and County fees

2. Create well water testing database in County GIS for samples received on private wells to account for changes and trends in ground water quality for informed management decisions. At this time, Freeborn County has seen no nitrates well water samples be above the maximum contaminant level.

Partners: Freeborn County

Timeline: 2017

Cost: \$4,000

Potential Funding Sources: State funds

3. Offer free Nitrates testing at the Freeborn County Fair to county residents to ensure nitrates levels are below the maximum contaminant level.

Partners: Freeborn County, MN Dept. of Ag, MDH

Timeline: ongoing/ 1 day per year at county fair

Cost: \$400/yr.

Potential Funding Sources: State funds

Goal #2

Protect Groundwater from Depletion and Degradation.

Objective

1. Promote groundwater education.

Action to achieve goal

1. Improve and maintain citizens/landowners access to local and regional groundwater data on the Freeborn County website.

Partners: Freeborn County

Timeline: ongoing

Cost: \$500

Potential Funding Sources: State funds

2. Promote Ag Irrigation BMP's offering financial and technical assistance.

Partners: SWCD, NRCS

Timeline: ongoing

Cost: \$1,000/yr. (cost share)

Potential Funding Sources: State and Federal funds

3. Promote Nitrogen application and timing per University of MN recommendations – Soil Health Initiative – through education and financial assistance.

Partners: SWCD, NRCS

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: Local and Federal funds

4. Promote proper use, storage, and disposal of pesticides through County-wide annual collections to limit potential groundwater contamination.

Partners: Freeborn County, SWCD, NRCS

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

Assessment. Surface Water Concerns

The general topographic relief of Freeborn County presents two distinctive features; gently rolling north-south moraines and the depressional basins with boggy and alluvial deposits located to the southeast and eastern areas. Both features are products of the last glacial period, and have subsequently affected soil development, vegetation and wildlife habitat.

An average elevation is about 1,250 feet above sea level, with elevations between 1,150 feet above sea level in the northwestern corner to about 1,280 feet above sea level in the central part of the County. An important statement can be made about the watersheds in Freeborn County “We are a headwater County”. The fact that water does not drain into this County make water resource protection an ongoing priority.

Small hilly areas exist and the most rugged tracts are in Section 16 of Newry Township and Sections 1 and 2 of Pickerel Lake Township (hills rise 50 to 100 feet). Over 65-percent of the County is drained southeastward through the Shell Rock and Cedar Rivers. The northwestern part drains to the Minnesota River via the Le Sueur and Blue Earth River Basins. There are six major watersheds and 74 minor watersheds shaping this topography. The table below details the size of the watersheds in the County.

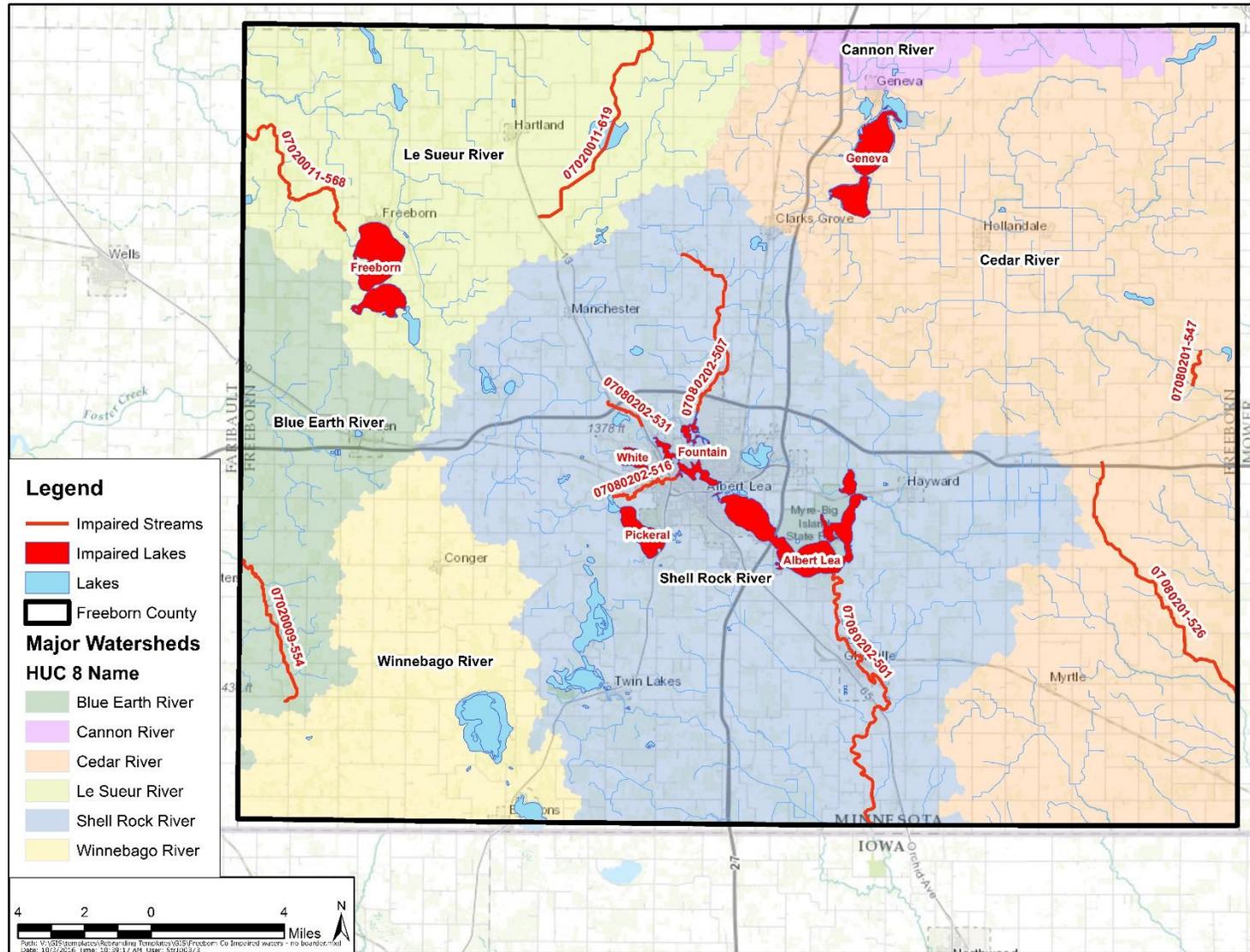
Major Watersheds in Freeborn County

Major Watershed	Minor Watersheds	Square Miles	County Coverage
Shell Rock River	18	246	34%
Cedar River	4	235	33%
Le Sueur River	12	108	15%
Winnebago River	6	71	10%
Blue Earth River	10	50	7%
Cannon River	4	13	<1%

The figure on the following page illustrates the impaired streams and lakes in the watersheds in Freeborn County. On the subsequent pages following the figure are the list of impaired waters in Freeborn County by watershed including the impaired use, impairment cause, impairment status and year added.

As stated previously, a challenge in developing targeted and measured actions items pertaining to the priority concerns of surface water is a lack of high quality, scientifically vetted data. When TMDLs and WRAPS are completed for each of the impaired streams and lakes, a more robust and geographically refined set of targeted and measurable actions will be possible.

Major Watersheds in Freeborn County with Impairments



List of Impaired Waters in Freeborn County by Watershed

Waterbody Name	ID	Impaired Use	Impairment Cause	Impairment Status*	Year Added
Blue Earth River Watershed					
Blue Earth River, East Branch: Headwaters to Brush Cr	07020009-554	Aquatic Life	Fishes Bioassessments	TMDL Required*	2004
Blue Earth River, East Branch: Headwaters to Brush Cr	07020009-554	Aquatic Life	Turbidity	TMDL Required*	2008
Le Sueur River Watershed					
Cobb River: T104 R23W S34, south line to Little Cobb R	07020011-568	Aquatic Life	Fishes Bioassessments	TMDL Required*	2004
Cobb River: T104 R23W S34, south line to Little Cobb R	07020011-568	Aquatic Life	Turbidity	TMDL Required*	2010
Cobb River: T104 R23W S34, south line to Little Cobb R	07020011-568	Aquatic Life	Aquatic Macroinvertebrate Bioassessments	TMDL Required*	2011
Le Sueur River: Headwaters to Boot C	07020011-619	Aquatic Life	Turbidity	TMDL Required*	2010
Le Sueur River: Headwaters to Boot Cr	07020011-619	Aquatic Life	Fishes Bioassessments	TMDL Required*	2011
Le Sueur River: Headwaters to Boot C	07020011-619	Aquatic Consumption	PCB in Fish Tissue	TMDL Required*	2012
Freeborn: AT FREEBORN	24-0044-00	Aquatic Recreation	Nutrient/Eutrophication Biological Indicators	TMDL Required*	2011
Shell Rock River Watershed					
Waterbody Name	ID	Impaired Use	Impaired Cause	Impairment Status	Year Added
Shell Rock River: Albert Lea Lk to Goose Cr	07080202-501	Aquatic Life	Ammonia (Un-ionized)	Removed from Inventory - New Analysis Shows Attainment	1994
Shell Rock River: Albert Lea Lk to Goose Cr	07080202-501	Aquatic Recreation	Fecal Coliform	TMDL Approved	1994
Shell Rock River: Albert Lea Lk to Goose Cr	07080202-501	Aquatic Life	Turbidity	TMDL Required*	2002
Shell Rock River: Albert Lea Lk to Goose Cr	07080202-501	Aquatic Life	pH	TMDL Required*	2008
Shell Rock River: Albert Lea Lk to Goose Cr	07080202-501	Aquatic Life	Aquatic Macroinvertebrate Bioassessments	TMDL Required*	2012
Shell Rock River: Albert Lea Lk to Goose Cr	07080202-501	Aquatic Life	Fishes Bioassessments	TMDL Required*	2012
Shell Rock River: Albert Lea Lk to Goose Cr	07080202-501	Aquatic Life	Oxygen, Dissolved	TMDL Required*	2012
Unnamed creek: T103 R22W S36, north line to Unnamed ditch	07080202-531	Aquatic Recreation	Escherichia coli	TMDL Required*	2012
Shell Rock River Watershed (continued)					

Waterbody Name	ID	Impaired Use	Impaired Cause	Impairment Status	Year Added
Bancroft Creek (County Ditch 63): CD 63 to Fountain Lk	07080202-507	Aquatic Recreation	Escherichia coli	TMDL Required*	2012
Unnamed creek: Mud Lk to Fountain Lk	07080202-516	Aquatic Life	Turbidity	TMDL Required*	2010
Albert Lea: AT ALBERT LEA	24-0014-00	Aquatic Recreation	Nutrient/Eutrophication Biological Indicators	TMDL Required*	2008
Fountain: East Bay: IN ALBERT LEA	24-0018-01	Aquatic Recreation	Nutrient/Eutrophication Biological Indicators	TMDL Required*	2008
Fountain: West Bay: IN ALBERT LEA	24-0018-02	Aquatic Consumption	Mercury in Fish Tissue	TMDL Approved	2012
Fountain: West Bay: IN ALBERT LEA	24-0018-02	Aquatic Recreation	Nutrient/Eutrophication Biological Indicators	TMDL Required*	2008
Fountain: North Bay	24-0018-03	Aquatic Consumption	Mercury in Fish Tissue	TMDL Approved	2012
Pickeral: ALBERT LEA	24-0025-00	Aquatic Recreation	Nutrient/Eutrophication Biological Indicators	TMDL Required*	2008
White	24-0024-00	Aquatic Recreation	Nutrient/Eutrophication Biological Indicators	TMDL Required*	2012
Turtle Creek Watershed					
Waterbody Name	ID	Impaired Use	Impaired Cause	Impairment Status	Year Added
Geneva: AT GENEVA	24-0015-00	Aquatic Recreation	Nutrient/Eutrophication Biological Indicators	TMDL Required*	2012
Unnamed creek: Unnamed cr to Turtle Cr	07080201-547	Aquatic Life	Aquatic Macroinvertebrate Bioassessments	TMDL Required*	2012
Cedar River Watershed					
Waterbody Name	ID	Impaired Use	Impaired Cause	Impairment Status	Year Added
Woodbury Creek: Headwaters to Cedar R	07080201-526	Aquatic Recreation	Fecal Coliform	TMDL Required*	2006

Source: MPCA

*Impairment status of "TMDL Required" means it's either ongoing or not yet started.

Pollutant source summary for streams and rivers

E. coli - Likely sources of bacteria include wastewater treatment facilities (WWTFs), inadequate subsurface sewage treatment systems (SSTS), Municipal Separate Storm Sewer System (MS4) communities, and livestock.

Livestock – Both feedlots and pasture are present throughout the County. Livestock can contribute bacteria to the watershed through runoff from poorly managed feedlots as well as direct loading if allowed access to streams or lakes. Additional runoff can occur through manure applications.

WWTFs- Human waste can be a significant source of *E. coli* during low flow periods. Ten WWTFs discharge into the impaired stream reaches addressed in this report. Controlled discharge facilities are not likely to be a source during low flow periods, however continuous discharge systems are likely a source during low flow periods. Rarely, during extreme high flow conditions, WWTFs may also be a source if they become overloaded and have an emergency discharge of partially or untreated sewage, known as a bypass.

Inadequate SSTS – Without a currently complete inventory of septic systems County-wide, it is difficult to

know for certain the rate of compliance for septic systems across both the individual watershed and full County. It is estimated that of the approximate 3,885 septic systems in the county, approximately 45-percent of those systems are thought to be failing to protect groundwater. This is based on the estimated age of the existing septic systems. These systems discharge partially treated or untreated sewage and are potentially a continuous source of bacteria. The proportion contributed by these sources tends to be more significant during lower stream flow conditions.

MS4 Communities – The City of Albert Lea is an MS4 community. The MS4 permitting program gives operators of municipal separate storm sewer systems approval to discharge stormwater to lakes, rivers and wetlands in Minnesota. It requires cities to establish a stormwater pollution prevention program that includes public education, illicit discharge elimination, construction-site runoff controls, and stormwater best management practices. The primary goal of the MS4 general permit is to improve water quality by reducing pollutants in stormwater discharges. Specifically, the program aims to ensure proper management of stormwater discharges into waters of the state.

Pollutant source summaries for lakes

Freeborn County has an interest in protecting not only the water contained in these lakes, but also the streams, wetland, and watershed surrounding them. Protection for these natural resources is vital to the protection of lakes. These waters provide a vital habitat for fish and wildlife, as well as a place for people to fish, hunt, trap, boat, and swim. Substantial amounts of water are stored in these areas can seep into the ground to recharge ground water aquifers. Lakes can also store excess water in times of flooding and provide an important reserve of surface water during times of drought.

Phosphorus can come from a variety of sources including natural sources such as runoff from forested, grassland and shrub areas that include decomposing vegetation, soil loss and wildlife waste. Manmade sources include crop land including applied manure, fertilizers, soil loss and organic material. Feedlots sources include manure and soil loss, pasture land sources include manure from livestock and wildlife, organic material and decomposing vegetation. Wetlands and open water can export Phosphorus through suspended solids and organic debris.

Inadequate SSTS –As was stated in the section above for streams and rivers as it pertains to lakes, without a currently complete inventory of septic systems County-wide, it is difficult to know for certain the rate of compliance for septic systems across both the individual watershed and county.

A lake watershed management plan is a written document that lists known information about a lake, defines existing conditions and problems, and lays out instruction for short and long term management of the lake. The lake management plan provides direction for the future activities of the lake association and other concerned about the lake. It helps define a path to reach the goals set by the lake association. The MN DNR has conducted several lake management plans in Freeborn County including plans for Freeborn Lake, Bear Lake, and Geneva Lake.

DNR Shoreland

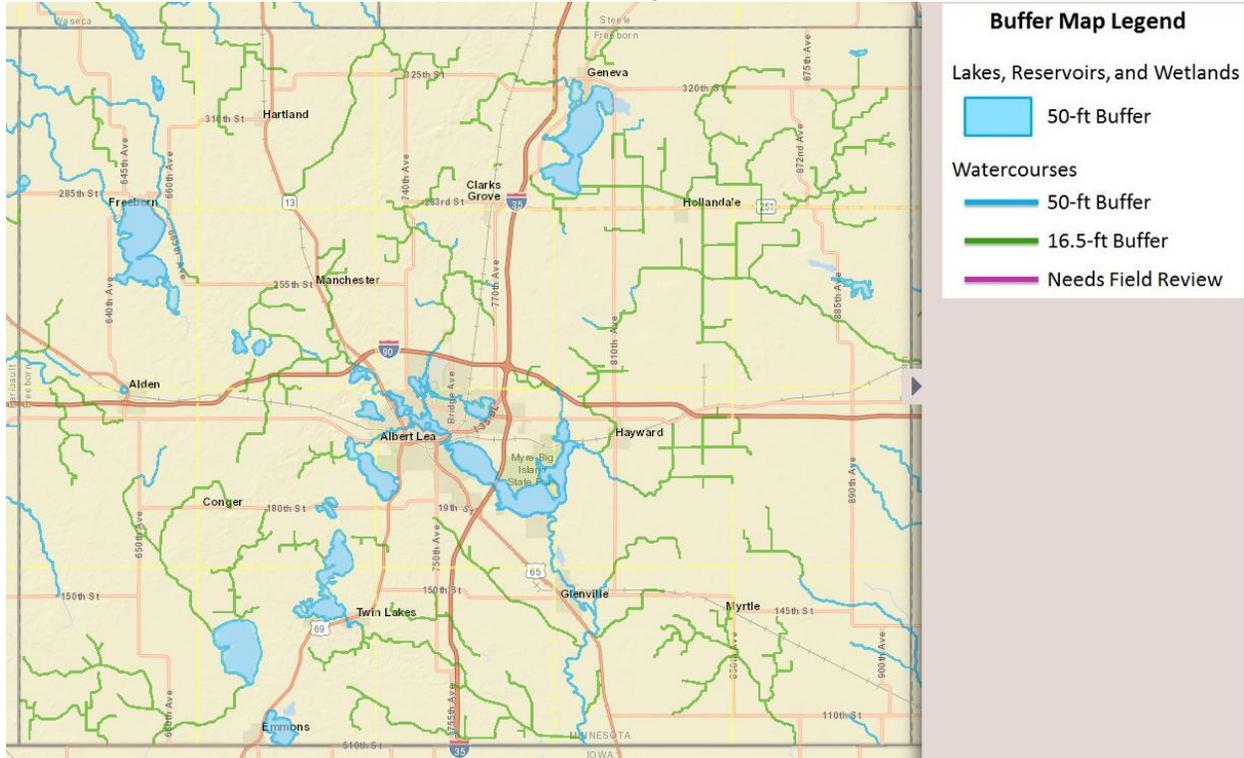
Public waters are designated as such to indicate which lakes, wetlands and watercourses over which the DNR has regulatory jurisdiction. The statutory definition of public waters includes public waters and public waters wetlands and can be referenced in Minnesota Statute 103G.005.

The Minnesota Legislature has delegated responsibility to local governments in the state to: regulate the subdivision, use and development of shorelands of public waters, and preserve and enhance the quality of surface waters through the development and adoption of State standards. Those state standards are pursuant to the authorization and policies contained in Minnesota Statute Chapter 103F, Chapter 394, and Minnesota State Rules 6120.2500-6120.3900, 6105.0010-6150.0250 and 6150.1550-6105.1700.

Freeborn County adopted the Minnesota Shoreland Act and has revised and adopted DNR Shoreland Rules. Both the protected waters and wetlands inventory and protected waters and wetland maps are currently not in digital GIS form. Paper copies of both the inventory and the map can be viewed through the DNR and the Freeborn County Environmental Services Department. Further the list of specific bodies defined as shoreland are available in GIS form within the Freeborn County Environmental Services Department.

The following figure illustrates the buffers required on DNR designed shoreland and public ditches as defined in the state buffer law (MN Statute 103F.48). The on-line mapping application was created from two sources of data: the Public Waters Inventory (PWI) and a public ditch layer created from data provided by local drainage authorities. This on-line mapping application (and figure below) does not replace the PWI maps. A reduced size of the PWI figure is in Appendix B as a general reference.

Buffered Waterbodies and Ditches in Freeborn County



Source: on-line DNR Buffer Map Viewing Application. <http://acrgis.dnr.state.mn.us/gis/bufferviewer>

The following tables illustrate those waterbodies classified as protected waters by the DNR with the appropriate shoreland classification, general location and public waters ID.

Shoreland Classification of Lakes in Freeborn County

DNR Shoreland Classification – Natural Environment Lake		
Name	Township/City	PWID
Newry Lake	Newry	24-4
Wetland NW Shore Geneva Lake	Geneva	24-13
Geneva Lake	Geneva/Bath	24-15
Goose Lake	Albert Lea	24-17
Lower Twin Lake	Nunda	24-27
Bear Lake	Nunda	24-28
Upper Twin Lake	Nunda/Pickerel Lake	24-31
Eberhart Lake	Pickerel Lake	24-32
Church Lake	Pickerel Lake	24-33
Sugar Lake	Manchester	24-37
Halls Lake	Manchester	24-38
School Section Lake	Manchester	24-40
Freeborn Lake	Freeborn/Carlston	24-44
Spicer Lake	Freeborn	24-45
Penny Lake	Freeborn	24-48
Trenton Lake	Freeborn	24-49
Mud Lake	Pickerel Lake	24-68
Unnamed	Moscow	24-75
DNR Shoreland Classification – Recreational Development Lake		
Name	Township/City	PWID
Albert Lea Lake	Hayward/A. Lea	24-14
White Lake	A. Lea/Pickerel	24-24
Pickerel Lake	A. Lea/Pickerel	24-25
State Line Lake	Nunda	24-30
DNR Shoreland Classification –General Development Lake		
Name	Township/City	PWID
Fountain Lake	A. Lea/Bancroft	24-18

Source: DNR Shoreland Classification for Freeborn County, MN

Shoreland Classification of Rivers and Streams in Freeborn County

DNR Shoreland Classification – Agricultural River	
Name	Location by Township and Range
Cobb Creek	Sec. 13, T103N R23W to Sec. 16, T104N R23W
	Sec. 17, T104N R23W to Sec. 07, T104N R22W
Boot Creek	Sec. 06, T104N R22W to Sec. 06, T104N R22W
Unnamed to Geneva Lake	Sec. 07, T104N R22W to Sec. 18, T104N R20W (Basin 15)
Unnamed Tributary	Sec. 06, T103N R20W to Sec. 06, T103N R20W
Unnamed to Turtle Creek	Sec. 20, T103N R20W to Sec. 20, T103N R20W
Unnamed to Turtle Creek	Sec. 31, T103N R19W to Sec. 30, T103N R19W
Orchard Creek (OC)	Sec. 12, T102N R19W to Sec. 13, T102N R19W
Unnamed to OC	Sec. 14, T102N R19W to Sec. 25, T102N R19W
Mud Lake Creek	Sec. 29, T012N R19W to Sec. 32, T102N R19W
	Sec. 04, T101N R19W to Sec. 13, T101N R19W
Unnamed Tributary	Sec. 14, T101N R19W to Sec. 24, T101N R19W
Unnamed to Cedar River	Sec. 34, T101N R19W to Sec. 35, T101N R19W
Bancroft Creek (BC)	Sec. 28, T103N R21W to Sec. 32, T103N R21W (Basin 18)
Unnamed to BC	Sec. 09, T103N R21W to Sec. 09, T103N R21W
Unnamed to BC	Sec. 15, T103N R21W to Sec. 15, T103N R21W
Unnamed to BC	Sec. 20, T103N R21W to Sec. 21, T103N R21W
Unnamed to Fountain Lake	Sec. 03, T102N R21W to Sec. 04, T102N R21W (Basin 17) (Basin 18)
Unnamed to A. Lea Lake	Sec. 01, T102N R21W to Sec. 07, T102N R20W (Basin 14)
Peter Lund Creek	Sec. 21, T102N R20W to Sec. 07, T102N R20W (Basin 14)
Unnamed to Fountain Lake	Sec. 26, T103N R22W to Sec. 06, T102N R21W (Basin 18)
Unnamed from Sugar Lake	Sec. 28, T103N R22W to Sec. 28, T103N R22W (Basin 37)
Unnamed from Halls Lake	Sec. 29, T103N R22W to Sec. 20, T103N R22W (Basin 38)
Unnamed to Fountain Lake	Sec. 13, T102N R22W to Sec. 08, T102N R21W (Basin 25) (Basin 18)
Unnamed to A. Lea Lake	Sec. 09, T102N R21W to Sec. 09, T102N R21W (Basin 18) (Basin 14)
Unnamed Tributary	Sec. 08, T101N R20W to Sec. 08, T101N R20W
Goose Creek (GC)	Sec. 11, T101N R22W to Sec. 13, T101N R22W (Basin 27)
Unnamed to Lower Twin Lake	Sec. 02, T101N R22W to Sec. 02, T101N R22W (Basin 31) (Basin 27)
Lime Creek	Sec. 20, T101N R22W to Sec. 29, T101N R22W (Basin 28)
Steward Creek (CD #23)	Sec. 14, T102N R23W to Sec. 19, T102N R23W
East Branch Blue Earth R	Sec. 05, T101N R23W to Sec. 19, T102N R23W
Foster Creek (FC)	Sec. 04, T102N R23W to Sec. 31, T103N R23W
Unnamed to FC	Sec. 33, T103N R23W to Sec. 30, T103N R23W

Source: DNR Shoreland Classification for Freeborn County, MN

Aquatic Invasive Species (AIS)

The DNR deems Aquatic Invasive Species (AIS) as species that are not native to Minnesota and cause harm to economic prosperity, environment, and human health. These include: purple loosestrife, reed canary grass, Eurasian water milfoil, zebra mussels, and invasive carp, among others.

The spread of AIS has led to habitat alteration, ecosystem degradation, and a loss of bio-diversity due to increased competition for resources. In addition, AIS disrupts the use of public waters, especially recreational opportunities. Because of this, it is illegal to possess, transport, or introduce any aquatic plants or animals within Minnesota that are designated as 'prohibited and regulated' invasive species by the DNR.

In 2014, a county tax bill was passed that provides funds for AIS prevention. Each year, \$10 million will be provided to Minnesota counties state-wide to support AIS prevention programs. AIS local program aid is distributed to each eligible county based on a formula of the number of watercraft trailer parking spaces. The DNR has identified 11 watercraft trailer access points along lakes and rivers in Freeborn County. Within in those 11 access points the DNR has determined there are 122 watercraft trailer parking spaces.

To gain access to the available AIS local prevention aid, counties must either develop a local AIS prevention plan or adopt a County Board resolution, outlining how AIS funds will be used. Freeborn County's aim is to educate the public of these species, as well as how to reduce and eliminate the spread of AIS. In addition, the Freeborn County Sheriff's office will assist through enforcement and education of AIS laws.

The most updated list of Infected Waters produced by the DNR as of September 28, 2016 states there are no infected waters identified in Freeborn County. However, staff have indicated that Chinese Mystery Snail is present in the channels between Fountain and Albert Lea Lakes. Curly-leafed pondweed is present in Pickerel, Fountain and Albert Lea Lakes. Purple Loosestrife is present County-wide.

Implementation Program of Goals, Objectives and Actions. Surface Water Concerns

Goal #1

Address impaired and unimpaired surface waters.

Objective

1. Educate the public and elected officials about the concerns and importance of TMDL and the WRAPS requirements.

Action to achieve goal

1. Develop implementation projects to address sub-watershed level impacts to reduce pollutants causing impairments, as part of an approved implementation plan.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District.

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: Levy, State funds

2. Coordinate agriculture water management issues and conservation drainage issues through the promotion of Ag BMPs.

Partners: Freeborn County, SWCD, USDA

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: Levy

3. Assist the MPCA in development of TMDL and WRAPS by major watershed for pollutants.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, MPCA, Cedar River Watershed District

Timeline: ongoing

Cost: \$1,000/TMDL

Potential Funding Sources: Levy, State funds

4. Provide technical assistance throughout the TMDL study and implementation study. Freeborn County will share water quality/quantity data collected for use in identifying impaired waters with partners.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, MPCA, Cedar River Watershed District

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: Levy

5. Continue the citizen precipitation monitoring programs where over 20 volunteers take daily rain measurements, reporting for the State Climatology Office.

Partners: Freeborn County, SWCD, State Climatology Office

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: Levy and State funds

Goal #2

Manage watersheds to reduce bacteria, nutrients, chemicals, and sediments from entering surface waters.

Objective

1. Encourage Best Management Practices.

Action to achieve goal

1. Participate in low interest loan, cost share, and incentive programs for “Best Management Practice” implementation.

Partners: Freeborn County, SWCD, NRCS

Timeline: ongoing

Cost: \$100,000/yr.

Potential Funding Sources: Ag BMP Loans, State and Federal funds

2. Promote decreased soil compaction and increased water infiltration through perennial vegetation, cover crops, reduced tillage, crop rotation, reduced impervious surfaces, temporary water storage, and storm water reuse.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, NRCS, Cedar River Watershed District

Timeline: ongoing

Cost: \$5,000/yr.

Potential Funding Sources: Levy, State and Federal funds

3. Provide technical assistance and educate landowners of existing cost share programs through outreach and demonstration.

Partners: Freeborn County, SWCD, NRCS

Timeline: ongoing

Cost: \$10,000/yr.

Potential Funding Sources: Levy

4. Promote and assist with maintaining existing BMPs and improving their effectiveness.

Partners: Freeborn County, SWCD, NRCS

Timeline: ongoing

Cost: \$5,000

Potential Funding Sources: Levy, State funds

5. Staff will seek local, state, and federal grant funding to protect surface waters and promote cost share opportunities.

Partners: SWCD, Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed District

Timeline: ongoing

Cost: \$5,000

Potential Funding Sources: State and Federal funds

6. Identify water storage locations by watershed participation basis to reduce downstream impacts and funding sources for such activities, focusing largest watersheds first.

Partners: SWCD, Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed District

Timeline: ongoing

Cost: \$1,000

Potential Funding Sources: Levy

7. Support the implementation of urban rain gardens for the filtration of nutrients from surface waters.

Partners: Shell Rock River Watershed District

Timeline: ongoing

Cost: \$50,000-\$150,000

Potential Funding Sources: Levy, State funds

Location: Cities

8. Promote MN Ag Water Quality Certification Program and assist landowners and operators in getting certified.

Partners: SWCD, NRCS

Timeline: ongoing

Cost: \$6,000

Potential Funding Sources: State funds

9. Communicate with legislators and other government agencies of the need and demand for BMPs, cost share funding, and technical assistance funding.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, NRCS

Timeline: ongoing

Cost: \$500

Potential Funding Sources: Levy

Objective

2. Educate the public: including service clubs, students, fair attendees, and residents.

Action to achieve goal

1. Provide technical assistance to landowners with outreach, education and demonstration sites to reduce agricultural chemical and nutrient impacts.

Partners: SWCD, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$10,000

Potential Funding Sources: Levy

2. Develop an education presentation on point and non-point pollution sources and promote new BMP's through demonstrations.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$500

Potential Funding Sources: Levy

3. Facilitate effective water resource management through education and public outreach using newsletters, articles, radio, County fair booth and speaking opportunities with local service clubs.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed District

Timeline: ongoing

Cost: \$2,000

Potential Funding Sources: Levy, State funds

Goal #3

Manage watersheds to control surface water runoff.

Objective

1. Coordinate with agencies' efforts on remediating water quality through a comprehensive strategy on watershed management.

Action to achieve goal

1. Hold water upstream to maximize flood flow efficiently and minimize bounce to manage sediment transport.

Partners: Shell Rock River Watershed District

Timeline: 2 years (2017-2018)

Cost: \$200,000

Potential Funding Sources: Levy, State funds

2. Preserve flood plain areas through effective floodplain management.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed District, DNR

Timeline: ongoing

Cost: \$500

Potential Funding Sources: Levy

3. Require post-land development surface water run-off rates not exceed pre-land development run-off rates – on land disturbances greater than one acre during the process of each building or zoning permit issued that involves land disturbances.

Partners: Freeborn County

Timeline: ongoing

Cost: \$1,000

Potential Funding Sources: Levy

Goal #4

Partner with other agencies to improve surface waters.

Objective

1. Participate in programs.

Action to achieve goal

1. Continue to participate in MN Department of Agriculture Best Management Loan Program, offering low interest loans through the MN Department of Ag for the purpose of improving water quality. These include, but not limited to: conservation tillage equipment, erosion control, wetland restoration, chemical management, well sealing, feedlot improvements and manure management, and septic systems.

Partners: Freeborn County, SWCD, MDA

Timeline: ongoing

Cost: \$150,000/yr

Potential Funding Sources: State funds

2. Participate in GBERBA and support GBERBA grant applications to provide cost share opportunities. Previous projects have included stream bank protection, cover crops, water control structures, tile intakes, etc.

Partners: Freeborn County, SWCD, GBERBA

Timeline: ongoing

Cost: \$2,500

Potential Funding Sources: State funds

3. Continue to participate in DNR floodplain management through the National Flood Insurance Program (NFIP) to assist local landowners with flooding and prevention.

Partners: Freeborn County, DNR

Timeline: ongoing

Cost: \$500

Potential Funding Sources: Levy

Goal #5

Improve water quality of lakes.

Objective

1. Apply treatment train methods to incorporate upland headwaters and in lake practices.

Action to achieve goal

1. Support projects with the goal of internal nutrient reduction the for the benefit of improved water quality. Projects include the reclamation of Goose, Sugar, Halls, and School Section Lakes to remove Common Carp and reduce internal nutrient re-suspension, and support the removal of phosphorus laden sediment to reduce re-suspension in Fountain Lake.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed District.

Timeline: ongoing

Cost: \$100,000

Potential Funding Sources: Levy, State funds

2. Support lake restoration management techniques for improving water quality, lake vegetation, fisheries, and to protect, preserve and promote habitat.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, DNR

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: Levy

3. Support the phosphorus remediation of lakes by the means of removing internal and external loading of phosphorus by targeting rough fish populations, managing upland sediment loading, and removal of bottom sediment.

Partners: Shell Rock River Watershed District

Timeline: 2017

Cost: \$15,000,000

Potential Funding Sources: Levy, Sales Tax, State bonding

4. Support habitat rehabilitation that focuses on improving water quality and clarity through the implementation of both in lake and upper watershed treatments.

Partners: Shell Rock River Watershed District

Timeline: 5 years (2016-2021)

Cost: \$200,000

Potential Funds Sources: Levy, State funds

5. Apply for federal/ state/ local funding for lake management implementation.

Partners: Freeborn County, Shell Rock River Watershed District, MPCA, BWSR

Timeline: as needed

Cost: \$500/yr.

Potential Funding Sources: Levy, State and Federal funds

6. Continue to support and participate with Department of Natural Resources and Ducks Unlimited in the development and implementation of management plans for county lakes.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Ducks Unlimited, DNR

Timeline: as needed

Cost: \$500

Potential Funding Sources: Levy

7. Create a dam inventory for maintenance, replacement and ownership identification purposes on public and private dams.

Partners: Freeborn County, SWCD

Timeline: 2019

Cost: \$5,000

Potential Funding Sources: Levy, State funds

Goal #6

Provide recreational opportunities on public waters.

Objective

1. Increase public access to public waters

Action to achieve goal

1. Work to upgrade public access to Twin Lakes, Pickerel Lake, Bear Lake, State Line Lake, Geneva Lake, and Freeborn Lake.

Partners: Freeborn County, Shell Rock River Watershed District, DNR

Timeline: 2019

Cost: \$15,000/ access

Potential Funding Sources: Levy, State funds

Location: Twin Lakes, Pickerel Lake, Bear Lake, State Line Lake, Geneva Lake, Freeborn Lake

Goal #7

Protect and preserve existing shorelands.

Objective

1. Improve stream bank and lakeshore development practices to achieve a no-net-loss of natural shoreland.

Action to achieve goal

1. Follow DNR standards for management of shoreland areas -MN Statute 103F, Chapter 394, State Rules 6120.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$5,000

Potential Funding Sources: State funds

2. Implement and enforce MN buffer law as directed in MN Statute 103F.

Partners: Freeborn County, SWCD, NRCS, BWSR, DNR

Timeline: ongoing

Cost: \$50,000/yr.

Potential Funding Sources: Levy, State funds

3. Identify shoreland erosion sites and prioritize run-off sites for remediation through the development of GIS or other digital sources, prioritizing areas identified as critical through enforcement of the Minnesota Buffer Law.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: Levy, State funds

4. Implement best management practices to reduce erosion, sedimentation, and nutrients in shoreland areas, prioritizing areas identified through enforcement of the Minnesota Buffer Law.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$5,000/yr.

Potential Funding Sources: Levy, State and Federal funds

5. Work to preserve existing natural riparian vegetation or re-establish it, through re-planting of grasses, trees, and brush to reduce erosion and keep sedimentation from entering surface waters.
Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District

Timeline: 2018

Cost: \$1,000/yr.

Potential Funding Sources: Levy, State funds

6. Preserve and enhance shoreland and riparian zones around lakes and water courses with an emphasis of promoting native species.

Partners: Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$20,000

Potential Funding Sources: Levy, State funds

7. Apply for federal/state/local funds for construction of riparian buffers to reduce sedimentation, excessive nutrients, and assist with bank stabilization.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$20,000/yr.

Potential Funding Sources: Levy, State funds

8. Pursue aquatic management areas to improve riparian areas.

Partners: Freeborn County, Shell Rock River Watershed District, DNR

Timeline: 2020

Cost: \$1,000

Potential Funding Sources: Levy

9. Require construction site erosion control standards in shoreland areas, including but not limited to: silt fences/curtains, erosion control blankets, and temporary seeding, to reduce erosion and sedimentation from entering surface waters.

Partners: Freeborn County, MECA, MPCA

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: Levy

10. Provide building contractor educational opportunities on erosion control and practices at annual contractor meeting.

Partners: Freeborn County, MECA

Timeline: ongoing

Cost: \$500

Potential Funding Sources: Levy

Location: Annual Meeting in Albert Lea

11. Require animal grazing management practices to limit erosion potentials in specific identified target areas by reviewing Feedlot Permits in shoreland areas.

Partners: Freeborn County, SWCD

Timeline: ongoing

Cost: \$1,000

Potential Funding Sources: Levy

12. Provide educational opportunities on shoreland protection through website and education events. These events typically include local service clubs, churches, schools, and the Freeborn County fair.
Partners: Freeborn County, SWCD
Timeline: 2017
Cost: \$500
Potential Funding Sources: State funds

Goal #8

Support Aquatic Invasive Species (AIS) prevention programs.

Objective

1. Increase public awareness and participation in prevention.

Action to achieve goal

1. Educate residents and businesses in ways to reduce/eliminate the risk of AIS spread. This will be done through speaking opportunities at schools, service clubs, and the county fair, and through signage and articles in newsletters and newspapers.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District, DNR

Timeline: ongoing

Cost: \$10,000/yr.

Potential Funding Sources: State funds

Location: County wide, County fair, area businesses, area clubs

2. Develop educational materials to reduce the risk of AIS spread.

Partners: Freeborn County, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: State funds

Objective

2. Increase county enforcement resources.

Action to achieve goal

1. Encourage staff, businesses, and individuals to submit samples of suspected AIS to the MN DNR.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District, DNR

Timeline: ongoing

Cost: \$100

Potential Funding Sources: State funds

2. Ensure Sheriff's Office is trained to enforce and educate AIS laws as perform compliance checks.

Partners: Freeborn County, DNR

Timeline: ongoing

Cost: \$10,000/yr.

Potential Funding Sources: State funds

Objective

3. Manage existing populations of AIS.

Action to achieve goal

1. Support efforts in pest management to control/eliminate populations of AIS.

Partners: Freeborn County, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District, DNR

Timeline: ongoing

Cost: \$50,000

Potential Funding Sources: State funds

2. Install/maintain fish barriers to prevent movement of new AIS in Lower and Upper Twin and as identified.

Partners: Shell Rock River Watershed District, Ducks Unlimited, Freeborn County, DNR

Timeline: 2017

Cost: \$300,000

Potential Funding Sources: State funds

Location: Twin Lakes

3. Manage rough fish populations, currently focusing common carp to determine spawning and over-wintering habitat.

Partners: Shell Rock River Watershed District, DNR, Freeborn County

Timeline: 2016-2017

Cost: \$50,000

Potential Funding Sources: State funds

Location: State Line Lake, Albert Lea Lake

4. Support stocking of game fish species through dialog with the DNR.

Partners: Shell Rock River Watershed District, DNR, Freeborn County

Timeline: ongoing

Cost: \$1,000

Potential Funding Sources: Levy

5. Support winter seining of rough fish through electronic tracking to study patterns and pathways.

Partners: Shell Rock River Watershed District, DNR

Timeline: ongoing

Cost: \$40,000

Potential Funding Sources: State funds

6. Possible employment of chemical treatment to supplement the efficiency of drawdowns for controlling carp on Goose Lake.

Partners: Shell Rock River Watershed District, Ducks Unlimited, DNR

Timeline: 2016-2017

Cost: \$200,000

Potential Funding Sources: State funds

Location: Goose Lake

Assessment. Soil Erosion and Soil Quality Concerns

Erosion is the loss of soil from the land. The rate and extent of erosion is increased through poor cultivation practices, which leave the land unprotected and vulnerable; rain and water runoff, causing the soil to become detached; removing plan cover; and having too many animals causing overgrazing in sensitive areas. When these happen, both agricultural areas and the natural environment contribute to the pollution through sedimentation that occurs to the surface waters.

Soil erosion has impacts the effect both onsite (at the place where the soil is detached) and offsite (wherever the eroded soil ends up). Prevention of soil loss due to erosion is necessary to reduce sediment and other attached pollutants from reaching surface waters, helping to improve water quality downstream.

Some 81-percent of productive land is farmed or used for rotational animal pastures in Freeborn County. Further, USDS Farm Service Agency policy requires that producers participating in several programs submit an annual report regarding all cropland use on their farms. For the end of year cropland totals for 2015, there were 362,982 total acres planted in Freeborn County.

The soils in Freeborn County are mostly deep and loamy. These soils range from tight clays to porous sands and gravels. They formed extensively in glacial till and less extensively in glacial outwash, lacustrine sediments, alluvium and organic material. Varying parent materials, topography and native vegetation reflect the number of different soils present. These broad classifications are a detailed inventory of 64 soil types. This general soil map is used for land use planning. The Freeborn County Soil Atlas is available for viewing at the SWCD and Environmental Services Department. The following table highlights the general soil classifications in Freeborn County.

Soils of Freeborn County

Group I Soils: Soils formed Mostly in Glacial Till on Uplands			
Soil Classification	Soil Parent Material	Drainage	Location
1. Webster-Canisteo	Fine Texture Glacial Till	Poorly-Very Poorly Drained	Nearly Level Uplands
2. Webster-Clarion Nicollet	Fine/Medium Texture Glacial Till	Poorly-Well Drained	Gently Undulating Uplands
3. Clarion-Webster	Fine Texture Glacial Till	Well-Poorly Drained	Level to Rolling Uplands Plans & Ground Moraines
4. Clarion-Webster Storden	Loamy Medium & Moderately Fine Texture Glacial Till	Well-Poorly Drained	Nearly Level to Hilly End Moraines
5. Lester-Webster-Glencoe	Medium & Moderately Fine Texture Glacial Till	Well-Poorly Drained	Nearly Level to Hilly End Moraines
6. Hamel-Kikkenny Lerdal	Medium & Moderately Fine Texture Glacial Till	Poorly-Well Drained	Nearly Level to Moderately Steep Upland Plains & Ground Moraines
Group II: Soils Formed in Loess Mantled Glacial Till on Uplands			
Soil Classification	Soil Parent Material	Drainage	Location
7. Maxcreek-Merton	Medium Texture Glacial Till	Poorly-Very Poorly Drained	Nearly Level End Moraine
8. Maxcreek-Blooming-Newry	Medium Texture Glacial Till	Very Poorly-Well Drained	Gently Sloping End Moraines
9. Maxfield-Skyberg	Loess Mantle over Medium Texture Glacial Till	Poorly-Somewhat Poorly Drained	Nearly Level Ground Moraines
Group III: Soils Formed in Outwash Materials on Outwash Plains and Stream Terraces			
Soil Classification	Soil Parent Material	Drainage	Location
10. Biscay-Mayer	Medium Texture Sediments over Course Textured Outwash	Poorly Drained	Nearly Level Broad Outwash Flats & Terraces
11. Dickenson-Esterville-Dakota	Medium Course Texture & Medium Texture Sediments over Course Texture Outwash	Well Drained	Nearly Level Outwash Plains & Stream Terraces
12. Masban-Fairhaven	Medium Textured Sediments over Course Texture Outwash	Poorly-Well Drained	Nearly Level Outwash Plains & Stream Terraces
Group IV: Soils Formed in Organic Material and Loamy Sediments on Lake Plains & in Depressions on Uplands			
Soil Classification	Soil Parent Material	Drainage	Location
13. Palms-Muskego-Blue Earth	Mucky Organic Material & Loamy Lake Sediment	Very Poorly Drained	Nearly Level Former Lake Depressions Upland

Source: Soil Survey of Freeborn County, Minnesota, USDA.

Within Freeborn County, there are four major land uses:

Cropland

- Soils in Freeborn County vary widely in their potential for major land uses and is the dominate enterprise for the area. Soils 1, 2, 7, and 9 are used intensively for growing row crops. Soils 3, 4, 5, and 6 are also well suited but management is needed to prevent erosion.

Woodland

- Because of present conditions, there is not a large interest in woodland development. Soils 5 and 6 have good potential for woodlands.

Wildlife Habitat

- Potential for wildlife habitat is good throughout the county. Wildlife habitat is almost fully developed in soils 4, 5, 11, and 12, which have a variety of conditions and habitat types.

Urban

- Only a small part of the county is classified as urban or build-up areas. Soil 11 has the best potential for further urban development provided parts of included areas that are subject to flooding are avoided. Soil 6 has been used for urban development. Soils 1, 2, 9, 10, and 13 have poor potential for all types of urban development.

Implementation Program of Goals, Objectives and Actions. Soil Erosion and Soil Quality Concerns

Goal #1

Protect and preserve topsoil.

Objective

1. Recognize that the topsoil has a generational value to promote a county wide culture of preserving and regenerating the topsoil.

Action to achieve goal

1. Educate landowners on soil erosion practices and promote soil health practices, through soil health demonstrations, informational meetings, and workshops

Partners: Freeborn County, SWCD, NRCS

Timeline: ongoing

Cost: \$10,000/yr.

Potential Funding Sources: Levy, State and Federal Fund

2. Provide building contractor educational opportunities on erosion control and practices through annual contractor meeting.

Partners: Freeborn County, SWCD, MECA

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: Levy

Location: Annual meeting in Albert Lea

Objective

2. Provide support resources for conservation.

Action to achieve goal

1. Participate in MN Dept. of Agriculture Best Management Loan Program (Ag BMP) offering low interest loans through the MN Department of Ag for the purpose of improving water quality through erosion practices. These include, but not limited to: conservation tillage equipment, erosion control, wetland restoration, chemical management, well sealing, feedlot improvements and manure management, and septic systems.

Partners: Freeborn County, SWCD, MDA

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: State funds

2. Support enrollment of highly erodible lands into Federal Conservation Reserve Program (CRP), Reinvest in Minnesota Program (RIM), Environmental Quality Incentives Program (EQIP).

Partners: Freeborn County, SWCD, NRCS

Timeline: ongoing

Cost: \$20,000

Potential Funding Sources: State and Federal funds

Objective

3. Reduce soils loss due to concentrated flow during storm events.

Action to achieve goal

1. Implement and administer the soil loss ordinance as directed in MN Statute 103F.

Partners: SWCD, Freeborn County, BWSR

Timeline: ongoing
Cost: \$1,000/yr.
Potential Funding Sources: Levy and State funds

2. Implement MN construction site erosion and sediment control planning through supervision by Freeborn County Building Inspection staff as part of building permit process and inspections.

Partners: Freeborn County
Timeline: as needed
Cost: \$500/yr.
Potential Funding Sources: Permit fees

3. Prioritize HEL, PHEL, and lands close to surface waters and concentrated flow areas (both mapped in GIS).

Partners: Freeborn County, SWCD
Timeline: ongoing
Cost: \$1,000/yr.
Potential Funding Sources: Levy

Goal #2

Control soil erosion.

Objective

1. Promote urban and agricultural land management to reduce pollutants from reaching the surface waters in the streams, lakes and rivers.

Action to achieve goal

1. Promote conservation programs and practices that reduce soil erosion and provide assistance to landowners to implement projects to reduce delivery to surface waters.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, NRCS, Cedar River Watershed District

Timeline: ongoing
Cost: \$30,000
Potential Funding Sources: Levy, State and Federal funds

2. Incentivize funding of controlled tile drainage systems on ag fields through pursuit of grant opportunities.

Partners: Freeborn County, SWCD
Timeline: 2018
Cost: \$1,000/yr.
Potential Funding Sources: State funds

Objective

2. Educate the public on erosion control.

Action to achieve goal

1. Promote soil health practices through local data collecting, demonstrations, field days, and peer to peer learning.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, NRCS, Cedar River Watershed District

Timeline: ongoing
Cost: \$5,000/yr.
Potential Funding Sources: Levy, State funds

2. Provide public education for the protection of sensitive lands through website, education and outreach.

Partners: Freeborn County, SWCD

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: Levy

3. Educate landowners on TMDL and WRAPS efforts to reduce erosion, sedimentation of surface waters and other water quality impairments.

Partners: Freeborn County, SWCD

Timeline: as plans are completed

Cost: \$500/yr.

Potential Funding Sources: Levy

4. Engage local partners (NRCS, Conservation Groups, Lake Associations) to foster new relationships on conservation approaches.

Partners: Freeborn County, SWCD

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: Levy

Objective

3. Reduce soil erosion from water and wind.

Action to achieve goal

1. Support wind erosion conservation practices (tree plantings, seeding of erosion area) through annual SWCD tree sale. In 2015, over 9,200 trees were planted throughout Freeborn County, providing financial, aesthetic, wildlife, soil, water, and air quality benefits.

Partners: Freeborn County, SWCD

Timeline: ongoing

Cost: \$5,000/yr.

Potential Funding Sources: Levy, Federal funds

Objective

4. Reduce soils loss due to concentrated flow during storm events.

Action to achieve goal

1. Enhance the promotion of buffer strips, filter strips, grassed waterways, and sediment control basins.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$10,000

Potential Funding Sources: Levy

2. Implement conservation measures to repair identified eroded landscapes, prioritizing those identified by the LeSueur Watershed PMZ effort. These efforts include wetland restorations, water and sediment control basins, RIM buffers, waterways, filter strips, and tree planting.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$50,000

Potential Funding Sources: Levy, State funds

Assessment. Waste Disposal and Management Concerns

SSTS

Subsurface Sewage Treatment Systems (SSTS) treat and disperse wastewater from residences and commercial buildings. Nearly all rural residents in Freeborn County rely on these systems to treat sewage from their household. The improper design, location, installation, use, and maintenance of SSTS adversely affects the public health, safety, and general welfare by the discharge of inadequately treated sewage to the surface and groundwater. Minnesota Rules Chapter 7080 provides the minimum standards and criteria for the design, location, use, and maintenance of SSTS.

Freeborn County has an estimated population of 9,725 within the rural community that relies on septic systems. The importance of design, location, use, and maintenance of these systems is actively pursued. It is estimated that of the approximate 3,885 septic systems in the county, approximately 45-percent of those systems are thought to be failing to protect groundwater. This is based on the estimated age of the existing septic systems and compliance inspections

As such, Freeborn County implemented a County wide SSTS inventory. Through this, the goal is to find and replace non-compliant systems, largely focusing on those deemed to be imminent threats to public health and safety. This program is reviewing existing septic systems in one township per year. Currently this program has completed two years of inventory covering Newry and Geneva townships. This program should be completed in 2029.

Freeborn County has adopted a Sanitary Sewage Treatment System Ordinance in April 2009. It regulates the siting, design, installation, alternation, operation, maintenance, monitoring, and management of all SSTS within the County's jurisdiction (all lands of the County except for incorporated areas that administer a SSTS program by ordinance). Compliance inspections are required at property transfer as well as during a permit request for expansion of the building that is serviced by a SSTS.

Feedlots

The Minnesota Pollution Control Agency (MPCA) administers rules regulating livestock in Minnesota. The feedlot rule (Minnesota Rules Chapter 7020) regulates the collection, transportation, storage, processing and disposal of animal manure and livestock processing activities. The rules apply to all aspects of livestock production, areas including the location, design, construction, operation and management of feedlots, feed storage, storm water runoff and manure handling facilities.

Many counties have entered into cooperative agreements with the MPCA to administer the State feedlot program within their specific county. Freeborn County is a delegated feedlot county. And as such, has the responsibility for implementing the State Feedlot regulations including registration, permitting, inspections, education and assistance and complaint follow-up for feedlots less than 1,000 animal units in size.

Freeborn County has a detailed feedlot inventory database in the Environmental Services Department. Currently there are 463 feedlots in the County. Of the 463 feedlots, only 19 are within DNR designated shoreland areas. The following table illustrates the number of feedlots based on animal unit in Freeborn County.

Feedlots in Freeborn County

Animal Units	In DNR Shoreland	Not in DNR Shoreland	Total
10-49	3	109	112
50-99	8	129	137
100-299	6	123	129
300-999	2	67	69
1,000+	0	16	16
Total	19	444	463

As stated above, Freeborn County is a MPCA Delegated County to administer the feedlot program. Existing feedlot sites receive random and scheduled on-site inspections from the Freeborn County Feedlot Officer or MPCA staff. When a new feedlot is planned, engineered plans are required for the manure storage pits. A conditional use permit may be required dependent upon animal units at the site or the location of animal buildings. Land application of animal manure is a potential pollution issue. Specific manure storage requirements, manure application rates, set-back distances from water wells, surface waters and field tile inlets or culverts are enforced with all feedlot sites. Livestock production is an important industry in Freeborn County.

Solid Waste

Pollution from landfills or dumpsites is an important concern to Freeborn County residents. If left unmanaged, mixed municipal waste, demolition debris or hazardous waste poses a threat to ground and surface waters. One closed solid waste landfill is managed by the City of Albert Lea.

Two permitted demolition landfills are currently operating within Freeborn County. All mixed municipal waste generated within the County is transported to be landfilled outside of Freeborn County. Clandestine dump sites are recognized, cleaned up and closed. The EPA estimates 4 pounds of hazardous waste is accumulated by each person per year. Freeborn County holds 25 mobile collection annual events to direct these items away from landfills. Freeborn County is committed to an effective policy, clearly defined, with applied practices that minimize impacts from this pollutant source.

Implementation Program of Goals, Objectives and Actions. Waste Disposal and Management Concerns

Goal #1

Protect surface water and ground water from subsurface sewage treatment system (SSTS) contamination.

Objective

1. Require all residences and businesses that are not connected to municipal wastewater treatment system to have an approved SSTS.

Action to achieve goal

1. Follow MPCA MN Rules Chapter 7080 through 7083.

Partners: Freeborn County, MPCA

Timeline: ongoing

Cost: \$18,800/yr.

Potential Funding Sources: Levy, State funds

Objective

2. Require proper education of SSTS professionals and provide education to landowners on SSTS.

Action to achieve goal

1. Seek licensing of all SSTS designers, installers, pumpers and septage haulers that perform work in County.

Partners: Freeborn County, MPCA, University of Minnesota

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

2. Provide education to landowners and contractors on properly installed and functioning SSTS through annual meeting, onsite education, county fair booth, and speaking opportunities at various local service clubs.

Partners: Freeborn County, MPCA, Contractors

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: State funds

Objective

3. Eliminate direct discharges of sewage to surface or ground water by identifying and repairing or replacing nonconforming sewage treatment/disposal systems.

Action to achieve goal

1. Apply for state and local cost-share funds for SSTS installations to assist low income residents.

Partners: Freeborn County

Timeline: ongoing

Cost: \$25,000/yr.

Potential Funding Sources: State funds (when available)

2. Continue county wide SSTS inventory, beginning in Newry Township in 2015 and completing inventory in 2029 (one township per year). Currently Newry and Geneva Townships are completed.

Partners: Freeborn County

Timeline: ongoing (through 2029)

Cost: \$10,000/yr.

Potential Funding Sources: State funds

Location: 1 township per year. Map of locations and year located on page93.

3. Apply for funding to bring SSTS to the city of Myrtle (if additional funds are needed).

Partners: Freeborn County

Timeline: 2019

Cost: \$50,000

Potential Funding Sources: State funds

Location: Myrtle

Goal #2

Protect surface water and groundwater resources from feedlot/animal waste contamination.

Objective

1. Perform routine compliance inspections to verify producers are abiding by Feedlot Rules and Statutes.

Action to achieve goal

1. Enforce MN Rules Chapter 7020 - MPCA Feedlot Permit program standards.

Partners: Freeborn County, SWCD, MPCA

Timeline: ongoing

Cost: \$40,000/yr.

Potential Funding Sources: State funds

Objective

2. Educate landowners on the importance of a nutrient management plan.

Action to achieve goal

1. Continue to provide education to feedlot owners/operators on best management of animal waste and setbacks for application to prevent feedlot runoff and over application.

Partners: Freeborn County

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

2. Pursue Federal and State funding to mitigate or eliminate pollution from feedlots and animal manure largely due to erosion and runoff.

Partners: Freeborn County, SWCD

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds, Federal EQIP

Goal #3

Manage animal manure for land applications.

Objective

1. Minimize the impact that surface applied manure from animal feedlots have on surface water quality.

Action to achieve goal

1. Follow and implement Minnesota Rules 7020 for animal feedlot, manure storage, and land application of liquid and solid waste products.

Partners: Freeborn County

Timeline: ongoing

Cost: \$40,000/yr.

Potential Funding Sources: State funds

2. Provide manure management workshops to educate producers on the correct practices of applying manure properly, proper application rate, and abiding by appropriate setbacks.

Partners: Freeborn County, NRCS, MDA, University of Minnesota Extension, MPCA

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: State funds

3. Require and provide construction inspections of new feedlot facilities.

Partners: Freeborn County

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: State funds

4. Provide manure management plan review every four years with all producers to ensure compliance and improve future plans.

Partners: Freeborn County

Timeline: every four years

Cost: \$1,000/yr.

Potential Funding Sources: State funds

5. Provide opportunities and incentives to owner/operators for planning and training of feedlot operations.

Partners: Freeborn County

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

6. Continue to administer MN Rules Chapter 7020 and Freeborn County Feedlot Ordinance.

Partners: Freeborn County

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: State funds

7. Utilize GIS for mapping of feedlot sites and identification of environmentally sensitive areas to control manure application. These may include manure runoff, setback issues, and over application of manure.

Six areas have already been identified through the LeSueur Watershed PMZ effort.

Partners: Freeborn County

Timeline: ongoing

Cost: \$1,500/yr.

Potential Funding Sources: State funds

8. Require soil sampling of manure application acres for nutrient analysis as required by MN Rules Chapter 7020 on any feedlot over 100 animal units.

Partners: Freeborn County

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: State funds

Objective

2. Educate producers and locals and assist producers with management plans.

Action to achieve goal

1. Host/participate in field demonstrations plots, new equipment displays, and calibration of injectors/spreaders at the Southern MN Land Use Expo.

Partners: Freeborn County

Timeline: ongoing

Cost: \$1,500/yr.

Potential Funding Sources: State funds

2. Assist MPCA, MDA, U of M, and MN Extension Offices on grazing of lands and nutrient management plans through the continued requirement of Manure Management plan on registered feedlots.

Partners: Freeborn County, MPCA, MDA, U of M Extension

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

3. Utilize GIS/GPS technologies in developing Manure Management, Nutrient Management, Pasture Management, and Rotational Grazing Plans to assist producers.

Partners: Freeborn County

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: State funds

4. Encourage involvement in the Livestock Environmental Quality Assurance (LEQA) Program to encourage water quality and implement appropriate practices.

Partners: Freeborn County, MN Dept of Ag

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

5. Provide technical assistance of manure land applications with implementation of Best Management Practices, such as maintaining state and local setbacks, incorporating within 48 hours, and avoiding slopes greater than 2%, to reduce impacts to ground and surface water.

Partners: Freeborn County, SWCD, Area 7 Technical Service Staff

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: State funds

Goal #4

Protect surface water and ground water from mixed solid waste contamination.

Objective

1. Maintain an effective solid waste management system.

Action to achieve goal

1. Effectively administer the Freeborn County Solid Waste Management Plan and ordinance and relevant State rules.

Partners: Freeborn County, MPCA

Timeline: ongoing

Cost: \$30,000/yr.

Potential Funding Sources: State funds

2. Continue to effectively administer the County wide recycling program.

Partners: Freeborn County, Recyclers Association of MN (RAM)

Timeline: ongoing
Cost: \$400,000/yr.
Potential Funding Sources: Levy, State funds

3. Continue to participate in agricultural waste chemical collections and agricultural waste pesticide container collection programs, offering one collection annually.

Partners: Freeborn County, MPCA, MDA
Timeline: ongoing
Cost: \$3,000/yr.
Potential Funding Sources: State funds

4. Provide public education on the reduction, reuse, and recycling of solid waste through the County website and other media.

Partners: Freeborn County, Recyclers Association of MN (RAM)
Timeline: ongoing
Cost: \$1,000
Potential Funding Sources: State funds

5. Continue to effectively administer the County wide hazardous waste collection program to ensure proper disposal of these items. Freeborn County offers 15 hazardous waste collections through its mobile program. In addition, Freeborn County offers 2 electronics collections for the proper disposal and recycling of televisions and computers.

Partners: Freeborn County, MPCA
Timeline: ongoing
Cost: \$10,000/yr.
Potential Funding Sources: State funds

Goal #5

Protect surface water and ground water from hazardous waste pollution.

Objective

1. Maintain an effective solid waste management system.

Action to achieve goal

1. Develop a public education program for residential/commercial/industrial hazardous waste disposal to improve knowledge on the proper disposal.

Partners: Freeborn County, MPCA
Timeline: 2018
Cost: \$1,000
Potential Funding Sources: State funds

2. Apply for federal/state funds for clandestine dumpsite clean-up.

Partners: Freeborn County, MPCA
Timeline: as needed
Cost: \$2,400
Potential Funding Sources: State and Federal funds

3. Prompt discussion for legislation at the national level to require manufacturers to label products for proper end disposal and product stewardship.

Partners: Freeborn County
Timeline: ongoing
Cost: \$3,000
Potential Funding Sources: State funds

4. Continue to provide hazardous waste collections to ensure proper disposal of paint and various chemicals. Freeborn County offers 15 hazardous waste collections through its mobile program.

Partners: MPCA, MDA, Paint Care, Freeborn County

Timeline: ongoing

Cost: \$10,000/yr.

Potential Funding Sources: Donations, Paint Care, Levy, State funds

Assessment. Drainage Concerns

Freeborn County has approximately 400,000 acres of cropable land with over 1,400 miles of roadway, over 350 miles of county drainage ditches and 391 miles of county tile lines. Freeborn County maintains these county ditch and tiles systems in accordance with Minnesota Statute 103E. Beyond these County systems there are many more miles of natural waterways, private constructed open ditches, grass waterways and tile lines draining excess surface and subsurface water from the rich farmland in Freeborn County. Such drainage allows for timely entry to fields for various cropping activities and is intended to reduce stress on germinating and growing crops caused by standing water or saturated soils in root zones. Freeborn County has completed determination and establishment of the one rod buffer on 100% of public ditches.

The County actively addresses establishment and maintenance of grass filter strips on both sides of ditches and roads. Erosion areas are scattered throughout Freeborn County (small concentration in the north central area). One percent is considered high erosion in the shoreland district and approximately six percent high erosion in other areas. Freeborn County consists of 94-percent low erosion priority area.

Although approximately 1-percent is considered Urban Residential land use, they contribute significant amounts of storm water runoff. A surface water sampling effort is underway through the efforts of the Shell Rock River Watershed District that is providing diagnostic data on storm water quality. River, ditch, creek and lake water quality sampling program also continues. The City of Albert Lea is phasing in changes to the storm water catch basins along new urban development areas.

These drainage systems have a direct effect on water quantity and quality of the receiving streams, river, and lakes. Traditionally the ditch and tile systems were built and viewed to get rid of excess water so the land could be used for various uses, primarily farming. Most recently these same systems are being looked upon as multipurpose drainage systems. There are many BMPs that can be placed in, on, adjacent to, or removed from the open ditches and tile systems to positively impact water quality as well as store water or move excess water off the landscape.

These BMPs include but are not limited to: Linear in-ditch sediment basins, multi-state ditches, water storage areas, woodchip bio-reactors, wetland restoration, controlled drainage, saturated buffers, alternative surface inlets, rock inlets, alternative side inlets, grass waterways, water and sediment control basins, parallel terraces, grade stabilization structures, In-stream rock chutes, cross vanes, J-hooks, and armoring curves in the ditches.

Many of these BMPs can be constructed as a treatment train to provide an added effect on water quality within a drainage system to maximize local and downstream outcomes. Freeborn County will look towards adding in new BMPs as technology and data advances.

Wetlands

Wetlands are the lands where saturation with water is the dominant factor determining the nature of soil development and the types of plants and animal communities living in the soil and on its surface. Wetlands are lands transitional between terrestrial and aquatic systems that enhance biodiversity. The water table is usually at or near the surface of the land. In general, wetlands can be considered among the most productive ecosystems in the world. Freeborn County has an estimated 10,000 acres of pre-settlement wetlands remaining.

In 1991, the legislature approved the Minnesota Wetland Conservation Act (WCA). The goal of this act is to promote no-net-loss of wetlands and to protect the benefits wetlands provide. Any persons proposing to drain or fill a wetland must first try to avoid disturbing the wetland. If disturbance is unavoidable, the impact must be minimized as much as possible. If no other alternative exists, any loss of wetland function and values must be replaced. Certain wetland activities are exempt from the act allowing projects with minimal impact or projects located on land where certain pre-established land uses are present to proceed without regulation.

Freeborn County administers WCA on a local level with assistance by BWSR, SWCD, DNR, and the U.S. Army Corps of Engineers. The City of Albert Lea administers WCA within their municipal boundary. The Freeborn County SWCD is a TEP member and provides comment on wetland applications. The following table is a summary of Circular 39 Type Wetlands found in the National Wetland Inventory of Freeborn County.

Circular 39 Wetland Types and Acreage in Freeborn County

Circular 39 Wetland Type	Approximate Acres
1	765
2	246
3	8,800
4	216
5	363
6	278
7	70
Riverine	200

Approximately 95-percent of the County is considered upland. Freeborn County's National Wetland Inventory map is included on page 87.

Implementation Program of Goals, Objectives and Actions. Drainage Concerns

Goal #1

Maintain drainage systems while improving agricultural productivity as well as improving drainage water quality, understanding the systems are a part of a larger tributary system.

Objective

1. Apply watershed based principles to multipurpose drainage system management.

Action to achieve goal

1. Ensure that the Public Drainage Systems are operated and maintained in accordance with State Drainage Law (MN Chapter 103C, 103D and 103E) and other applicable regulations.

Partners: Freeborn County

Timeline: ongoing

Cost: \$60,000/yr.

Potential Funding Sources: Levy

2. Educate the public about drainage options and BMPs to improve water quality.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Turtle Creek Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: Levy

3. Promote programs that provide financial and technical assistance to install BMP's in, on, adjacent to, or removed from open ditches and tile that will improve cropland productivity and water quality.

Partners: Freeborn County, SWCD

Timeline: ongoing

Cost: \$5,000/yr.

Potential Funding Sources: Levy

4. Support drainage research and local demonstration projects that improve cropland productivity, and water quality.

Partners: Freeborn County, SWCD, MPCA

Timeline: 2018

Cost: \$1,000/yr.

Potential Funding Sources: Levy, State funds

Objective

2. Apply a treatment train approach to water quality improvements on a ditch watershed basis.

Action to achieve goal

1. Develop a Water Management Plan for one or two specific ditch systems per year in the Watersheds for BMP installation in a predetermined prioritized area.

Partners: MPCA, BWSR, MDA, SWCD

Timeline: 2019

Cost: \$10,000/yr.

Potential Funding Sources: Levy, State funds

Objective

3. Protect surface waters from storm water drainage of sediment, nutrients and chemicals.

Action to achieve goal

1. Maintain or improve existing public ditch systems. Freeborn county Ditch Authority has completed a 100% determination and establishment of 1 rod buffer on all public ditches. A system inspection is completed every 60 months and may include enforcement if violations are discovered.

Partners: Freeborn County

Timeline: ongoing

Cost: \$800,000/yr.

Potential Funding Sources: Levy

2. Inspect and maintain vegetative buffer strips, on 5 year schedule as required by MN state statute 103E.

Partners: Freeborn County, SWCD

Timeline: ongoing. Full system inspection completed every 5 years.

Cost: \$7,000/yr.

Potential Funding Sources: Levy

3. Encourage landowners of private ditches to establish and maintain vegetative buffer strips to assist with water quality and erosion prevention.

Partners: Freeborn County, SWCD

Timeline: ongoing

Cost: \$3,000/yr.

Potential Funding Sources: Levy

4. Educate landowners on land treatment options and available cost-share programs to minimize transport of sediment and other pollutants.

Partners: SWCD

Timeline: ongoing

Cost: \$3,000/yr.

Potential Funding Sources: Levy

5. Identify ditches, streams, wetlands, rivers, and lakes that contribute excess sediment into surface waters, through continuous ditch inspections. Many of these locations have already been identified through the LeSueur River Watershed, Cedar River Watershed, and Shell Rock River Biotic Stressor reports.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, MPCA, Turtle Creek Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$5,000

Potential Funding Sources: Levy, State funds

6. Measure surface water flows and analyze water for nutrient/chemical/sediment loading to establish and track trends on water quality.

Partners: Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed District

Timeline: ongoing

Cost: \$20,000

Potential Funding Sources: Levy, State funds

7. Follow MPCA Total Maximum Daily Load (TMDL) recommendations for remediation of waters.

Partners: Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed District

Timeline: when individual TMDLs are completed

Cost: \$50,000

Potential Funding Sources: Levy, State funds

8. Increase infiltration and reduce compaction by promoting perennial vegetation, cover crops, reduced tillage, and reduced impervious surfaces.

Partners: Freeborn County, SWCD, City of Albert Lea

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: Levy

9. Promote drainage associated BMPs such as Nitrogen bioreactor, saturated buffer, controlled drainage, alternative tile intakes, alternative side inlets, grade stabilization structures, ditch sediment traps, and other BMPs.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed, NRCS, U of M Extension, Ag organizations

Timeline: ongoing

Cost: \$5,000/yr.

Potential Funding Sources: Levy, State and Federal funds

10. Promote BMPs that reduce runoff, store water, or increase infiltration.

Partners: SWCD, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$5,000/yr.

Potential Funding Sources: Levy

Goal #2

Preserve existing and create wetlands.

Objective

1. Promote the preservation or creation of wetlands.

Action to achieve goal

1. Freeborn County and City of Albert Lea, acting as local governing units for the implementation of the Wetland Conservation Act, will follow US Corps of Engineers, DNR, and BWSR wetland regulations.

Partners: Freeborn County, City of Albert Lea, SWCD, BWSR, ACOE

Timeline: ongoing

Cost: \$10,000/yr.

Potential Funding Sources: State funds

2. Apply for state funding and assistance to control invasive species on public and private land.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District, Turtle Creek Watershed

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

3. Develop an inventory of possible sites for wetland restoration and water storage.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District

Timeline: 2017

Cost: \$1,000/yr

Potential Funding Sources: Levy, State funds

4. Assist with land acquisition, easement, or short term contracts for wetland restoration and water storage.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District

Timeline: ongoing
Cost: \$10,000/yr.
Potential Funding Sources: Levy, State funds

5. Prioritize drained wetlands for use as water holding basins and restore wetland use.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$1,000/yr.

Potential Funding Sources: State funds

6. Provide assistance to applicants for wetland banking through WCA and ACOE.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, ACOE, Cedar River Watershed District

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

7. Promote no net loss of wetlands.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District, Cedar River Watershed District

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: State funds

8. Apply for state funding and assist in wetland creation.

Partners: SWCD, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$5,000

Potential Funding Sources: Levy, State funds

9. Educate the public about the function of a wetland through onsite meetings with residents, Freeborn County's fair booth, in office conversations, website and articles.

Partners: Freeborn County, SWCD, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$500

Potential Funding Sources: Levy, State funds

Location: County wide, County Fair, Schools, Area groups.

Assessment. Municipal Wastewater and Stormwater Concerns

Lakes, rivers, forests and farms all depend on the replenishing waters of precipitation. However, when rain falls on developed urban areas, or impervious surfaces such as paved streets, parking lots and building rooftops, it can wash away pollutants. This runoff is deposited via storm sewers into nearby lakes, creeks, and rivers.

Stormwater runoff can change both water quality and quantity affecting our water resources physically, chemically and biologically. Polluted runoff containing oil, grease, chemicals, nutrients, metals, litter and pathogens for example, can severely reduce water quality.

When an urban area is developed, natural drainage patterns are also modified as runoff is channeled into road gutters, storm sewers and paved channels. The amount of rainfall that can infiltrate into the soil is reduced, which increases the volume of runoff from the watershed. Drainage modifications also increase the velocity of runoff, which decreases the time required to convey it to the outlet of the watershed. Increased volume and increased velocity of runoff results in higher peak discharges and shorter times to reach peak discharge. This causes higher flows, flooding, erosion and adverse effects on habitat in natural streams.

Today, good site planning can reduce much of this excess runoff and the potential for erosion and sedimentation problems. However, challenges remain as current systems were designed where stormwater was generally downstream consequences and local long-term hydrologic and water-quality impacts.

Currently, under the Minnesota Pollution Control Agency (MPCA) Phase II Stormwater Program, communities with a population of 10,000 or greater, or a population of 5,000 or greater with the potential to discharge into an impaired water, are required to apply for a permit to regulate discharges from a municipal separate storm sewer system. The Stormwater Program is designed to reduce the amount of sediment and pollution that enters surface and ground water from storm sewer systems to the maximum extent practicable. Stormwater discharges are regulated through the use of National Pollutant Discharge Elimination System (NPDES) permits. Through this permit, the owner or operator is required to develop a Stormwater Pollution Prevention Program (SWPPP) that incorporates best management practices applicable to their system. The only community in Freeborn County under the Phase II Stormwater Program is Albert Lea.

When stormwater drains off a construction site, it also carries sediment and other pollutants that can harm surface waters. To keep water resources clean the MPCA issues permits to construction site owners and their operators to prevent stormwater pollution during and after construction. Currently the Phase II Stormwater Program for Construction Activity establishes permit requirements for small construction activity which includes clearing, grading and excavating, that results in the land disturbance of equal to or greater than one acre and less than five acres. Construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one acre.

As an area becomes more urbanized, natural drainage is modified reducing the amount of rainfall that can infiltrate the soil, increasing the runoff. Stormwater runoff can change both water quality and quantity affecting our water resources physically, chemically, and biologically. Polluted runoff containing chemicals, pathogens, oil/ grease, and nutrients can severely reduce water quality.

Nonpoint pollution sources that are associated with urban stormwater runoff include:

- Vehicular traffic
- Lawn and garden maintenance
- Municipal maintenance activities
- Industrial and commercial activities
- Improper disposal of household hazardous wastes
- Pet and wildlife feces and litter
- Construction activity
- Runoff from residential driveways and parking areas

The following table illustrates the waste water treatment facilities and public wells within the communities of Freeborn County. The WWTFs are NPDES/SDS permitted facilities that process primarily wastewater from domestic sanitary sewer sources (sewage). These include city or sanitary district treatment facilities, wayside rest areas, national or state parks, mobile home parks and resorts.

Waste Water Treatment Facility/Community Well Data for Freeborn County

Community	Age of WWTF or last upgrade	Number of Wells	On the Public Priority List (PPL) for WWTP or Water
Albert Lea	33 years	3	Yes (WWTP)
Alden	31 years	2	Yes (Water)
Clarks Grove	43 years	2	No
Conger	11 years	1	No
Emmons	40 years	1	No
Freeborn	38 years	2	Yes (Water)
Geneva	unknown	1	No
Glenville	41 years	1	No
Hartland	unknown	1	Yes (WWTP)
Hollandale	33 years	1	No
Manchester	6 years	1	No
Myrtle	ongoing	1	Yes (Water)
Twin Lakes	30 years	1	No

Source: MN Office of the State Auditor

Implementation Program of Goals, Objectives and Actions. Municipal Wastewater and Stormwater Concerns

Goal #1

Protect surface water and groundwater from municipal wastewater and stormwater contamination.

Objective

1. Reduce pollution in stormwater runoff from municipalities.

Action to achieve goal

1. Provide assistance to municipalities that have Municipal Separate Storm Sewer System (MS4) permits. Currently Albert Lea is the only city with an MS4 permit.

Partners: Shell Rock River Watershed District, MPCA, Freeborn County

Timeline: ongoing

Cost: \$2,000/yr.

Potential Funding Sources: Levy

Location: Only Albert Lea at this time

2. Promote the construction of permanent stormwater management BMPs to improve the quality and reduce the quantity of stormwater conveyed by ditches, streams, and rivers.

Partners: City of Albert Lea, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: Levy, State funds

3. Promote storm water management to municipalities and all residents to reduce pollutants from reaching surface waters. Residential education done through newsletters, and speaking opportunities with local service groups.

Partners: City of Albert Lea, Freeborn County, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: Levy

4. Promote street sweeping and educate residents on how to maintain clean roads, clear of grass clippings, to reduce urban pollutants.

Partners: City of Albert Lea, Freeborn County, Shell Rock River Watershed District

Timeline: ongoing

Cost: \$500/yr.

Potential Funding Sources: Levy

Location: Area Cities

5. Apply for federal/state/local funding for waste water treatment and stormwater facility upgrades.

Partners: City of Albert Lea, Shell Rock River Watershed District

Timeline: 2019

Cost: \$50,000

Potential Funding Sources: Levy, State, Federal Funds

Location: Area Cities

Objective

2. Promote a process to institute a pollution credit exchange program for the MS4 requirements to be offset with upland restoration and remediation BMP's in the same watershed.

Action to achieve goal

1. Collaborate with appropriate State Agencies and support discussions related to responsible use of tax dollars and other available resources to insure the most benefit to water quality.

Partners: City of Albert Lea, Freeborn County, MPCA, BWSR

Timeline: ongoing

Cost: \$10,000/yr.

Potential Funding Sources: Levy

Location: Area Cities

2. Work with appropriate State Agencies to draft legislation creating a pilot pollution offset program.

Partners: City of Albert Lea, Shell Rock River Watershed District

Timeline: 2017

Cost: \$10,000

Potential Funding Sources: Levy, State funds

Objective

3. Reduce pollution in receiving waters from wastewater.

Action to achieve goal

1. Provide assistance to municipalities to construct and maintain wastewater treatment facilities.

Partners: MPCA, Freeborn County

Timeline: as needed

Cost: \$500/yr.

Potential Funding Sources: Levy

Location: Area Cities

2. Apply for federal/state/local funding for wastewater treatment facilities to assist with upgrades to improve water quality.

Partners: All cities, Freeborn County, SRRWD, MPCA

Timeline: as needed

Cost: \$10,000

Potential Funding Sources: Levy, State and Federal funds

Location: Area Cities

3. Seek priority placement on MPCA Wastewater Infrastructure Fund (WIF) for non-conforming wastewater treatment facilities for Albert Lea.

Partners: Freeborn County, Shell Rock River Watershed District, MPCA

Timeline: 2017

Cost: \$5,000

Potential Funding Sources: Levy

Location: Albert Lea

Appendix A

The Freeborn County Water Plan has been updated in 1986 with amendments in 1997, 2006, 2012, and now in 2016. The local water management planning process addressed priority concerns by following these steps:

1986: On June 23, Freeborn County passed a resolution to develop a Comprehensive Water Plan.

1989: October 1, Freeborn County completed a draft plan and submitted it to affected local units of government for review and comment under Chapter 110B of Minnesota Statutes.

October 1, Freeborn County submitted its draft plan to the Minnesota Departments of Agriculture, Health, Natural Resources, Pollution Control Agency, State Planning Agency, and the Minnesota Geological Survey for preliminary review and comment.

December 13, a public hearing was held on pursuant to Section 110B.08 Subd. 4 for the purpose of obtaining public input into the Water Plan.

1990: May 1, Freeborn County submitted its Water Plan along with written comments received, a record of the public hearing, and a summary of changes incorporated as a result of the review process to the Minnesota Board of Water and Soil Resources.

September 18, the Minnesota Board of Water and Soil Resources provided written comments to Freeborn County on its final plan.

October 24, the Minnesota Board of Water and Soil Resources approved the Freeborn County Comprehensive Water Plan.

December 18, the Freeborn County Board of Commissioners approved and locally adopted its Comprehensive Water Plan.

Beginning in 1990: The Water Planning Advisory Committee meetings were held with the public participation in reviewing and discussing this water plan, and making recommendations for changes. Meeting dates were:

1991: January 10 and November 14.

1992: April 24 and June 15.

1993: January 22, April 30, May 18, July 1 and July 27.

1994: February 10 and April 13.

1995: February 15, Township Officers Meeting.

February 23, Public Information Meeting for revision of the Water Plan.

August 22, Consultant hired to provide technical assistance developing the revision of the County Water Plan.

1997: March 31, Township Officers Meeting.

October Revision of Comprehensive Water Plan distributed of State Agency and Local Units of Government review and comment.

Public participation is continuously received from interested individuals, municipalities, and local business which take an active interest in this process.

September 7, 2004: Freeborn County passed a resolution to revise the 1997 – 2005 Water Plan

September 10, 2004: Surveys were sent to state agencies, contiguous counties, city and township officials, agricultural organizations, environmental groups, watershed organizations, and interested individuals seeking input in development of the Priority Concern Document.

November 10, 2004: Freeborn County Water Planning Advisory Committee held a public meeting to update the public and seek additional input for development of the Priority Concerns that will be addressed in this water plan revision.

January 10, 2005: Water Planning Advisory Committee Public Meeting

February 1, 2005: Water Planning Advisory Committee Public Meeting

March 15, 2005: Water Planning Advisory Committee Public Meeting

April 12, 2005: Water Planning Advisory Committee Public Meeting

June 27, 2005: Water Planning Advisory Committee Public Meeting

July 18, 2005: Water Planning Advisory Committee Public Meeting

August 29, 2005: Water Planning Advisory Committee Public Meeting

December 14, 2005: Freeborn County submitted Priority Concerns Scoping Document to Minnesota Board of Soil and Water Resources (BWSR)

January 4, 2006: BWSR convene the Southern Minnesota Water Plan Review Committee to discuss Freeborn County 1997 – 2005 CWP and provide comment on resource protection, funding, staff and accomplishments as outlined in Priority Concerns Scoping Document

January 25, 2006: BWSR returns official comments pertaining to the State review of the Freeborn County Priority Concerns Scoping Document (PCSD) for the local water plan

- March 27, 2006: Water Planning Advisory Committee Public Meeting – Recommend approval of the 2006 – 2015 Freeborn County Comprehensive Water Plan
- May 2, 2006: Freeborn County held a public hearing at a regularly scheduled Commissioner Meeting to receive input on the proposed 2006 – 2015 Comprehensive Local Water Plan.
- October 19, 2011: Notice of Decision to amend Water Plan and request for comments sent to State Agencies, contiguous counties, townships, cities and interested citizens.
- November 16, 2011: Mower County comments on Water Plan Revision received.
- November 21, 2011: Minnesota Pollution Control Agency comments received on CLWP Amendment.
- November 29, 2011: Minnesota Department of Agriculture comments on Water Management Plan received.
- November 30, 2011: Minnesota Department of Health comments received on amendments to Water Plan.
- February 7, 2012: Freeborn County held a Public hearing at a regularly scheduled Commissioners Meeting to receive input on the proposed 2011 mid-term amendment to this Comprehensive Local Water Plan.
- February 21, 2012: Resolution amending and adopting the 2011 Mid-Term Comprehensive Water Plan.

2016-2021 Amendment Public Process - Priority Concerns Scoping Document

Freeborn County is a gateway into southern Minnesota. Interstates 35 and 90 bisect the County north to south and west to east respectively. The County is bordered by the State of Iowa to the south, Faribault County to the West, Waseca County and Steel Counties to the north and Mower County to the east. Freeborn County has a land area of 720 square miles. Per the Minnesota State Demographic Center, the 2015 population of Freeborn County was estimated to be 30,642. Freeborn County is comprised of 14 incorporated cities and 20 townships. The County Seat is the City of Albert Lea, which is located approximately 100 miles south of Minneapolis, Minnesota. Some 81-percent of productive land is farmed or used for rotational animal pastures in Freeborn County.

This Water Plan update is Freeborn County's fourth amendment of the original document. On June 23, 1986, the Freeborn County Board of Commissioners passed a resolution authorizing the development of a Comprehensive Water Plan. After four years of planning, public engagement and review by the Minnesota Board of Water and Soil Resources (BWSR), the first Comprehensive Water Plan was approved on December 18, 1990.

There have been 3 subsequent amendments to the Comprehensive Water Plan in 1997, 2006 and in 2012. The last amendments adopted in 2012, (2011 Mid-Term Amendment Comprehensive Water Plan 2006-2015) carried the State approved Comprehensive Water Plan to December 31, 2015.

Freeborn County is committed to sound water quality management and recognizes the State's watershed management transition from Local Comprehensive Water Plans to larger scale watershed based plans – known as One Watershed One Plan. Until that time when watershed-wide One Watershed One Plans are approved that cover the jurisdictional authority of Freeborn County. Freeborn County intends to update the current Comprehensive Water Plan. On August 4, 2015, the Freeborn County Board of Commissions passed a resolution requesting an extension of the effective date of the current County Comprehensive Water Plan and was granted a one-year extension to update its Plan by December 31, 2016.

The following outlines the components of the priority concerns scoping document including the official County Board Resolution to extend the Freeborn County Comprehensive Water Plan, the invitation to participate in the amendment process (through the Water Planning Advisory Committee), participating members of the Water Planning Advisory Committee, dates of Water Planning Advisory Committee working meetings, the initial 60-day State Agency notice, official County public notice, and comments received from State Agencies.

August 4, 2015 Freeborn County Board Resolution to Extend the Freeborn County Comprehensive Local Water Management Plan

**Resolution # 15 - 183
Resolution to Extend the Freeborn County
Comprehensive Local Water Management Plan**

WHEREAS, Minnesota Statutes, 103B.301, Comprehensive Local Water Management Act, authorizes Minnesota Counties to Develop and Implement a local Water management plan, and

WHEREAS, Freeborn County currently has a state approved local water management plan that covers the period of August 24, 2006 through December 31, 2015, and

WHEREAS, Freeborn County is currently updating the Local Water Management Plan in accordance with Minnesota Statutes 103B.301, and

WHEREAS, the MPCA's Watershed Restoration and Protection strategies information will be available to Cedar River basin partners beginning in 2015, and

WHEREAS, Freeborn County is committed to synchronize water management efforts within the Cedar River basin with the WRAPS schedule and watershed partners as they transition into One Watershed One Plan, and

WHEREAS, Freeborn County assures continued effort toward completion of the Comprehensive Local Water Management Plan update, and

WHEREAS, the Minnesota Board of Water and Soil resources has authorization to grant extensions pursuant to Minnesota Statutes 103B.3367;

WHEREAS, Freeborn County agrees to update the Executive Summary and the Implementation Plan of our existing Water Plan by December 31, 2016.

NOW, THEREFORE, BE IT RESOLVED, the Freeborn County Board of Commissioners requests from the Minnesota Board of Water and Soil Resources an extension of the effective date of the current County Comprehensive Local Water Management Plan until December 31, 2020, in order to complete the update process in accordance with Minnesota Statutes 103B.301.

I hereby certify that the above is a true and correct copy of a resolution adopted by the Freeborn County Board of Commissioners at their session on the 4th day of August 2015, and as appears on the minutes of their record of proceedings.



John Kluever
Administrator/Clerk
County of Freeborn
State of Minnesota

COPY

February 5, 2016 Initial Invitation to Participate in the Local Water Plan Amendment Process

From: John Kluever

Sent: Friday, February 05, 2016 3:41 PM

To: Brett Behnke; Mark Schaetzke; Steve Lawler (steve.lawler@mowerswcd.org); bev.nordby@mowerswcd.org; Winston Beiser

Cc: Wayne Sorensen; Rachel Wehner; Andy Yost; Mark Goskeson

Subject: Water Plan

Good Afternoon: If you have not heard Freeborn County will be going through the process of reviewing /amending our Comprehensive Water Plan in 2016.

The general plan will be to holding a series of meeting during the months of February, March and April to hopefully work through the review / amendment phase of this project.

If you or any of your staff would like to be part of these upcoming meetings or want to make comment on the parts of the plan being reviewed please let me know. I would plan on setting meeting dates and times next week.

Thanks and have a good weekend.

February 8, 2016 Schedule for Water Planning Advisory Committee Meetings

From: John Kluever

Sent: Monday, February 08, 2016 1:31 PM

To: Andy Yost; Mark Goskeson; Mark Schaetzke; Rachel Wehner; Wayne Sorensen; Winston Beiser

Subject: Plan

All, we have set up a plan to review and update the Water Plan.

1. Attached are the areas to be reviewed.
2. We will be meeting on the first and third Wednesday's of each month from 1:30 – 3:00 in February, March and April to review between 2 and 3 areas per meeting.
3. All meetings will be held in the Env. Services office here at the Gov. Center.
4. Our first meeting will be held on February 17th.
5. On the 17th we will review Aquifers, Surface Waters and Top Soil.
6. Please come prepared to discuss the Goal, Objective and Action items for each.

Let me know of any questions you may have.

Participating members of the Water Planning Advisory Committee

Rachel Wehner	Environmental Health Coordinator, Freeborn County
Wayne Sorensen	Environmental Services Supervisor, Freeborn County
Mark Goskeson	Solid Waste Officer/SSTS Tech, Freeborn County
Winston Beiser	Ditch Inspector, Freeborn County
Courtney Christensen	Shell Rock River Watershed District
Andy Henschel	Shell Rock River Watershed District
Jennifer Mocol-Johnson	Board Conservationist, BWSR
Mark Schaetzke	District Manager, Freeborn County SWCD
Jerad Stricker	Shell Rock River Watershed District
Phillip Wacholz	City of Albert Lea

Dates of Water Planning Advisory Committee Meetings

- February 2, 2016
- February 16, 2016
- March 6, 2016
- March 20, 2016
- April 6, 2016
- April 20, 2016
- May 4, 2016
- October 13, 2016

Public Notice of Public Hearing to Receive Comment on Amendment Local Water Plan

Albert Lea Tribune Affidavit

STATE OF MINNESOTA COUNTY OF FREEBORN

Crystal Miller, being duly sworn, on oath states as follows:

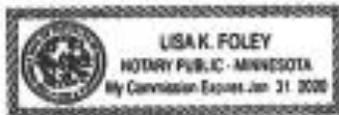
1. I am the publisher of the Albert Lea Tribune, or the publisher's designated agent. I have personal knowledge of the facts stated in this Affidavit, which is made pursuant to Minnesota Statutes §331A.07.
2. The newspaper has complied with all of the requirements to constitute a qualified newspaper under Minnesota law, including those requirements found in Minnesota Statutes §331A.02.
3. The dates of the month and the year and day of week upon which the public notice attached/copied below was published in the newspaper are as follows:
06/10/16
4. The publisher's lowest classified rate paid by commercial users for comparable space, as determined pursuant to § 331A.06, is as follows: \$17.48.
5. Pursuant to Minnesota Statutes §580.033 relating to the publication of mortgage foreclosure notices: The newspaper's known office of is located in Freeborn County. The newspaper complies with the conditions described in §580.033, subd. 1, clause (1) or (2). If the newspaper's known office of issue is located in a county adjoining the county where the mortgage premises or some part of the mortgaged premises described in the notice are located, a substantial portion of the newspaper's circulation is in the latter county.

FURTHER YOUR AFFIANT SAITH NOT.

Crystal Miller, publisher

Subscribed and sworn to before me this
10th Day of June, 2016

Lisa Foley, Notary Public
Freeborn County, MN



Notice Of Public Hearing

Notice is hereby given that a hearing will be held before the Freeborn County Board of Commissioners at 8:45 a.m. on June 21, 2016, in the Commissioners Room at the Freeborn County Government Center, 411 South Broadway, Albert Lea, Minnesota to receive comments on the draft of the

"Comprehensive Water Plan Amendment to Implementation 2016-2021"

The State of Minnesota in Minnesota Statute 100B.301 authorizes Counties to develop and implement a local Water Management Plan. Freeborn County is currently updating the Local Water Management Plan in accordance with Minnesota Statutes 100B.301. Freeborn County is hereby holding this public hearing as a required in 100B.313 subd. 3.

A summary of the Water Plan is to focus efforts on identified existing and potential priority concerns and/or opportunities for protection, management, and development of related water resources and land resources; continue to develop, update and implement this water plan of action; promote sound management of our resources through the use of Best Management Practices; Intensity land use practices aimed at effective environmental protection; provide a guidance document for local decision makers; and regulate land use practices for the development, management and protection of water and related land resources. Freeborn County Comprehensive Water Plan 2016 – 2021 established priorities in actions related to water quality, water quantity, special land uses and conditions that influence land and water resources.

This notice with summary is made in accordance with Minnesota State Statute 331A.01.

A copy of the entire Plan is marked as the official draft copy and filed for use and examination by the public in the Freeborn County Environmental Services Department and Freeborn County Auditor's Office. Electronic versions are available by request.

Wayne Sorenson
Planning and Zoning
Administrator
Appointed Building Official
Published in the Albert
Lea Tribune on the 10th
day of June, 2016

Official County Board Minutes pertaining to the June 21, 2016 Public Hearing to Receive Comment on Amendment Local Water Plan

ADJOURNED MEETING OF THE COUNTY BOARD

June 21, 2016

The Board of Commissioners of Freeborn County met in the Freeborn County Boardroom at 8:30 a.m. on Tuesday June 21, 2016. Members present: Commissioners Shoff, Lee, Mathiason, Belshan and Nelson.

At approximately 8:48 a.m. the Chairman opened a Public Hearing to take comment on the proposed 2016 Amended Comprehensive Water Plan. The Planning and Zoning Official discussed the proposed amendments with the Board. The Chairman then asked for public comment regarding the proposed amendments to the plan. Hearing that there were no public comments, the Chairman closed the meeting at approximately 8:53 a.m.

July 20, 2016 Sample 60-day notice for State Review

From: Wayne Sorensen
Sent: Wednesday, July 20, 2016 3:46 PM
To: Gina Gullickson
Subject:

Greetings,

This is the 60 day notice for State review and comment on the 5-year amendment to the Freeborn County Comprehensive Water Management Plan. The public hearing on the amendment was held on June 21, 2016.

A copy of the draft plan is attached to this e-mail, and can be found on the County's Website at the address below or viewed at Freeborn County Environmental Services Office located at 411 South Broadway Ave Albert Lea, MN, during regular business hours: Monday-Friday 8:00am – 5:00pm.

<http://www.co.freeborn.mn.us/DocumentCenter/Home/View/1889>

Please feel free to contact me with any questions, comments or concerns.

Thank you.

Wayne Sorensen
Freeborn County Environmental Services Supervisor
Zoning/Building Official #BO002232
507-377-5186
wayne.sorensen@co.freeborn.mn.us

The 60-day notice for State Review was emailed on July 21, 2016 to:

- Robert L. Sip, MN Department of Agriculture
- Gina Bonsignore, MN Department of Natural Resources
- Jeni Manchard, MN Department of Health
- Ryan Hughes, MN Board of Water and Soil Resources
- Jim Haertel, MN Board of Water and Soil Resources
- Jeff Nielsen, MN Board of Water and Soil Resources
- Erik Dahl, Environmental Quality Board

General comments were received from Robert L. Sipp, MN Department of Agriculture on August 8, 2016.

Wayne Sorensen

From: Sipp, Rob (MDA) <rob.sip@state.mn.us>
Sent: Monday, August 08, 2016 1:39 PM
To: Wayne Sorensen
Cc: Hughes, Ryan (BWSR)
Subject: Freeborn County - 60 day notice for State review and comment
Attachments: Final Version Reducing Ditch System Maintenance Costs Factsheet in the RRB - March 25, 2015.pdf; NRCS_FarmLandClassification_2016_MN_2.pdf; 2015 Crow Wing Prioritization.pdf; MDA Drainage Recommendations for Local Water Mgmt Plans - June 2014.pdf; FreebornCo_WaterPlanMap.pdf; FreebornCo_WaterPlanMap.jpg

Wayne,

Below is a website that MDA has developed to discuss and illustrate priority concerns and not sure if you had seen any of this in the past. So, I just wanted to ensure that you had this information and the MDA is not requesting any major changes to anything unless you think there is something critical from MDAs comments that should be included. It looks like some of the items being shared in your draft plan are already addressed. The MDA realizes that recommendations are implemented based on staff, financial and technical resources and that this is an amendment at this point in time. In addition to the website recommendations, the MDA is providing additional information below to highlight priorities.

MDA Water Planning Assistance Website:

<http://www.mda.state.mn.us/en/protecting/waterprotection/waterplanning.aspx>

1. Drainage Water Management (DWM) - The MDA recommends additional effort be focused on encouraging landowners and farmers to implement DWM practices and management plans. The Freeborn County SWCD can play an important role in working with drainage authorities, landowners and agricultural groups to determine how best to promote and implement DWM practices. Attached are drainage related recommendations from the MDA, which are also being updating. A fact sheet from the Red River Watershed Management Board regarding ditch system maintenance is also attached. Please distribute this factsheet when appropriate as you work with area farmers and landowners and water management partners.

The MDA also recommends that Freeborn County consider the development of a Multipurpose Drainage Management Plan in conjunction with its partners and below is a recent example that you are probably aware of. While this is just one recent example, it may serve as a model for Freeborn County:

<http://www.co.martin.mn.us/images/Ditch%20Admin/Martin%20County%20Multipurpose%20Drainage%20Management%20Plan.pdf>

2. Water Storage - The MDA recommends that Freeborn County along with its water management partners consider the development of a water storage plan for both public drainage systems and for private on-farm water storage. This plan may build off of existing water or drainage management plans and may include but not be limited to the following:

- Communication of the development of a water storage plan with private landowners in Freeborn County.

- Obtaining flow data and setting flow goals agreed upon by landowners within each public ditch systems or sub-watersheds.
- Prioritizing public ditch systems or sub-watersheds based on flow goals with input from landowners.
- Assessment of where short-term and long-term water storage projects can be located. This may include several types of water storage, including smaller scale (wetland restorations) or larger scale projects such as constructed impoundments. However, larger scale projects are costly and require significant financial resources to engineer, construct, operate and maintain.
- Development of an implementation plan or schedule that would include discussion of funding considerations, again with landowner input.
- Operation and maintenance plans for each project.

The MDA is also aware of the sensitivity regarding past efforts to manage water on a regional basis and further recognizes that local policy-makers have difficult decisions to make regarding how to address these important issues.

3. Wind and Water Erosion - Attached is a map of prime soils that was recently updated by the USDA NRCS and please share this with your partners. The SWCD may have opportunities in the future to create additional awareness about prime soils by sharing and distributing this map. The MDA recommends that the Freeborn County water plan focus and renew efforts to reduce wind and water erosion and that efforts continue to implement more conservation practices such as WASCOBs, grassed waterways, etc., in priority areas.

Field windbreaks, farmstead windbreaks and small areas of trees or other vegetation have been removed from the landscape at unprecedented levels in recent years. However, the MDA also realizes that many of the field windbreaks that have been removed were beyond their lifespan. Windbreaks and vegetative plantings that also incorporate pollinator habitat can serve dual purposes. It is also critical that cover crops, residue management and other soil health initiatives be implemented at an increased levels. The MDA recommends that tools such as PTMAPP (website below) be used as your county continues its important water quality efforts: <http://www.rbdin.org/prioritize-target-measure-application-ptmapp>

4. Lake Management - The MDA recommends that a process be considered for development to prioritize lake management and protection efforts in Freeborn County. As an example, Crow Wing County developed a process (attached) to prioritize lake protection efforts. Recently two additional counties have adopted components of this process or have created similar lake protection efforts.

5. Nitrogen Issues - The MDA website below will direct you to the Nitrogen Fertilizer Management Plan, which includes a wealth of information about the plan, township testing, prevention, etc.: <http://www.mda.state.mn.us/nfmp>

6. MN Agricultural Water Quality Certification Program (MAWQCP) - This program is a volunteer opportunity for farmers and agricultural landowners to implement BMPs that protect water. Technical and financial assistance is available to those participating in the program and once certified, participants are granted regulatory certainty for 10 years. The MAWQCP is positioned to identify and treat agricultural risks to water quality throughout Minnesota. The MDA operates the MAWQCP in

collaboration with the MPCA, BWSR and DNR. Through these partnerships the MAWQCP is aligned with other nonpoint and water quality projects across multiple agencies.

Implementing new on-farm conservation practices that address nonpoint issues is best achieved on the local level and is designed to be delivered through Minnesota's 91 SWCDs. Implemented on the local level with these local partners, MAWQCP-certification is a key strategy local water plans can utilize when writing integrated management plans. The Freeborn County SWCD can provide MAWQCP information and encourage participation in the program to access technical and/or financial assistance to county landowners and operators implementing agricultural BMP's on working lands to reduce soil erosion, protect stream banks and improve water resources. MAWQCP website: <http://www.mda.state.mn.us/awqcp>

7. General Information about the MDA - you may wish to incorporate the following language if there is a need to illustrate state agency duties and responsibilities:

The MDA is statutorily responsible for the management of pesticides and fertilizer other than manure to protect water resources. The MDA implements a wide range of protection and regulatory activities to ensure that pesticides and fertilizer are stored, handled, applied and disposed of in a manner that will protect human health, water resources and the environment. The MDA works with the University of Minnesota to develop pesticide and fertilizer Best Management Practices (BMPs) to protect water resources, and with farmers, crop advisers, farm organizations, other agencies and many other groups to educate, promote, demonstrate and evaluate BMPs, to test and license applicators, and to enforce rules and statutes. The MDA has broad regulatory authority for pesticides and has authority to regulate the use of fertilizer to protect groundwater. The MDA is the lead agency for all aspects of pesticide and fertilizer environmental and regulatory functions as directed in the Groundwater Protection Act (Minnesota Statute 103H). These include but are not limited to the following:

- Serve as lead agency for groundwater contamination from pesticide and fertilizer nonpoint source pollution.
- Conduct monitoring and assessment of agricultural chemicals (pesticides and nitrates) in ground and surface waters.
- Oversee agricultural chemical remediation sites and incident response.
- Regulate use, storage, handling and disposal of pesticides and fertilizer.

Thank you for the opportunity to comment. Please do not hesitate to contact me if you have any questions.

Robert L. Sip
Environmental Policy Specialist
Pesticide and Fertilizer Management Division
Minnesota Department of Agriculture
3725 12Th Street North
St. Cloud, MN 56303

320-223-6531 (Office)
651-319-1832 (Cell)
651-201-6120 (Fax)

Additional comments were received from Robert L. Sipp, MN Department of Agriculture on November, 21, 2016.

Wayne Sorensen

From: Sip, Rob (MDA) <rob.sip@state.mn.us>
Sent: Monday, November 21, 2016 10:35 AM
To: Wayne Sorensen; Copeland, David (BWSR); Lenz, Ed (BWSR); Rachel Wehner
Cc: Thomas A. Berry; John Kluever
Subject: RE: Freeborn County Update to Water Plan

Follow Up Flag: Follow up
Flag Status: Completed

Wayne,

Just an FYI - here are links to a new MDA funding brochure:

<http://www.mda.state.mn.us/~media/Files/grants/finassistprograms.pdf>

<http://www.mda.state.mn.us/~media/Files/grants/finassistprogramsltr.pdf>

MDA has no other comments.

Robert L. Sip
Environmental Policy Specialist
Pesticide and Fertilizer Management Division
Minnesota Department of Agriculture
3725 12Th Street North
St. Cloud, MN 56303

320-223-6531 (Office)
651-319-1832 (Cell)
651-201-6120 (Fax)

rob.sip@state.mn.us
www.mda.state.mn.us

From: Wayne Sorensen [Wayne.Sorensen@co.freeborn.mn.us]
Sent: Thursday, November 03, 2016 9:55 AM
To: Copeland, David (BWSR); Sip, Rob (MDA); Fouch, Cathi M (DNR); Bailey, Pat (MDH); Lenz, Ed (BWSR); Rachel Wehner
Cc: Thomas A. Berry; John Kluever
Subject: Freeborn County Update to Water Plan

Please note the attached notice and document.

Thank you for your time and efforts in the review and comments of the Freeborn County Update to our Water Plan.

Minnesota Department of Health Comments

The Minnesota Drinking Water Protection Program protects public health by ensuring a safe and adequate supply of drinking water at all public water systems. These systems include municipalities, manufactured housing developments, businesses, schools, and other facilities that serve water to more than 25 people on a regular basis. MDH does this through carrying out provisions of the Safe Drinking Water Act in Minnesota.

One part of this program is source water protection. MDH staff work with public water suppliers in protecting their source of drinking water whether that be lakes, rivers or groundwater. Specifically related to groundwater, Minnesota has a wellhead protection program where the source aquifers are assessed in regard to their vulnerability to contamination and management strategies are developed by the public water supplies to protect their wells and the groundwater aquifers from contamination. All 63 public water suppliers in Freeborn County use groundwater for drinking water supplies. Detail for each system in terms of their wells, source aquifer, and source water vulnerability/susceptibility to contaminant from the land surface can be found in the source water assessments. See the MDH website at <http://www.health.state.mn.us/divs/eh/water/swp/swa/>.

MDH has been working with community systems throughout the State for the last several years to develop detailed wellhead protection plans. Where Drinking Water Supply Management Areas have been delineated, these maps can also be accessed from the source water assessments. The accompanying table indicates where the fourteen Freeborn County community systems are in the wellhead protection planning process.

COMMUNITY PUBLIC WATER SUPPLIERS	WELLHEAD PROTECTION PLANNING
Albert Lea	amendment approved in 2016
Alden	plan completed in 2012
Clarks Grove	not yet phased into WHP program
Conger	not yet phased into WHP program
Emmons	not yet phased into WHP program
Freeborn	not yet phased into WHP program
Geneva	not yet phased into WHP program
Glenville	plan completed 2012
Hartland	not yet phased into WHP program
Hayward	not yet phased into WHP program
Hollandale	not yet phased into WHP program
Manchester	not yet phased into WHP program
Myrtle	not yet phased into WHP program
Twin Lakes	not yet phased into WHP program
Elmwood Terrace	not yet phased into WHP program

The county's role in wellhead protection is to review these plans and if needed utilize county authorities and programs to collaborate with the public water suppliers to protect their source aquifer.

MDH Well Management Program administers the Minnesota Well Code MN Rules Chapter 4725. The Well Management Program protects both public health and groundwater by assuring the proper construction of new wells and borings, and the proper sealing of unused wells and borings.

¶
¶
November 3, 2016¶

¶
Notice of Decision to Revise and Update the
Freeborn County Comprehensive Local Water Management Plan¶

¶
The Freeborn County Board of Commissioners adopted a resolution on August 4, 2015 requiring the update and revisions of the Freeborn County Local Water Management Plan, as authorized under Minnesota Statutes, Chapter 103B.301, and the Comprehensive Local Water Management Act. The current plan will be revised to align with the Minnesota Board of Water and Soil and Water Resources (BWSR's) Local Water Plan template including: Executive Summary, Assessment of Priority Concerns (including goals and actions) and Implementation Program. ¶

¶
The revision and update to the Freeborn County Local Water Management Plan will therefore better align with an upcoming 1 Watershed 1 Plan development for the Cedar River Watershed District, which encompasses part of Freeborn County. ¶

¶
Until that time when the upcoming 1 Watershed 1 Plan for the Cedar River Watershed District (and other watersheds within the jurisdictional boundary of Freeborn County) are approved, the Freeborn County Local Water Plan Update will govern for Local Water Plan requirements during this 5 year Plan update. ¶

¶
The Plan update will focus on a number of priority water management concerns. Freeborn County invites all recipients of this notice to submit water management issues they feel the plan should focus on during this five-year period (2016--2021). An input meeting has been scheduled for December 13th, 2016. If you have interest in attending, please contact staff below. Copies of the update are available for review. ¶

¶
Please direct issues and comments by December 5, 2016 to:¶

¶
Wayne Sorensen¶
Environmental Services Supervisor¶
Freeborn County Courthouse¶
411 S. Broadway P.O. Box 1147¶
Albert Lea, MN 56007¶
wayne.sorensen@co.freeborn.mn.us¶

Distributed Via email to:
Rob Sip, MDA
Catherine Fouchi, DNR
Pat Bailey, MDH
Ed Lenz, BWSR
David Copeland, BWSR

Albert Lea Tribune Affidavit

STATE OF MINNESOTA COUNTY OF FREEBORN

Crystal Miller, being duly sworn, on oath states as follows:

1. I am the publisher of the Albert Lea Tribune, or the publisher's designated agent. I have personal knowledge of the facts stated in this Affidavit, which is made pursuant to Minnesota Statutes §331A.07.
2. The newspaper has complied with all of the requirements to constitute a qualified newspaper under Minnesota law, including those requirements found in Minnesota Statutes §331A.02.
3. The dates of the month and the year and day of week upon which the public notice attached/copied below was published in the newspaper are as follows:

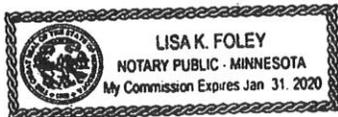
11/25/16
4. The publisher's lowest classified rate paid by commercial users for comparable space, as determined pursuant to § 331A.06, is as follows: \$17.48.
5. Pursuant to Minnesota Statutes §580.033 relating to the publication of mortgage foreclosure notices: The newspaper's known office of is located in Freeborn County. The newspaper complies with the conditions described in §580.033, subd. 1, clause (1) or (2). If the newspaper's known office of issue is located in a county adjoining the county where the mortgage premises or some part of the mortgaged premises described in the notice are located, a substantial portion of the newspaper's circulation is in the latter county.

FURTHER YOUR AFFIANT SAITH NOT.

Crystal Miller, publisher

Subscribed and sworn to before me this
25th Day of November, 2016

Lisa Foley, Notary Public
Freeborn County, MN



Notice of Public Hearing

Notice is hereby given that a hearing will be held before the Freeborn County Board of Commissioners at 8:45 a.m. on December 13, 2016, in the Commissioners Room at the Freeborn County Government Center, 411 South Broadway, Albert Lea, Minnesota to receive comments on the draft of the

“Comprehensive Water Plan Amendment to Implementation 2016-2021”

The State of Minnesota in Minnesota Statute 103B.301 authorizes Counties to develop and implement a local Water Management Plan. Freeborn County is currently updating the Local Water Management Plan in accordance with Minnesota Statutes 103B.301. Freeborn County is hereby holding this public hearing as a required in 103B.313 subd. 3.

A summary of the Water Plan is to focus efforts on identified existing and potential priority concerns and/or opportunities for protection, management, and development of related water resources and land resources; continue to develop, update and implement this water plan of action; promote sound management of our resources through the use of Best Management Practices; intensify land use practices aimed at effective environmental protection; provide a guidance document for local decision makers; and regulate land use practices for the development, management and protection of water and related land resources. Freeborn County Comprehensive Water Plan 2016 – 2021 established priorities in actions related to water quality, water quantity, special land uses and conditions that influence land and water resources. The Plan Amendment is being conducted to align and transition Comprehensive Water Plan-

ning at the Watershed scale.

This notice with summary is made in accordance with Minnesota State Statute 331A.01. A copy of the entire Plan is marked as the official draft copy and filed for use and examination by the public in the Freeborn County Environmental Services Department and Freeborn County Auditor's Office. Electronic versions are available by request.

Wayne Sorensen
Freeborn County
Environmental Services
Supervisor
Zoning/Building Official

Published in the Albert Lea Tribune on the 25th day of November, 2016

History of Priority Concerns 2006- Present

The previous Water Plan process identified priority concerns water plan process produced 13 priority concerns to focus water management efforts through December 31, 2015. The process through which these priority concerns were identified is detailed later in this appendix. The following is a summary of the priority concerns from 2006 to present.

Priority Concerns 2006

1. Water Wells – protect aquifer from contamination by water wells.
2. Sewer Systems – protect surface water and groundwater from individual sewage treatment systems (ISTS).
3. Top Soil– protect and preserve topsoil.
4. Wetlands – preserve existing wetlands.
5. Feedlots – protect land and water resources from animal waste contamination.
6. Municipal Waste Water – protect water resources from municipal waste water contamination.
7. Mixed Solid Waste – protect land and water resources from mixed solid waste contamination.
8. Hazardous Waste – protect water resources from hazardous waste contamination.
9. Storm Water – Work to bring Freeborn County Lakes, ditches, rivers into compliance with TMDL requirements.
10. Watersheds – Manage land resource to reduce contamination into surface waters.
11. Flooding – control surface water run-off.
12. Shoreland – protect and preserve existing shorelands.
13. Public Waters – provide recreational opportunities.

Priority Concerns 2011

1. Protect groundwater from depletion and degradation.
2. Enhance protection of surface and groundwater resources from sewage treatment systems.
3. Address impaired surface waters.
4. Management of animal manure for land applications.
5. Control soil erosion.
6. Storm water management.
7. Protect shoreland areas.

Priority Concerns 2016-2021

1. Aquifers- Groundwater Concerns
2. Surface Water Concerns
 - a. Added Aquatic Invasive Species (AIS) as a subset
3. Soil and Erosion Concerns
4. Waste Disposal and Management Concerns
5. Drainage Concerns (Added Drainage as a Priority Concern)
6. Municipal Wastewater and Storm Water Concerns

Acknowledgment

Freeborn County Board of Commissioners

Glen Mathiason	Commissioner 1 st District
Dan Belshan	Commissioner 2 nd District
Jim Nelson	Commissioner 3 rd District
Christopher Shoff	Commissioner 4 th District
Mike Lee	Commissioner 5 th District

Freeborn County Water Planning Advisory Committee

Rachel Wehner	Environmental Health Coordinator, Freeborn County
Wayne Sorensen	Environmental Services Supervisor, Freeborn County
Mark Goskeson	Solid Waste Officer/SSTS Tech, Freeborn County
Winston Beiser	Drainage Inspector, Freeborn County
Courtney Christensen	Shell Rock River Watershed District
Andy Henschel	Shell Rock River Watershed District
Jennifer Mocol-Johnson	Board Conservationist, BWSR
Mark Schaeetzke	District Manager, Freeborn County SWCD
Jerad Stricker	Shell Rock River Watershed District
Phillip Wacholz	City of Albert Lea

County Agencies

Freeborn Environmental Services
Freeborn County Extension Service
Freeborn County Soil and Water Conservation District
Freeborn County Natural Resources Conservation Services

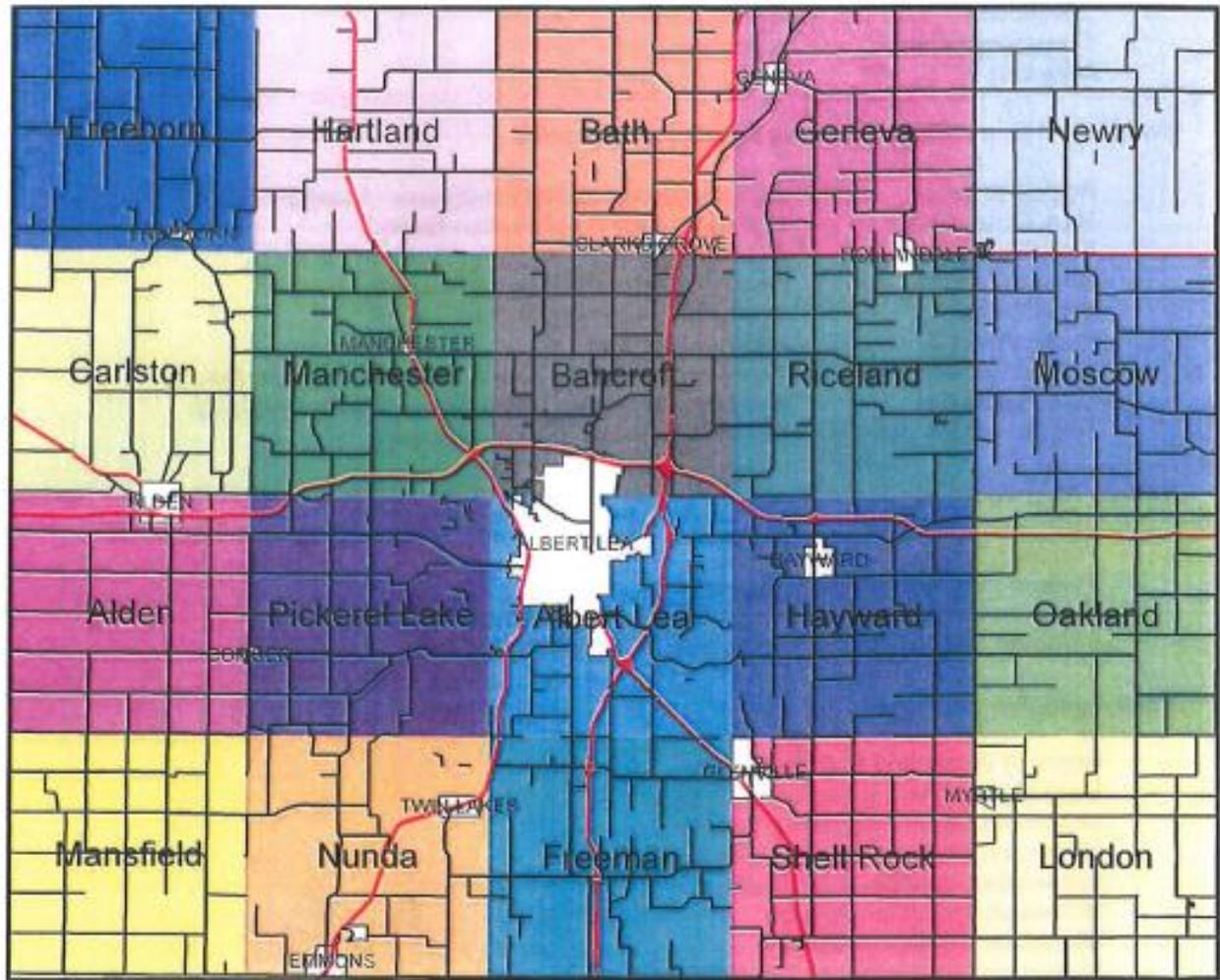
State Agencies

Board of Water and Soil Resources
Land Management Information Center
Minnesota Department of Agriculture
Minnesota Department of Natural Resources
Minnesota Department of Health
Minnesota Extension Service
Minnesota Geological Survey
Minnesota Department of Transportation
Minnesota Pollution Control Agency
Water Resources Center, Mankato State University

Appendix B – Supplemental Figures



Map 1
Freeborn County
Townships & Cities



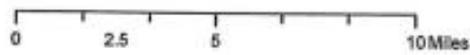
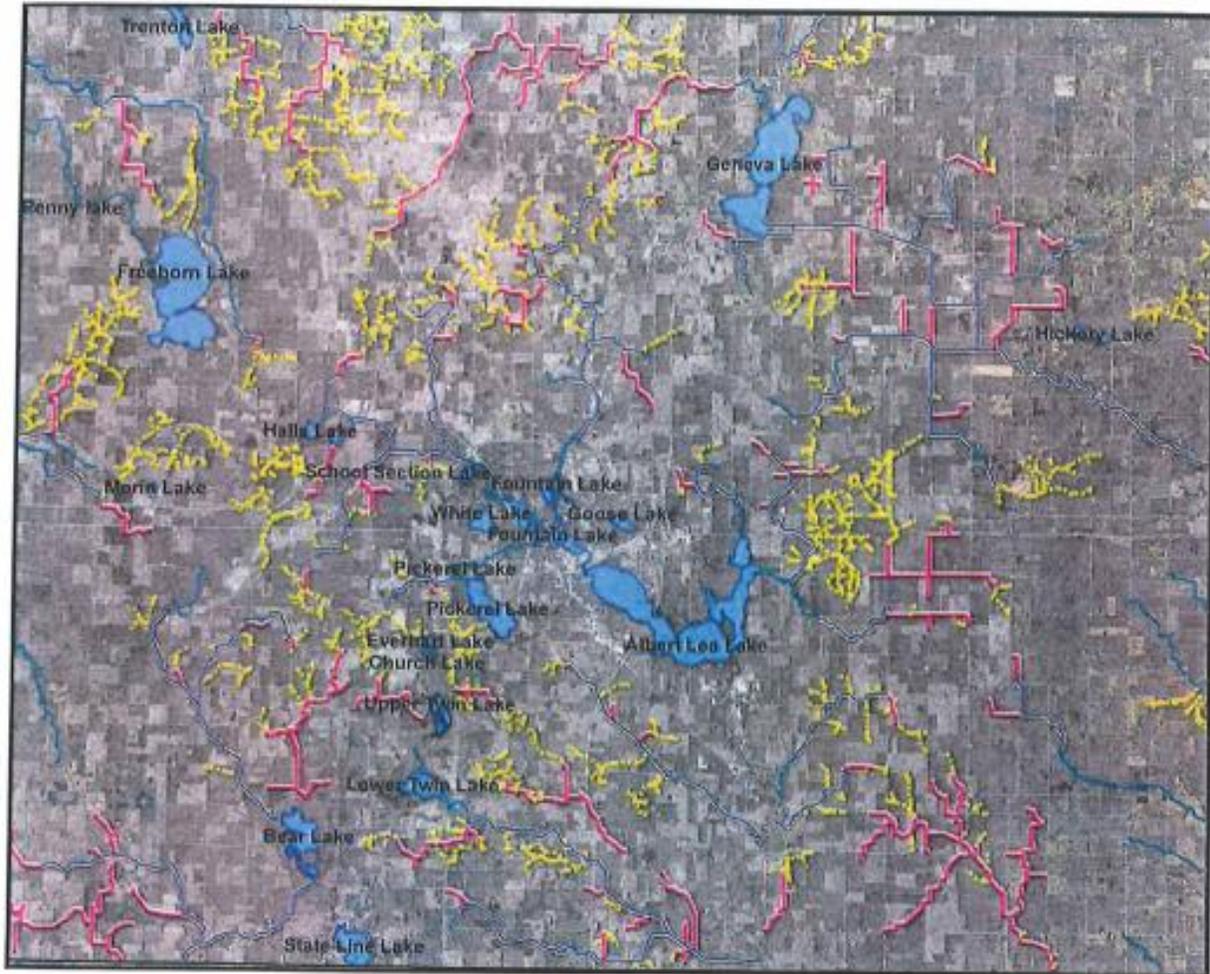
0 2.5 5 10 Miles



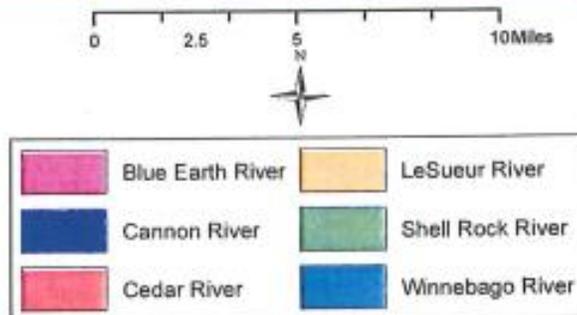
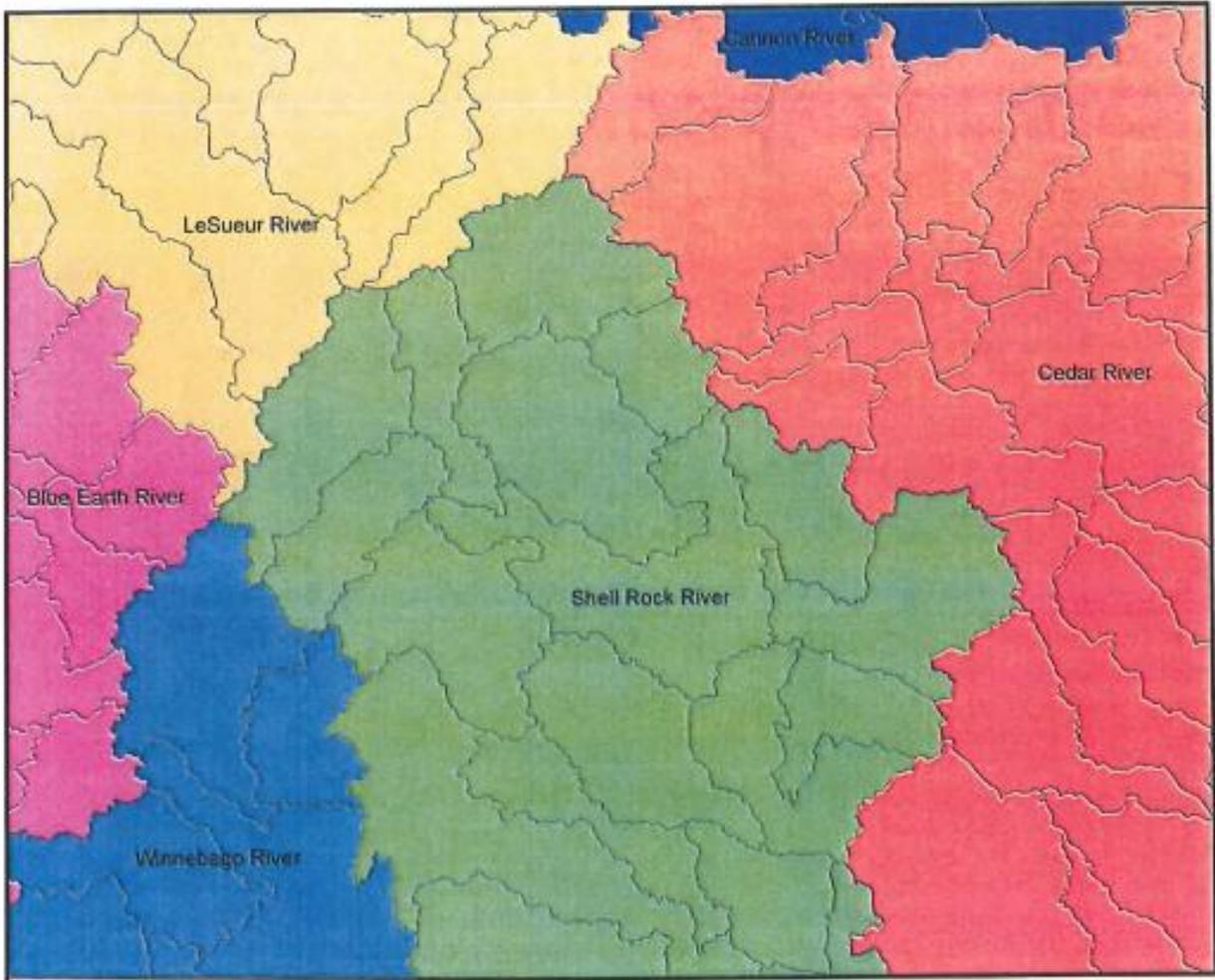
Albert Lea	Freeborn	London	Nunda
Alder	Freeman	Manchester	Oakland
Bancroft	Geneva	Mansfield	Pickere Lake
Bath	Hartland	Moscow	Riceland
Carlston	Hayward	Newry	Shell Rock

5/2016

Map 2 Surface Waters

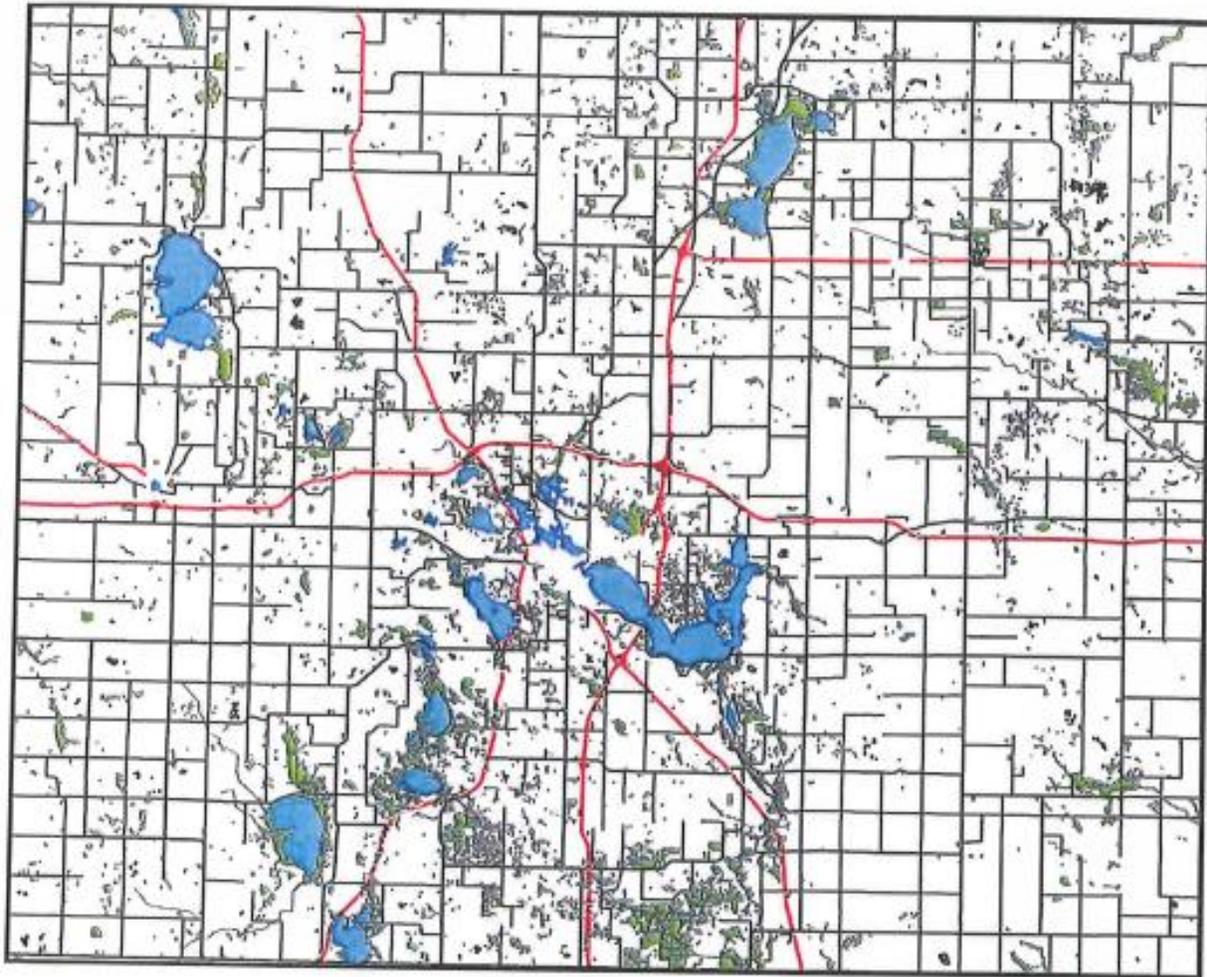


Map 3 Major Watersheds

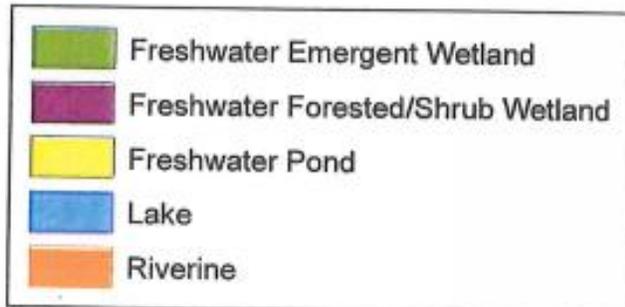




Map 4 National Wetland Inventory



0 2.5 5 10 Miles



2/6/2016

Freeborn County, MN Water Table Sensitivity

Water Table Aquifer Sensitivity based on Sediment Association of MN Geomorphology (DNR, UMD, MGS 1997) and Sand and Gravel layer (MGS)

Landscape Features

- Major Roads
- 100k Streams and Rivers (USGS)
- DWSMA (MDH)
- 100k Lakes (DNR)
- Townships

Water Table Aquifer Sensitivity

Rating

- No Rating
- Low
- Medium
- High

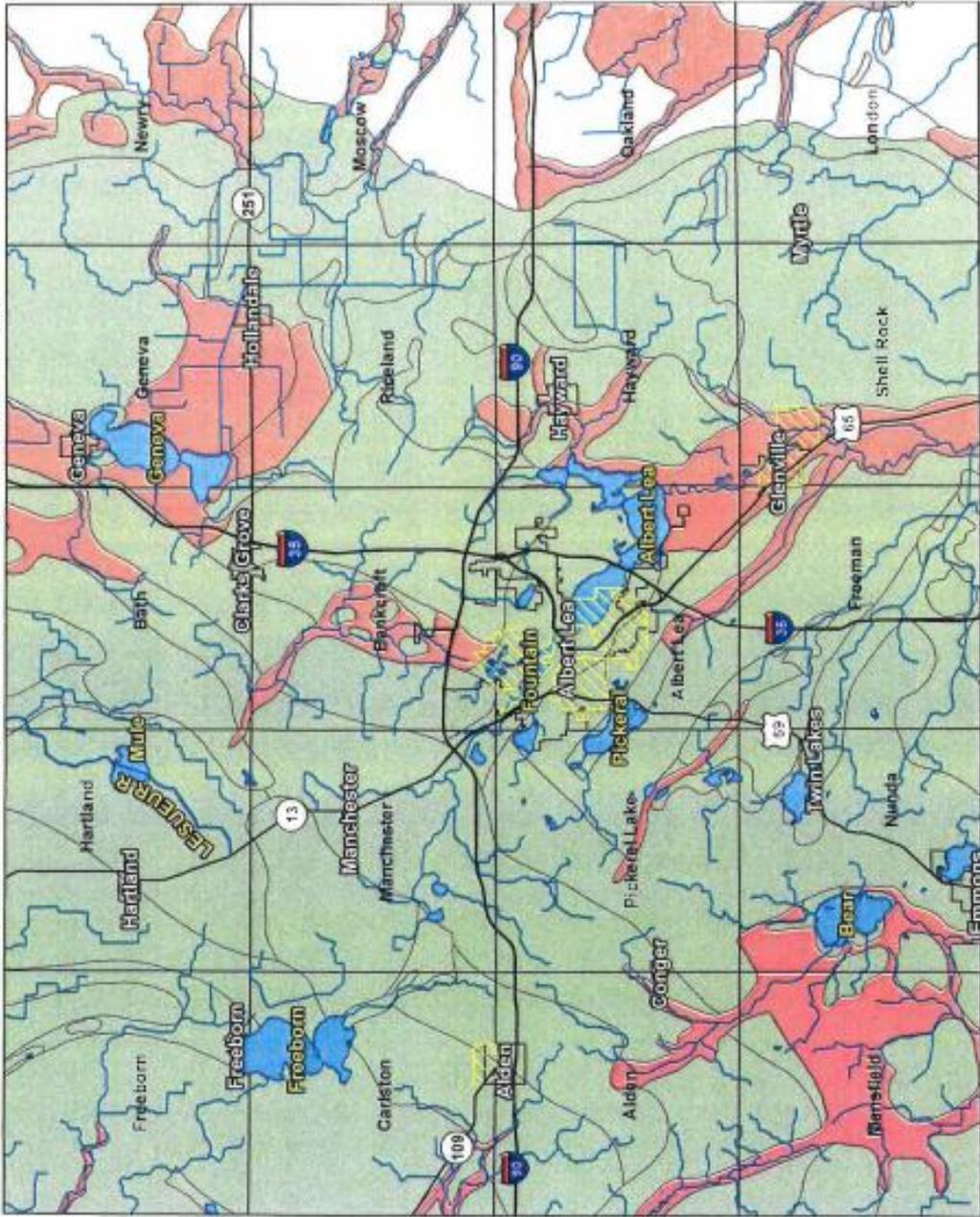
City

Major waterbody

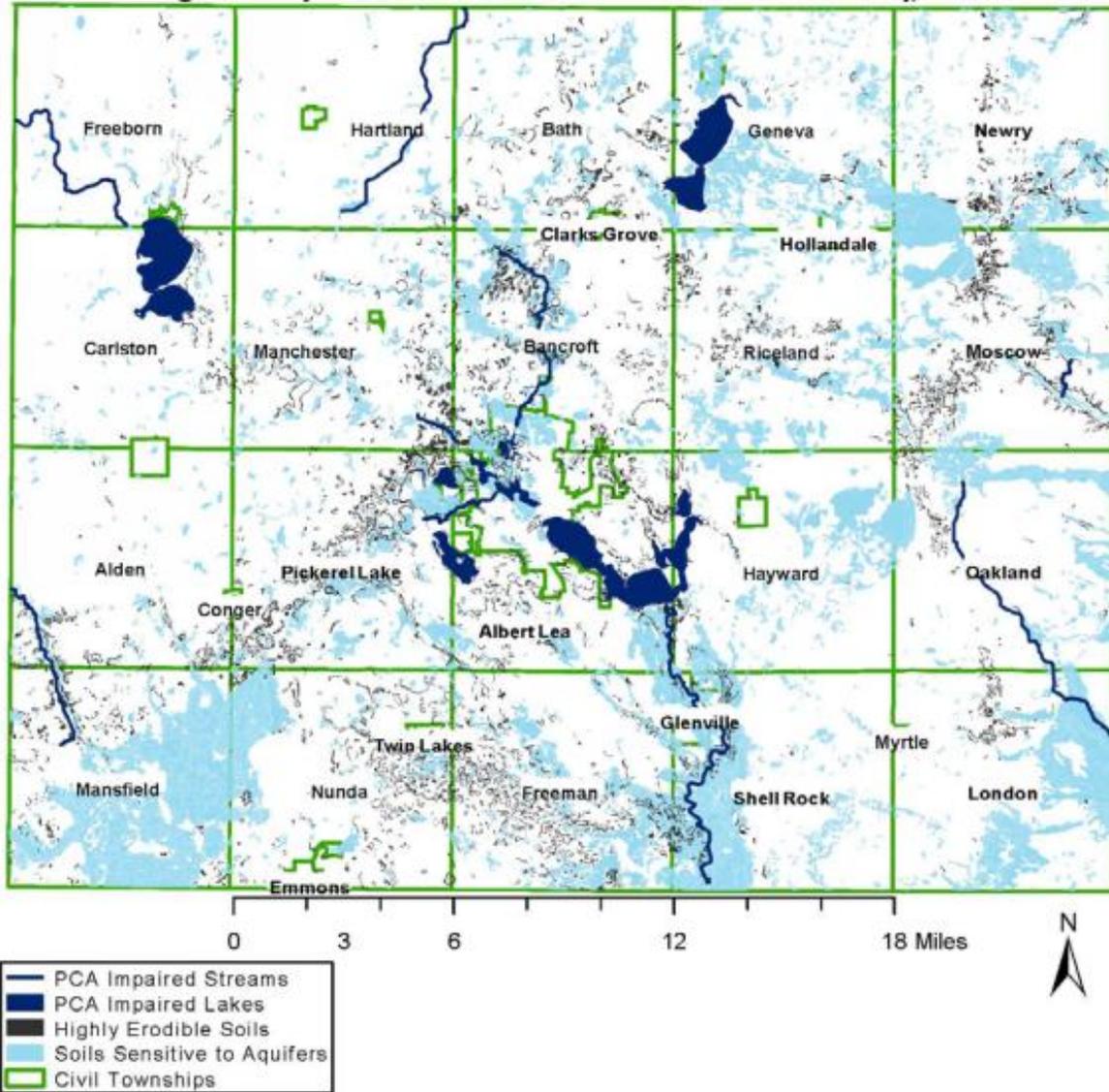
Township name

Minnesota Counties

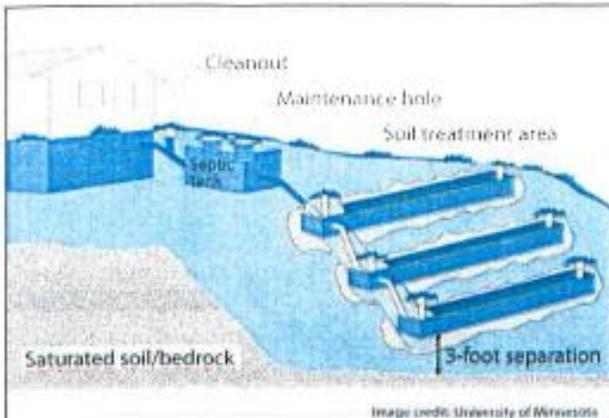
- Freeborn



High Priority Resource Concerns Areas in Freeborn County, MN



Freeborn County SSTS Compliance Program



Freeborn County will continue with on-site sewer system compliance inspections. These inspections evaluate the components of your sewer system, according to MN Rules Chapter 7080. Your sewer should consist of a water tight tank and a soils treatment area.

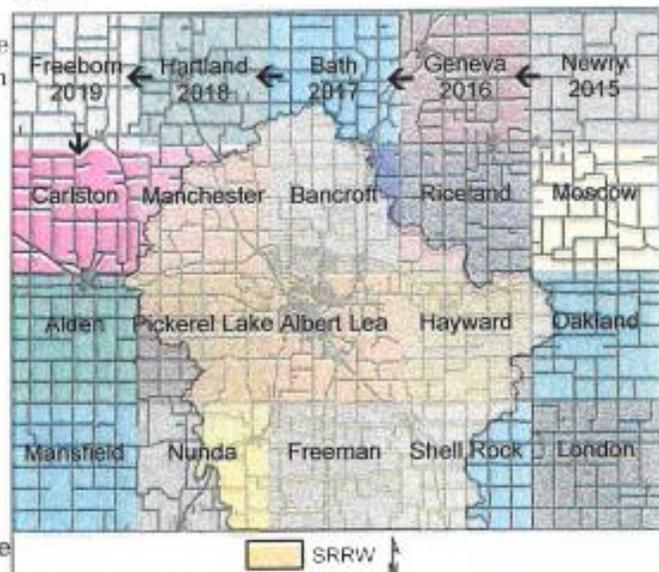
The septic tank is a solid, watertight tank that receives waste water. It separates solids from liquids and stores solids until they are removed by a licensed pumper. Inlet and outlet baffles trap scum in the tank. Effluent screens are a practical means of reducing solids into the soil treatment area.

Sewage is waste produced by toilets, bathing, laundry, and cooking. Sewage does not include roof drainage, water softener recharge, or lawn & garden irrigation.

Proper operation and maintenance of your system will reduce bacteria, viruses, nutrients, and chemicals into our land and water resources.

Recommendations for system operations:

- Control water use
- Reroute water softener discharge water out of septic system
- Eliminate harmful products from system
- Do not use additives to enhance system performance
- Regularly pump septic tanks
- Protect the soils treatment area from **vehicle** traffic

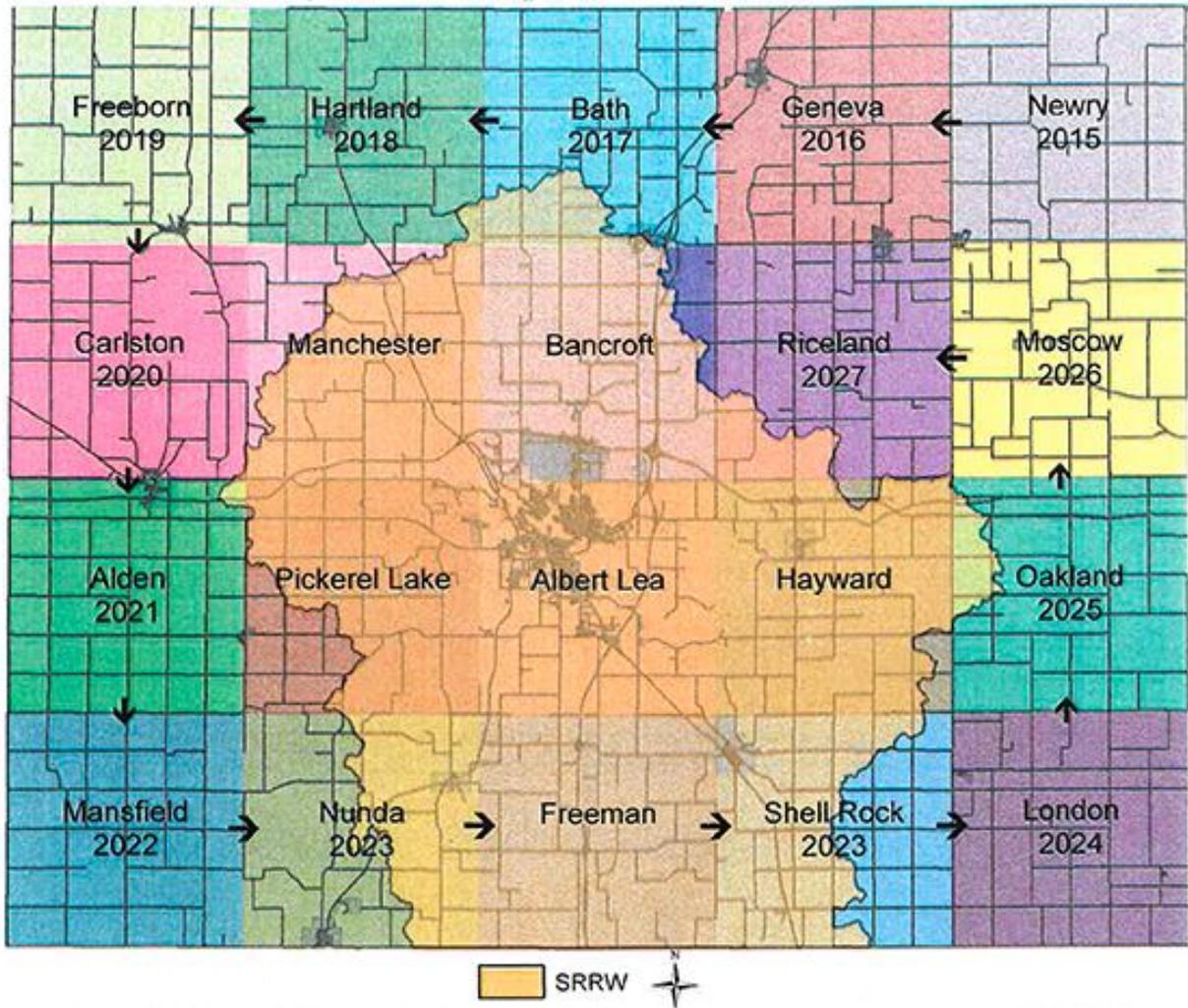


Compliance Program Details:

- County wide program to start January 1, 2015
- Freeborn County will offer a \$100 reimbursement for each sewer system compliance when completed and returned to office
- Approximately 100-150 inspections per year, completing typically 1 township each year
- Any system installed prior to 2002, may be inspected
- An emphasis would be placed on properties that are imminent health threats, without sewer permits, and those within shoreland areas or wellhead protection zones
- Systems within Shell Rock River Watershed would be inspected near end of program

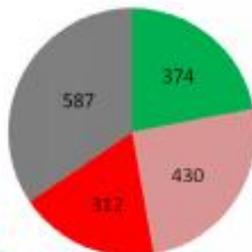
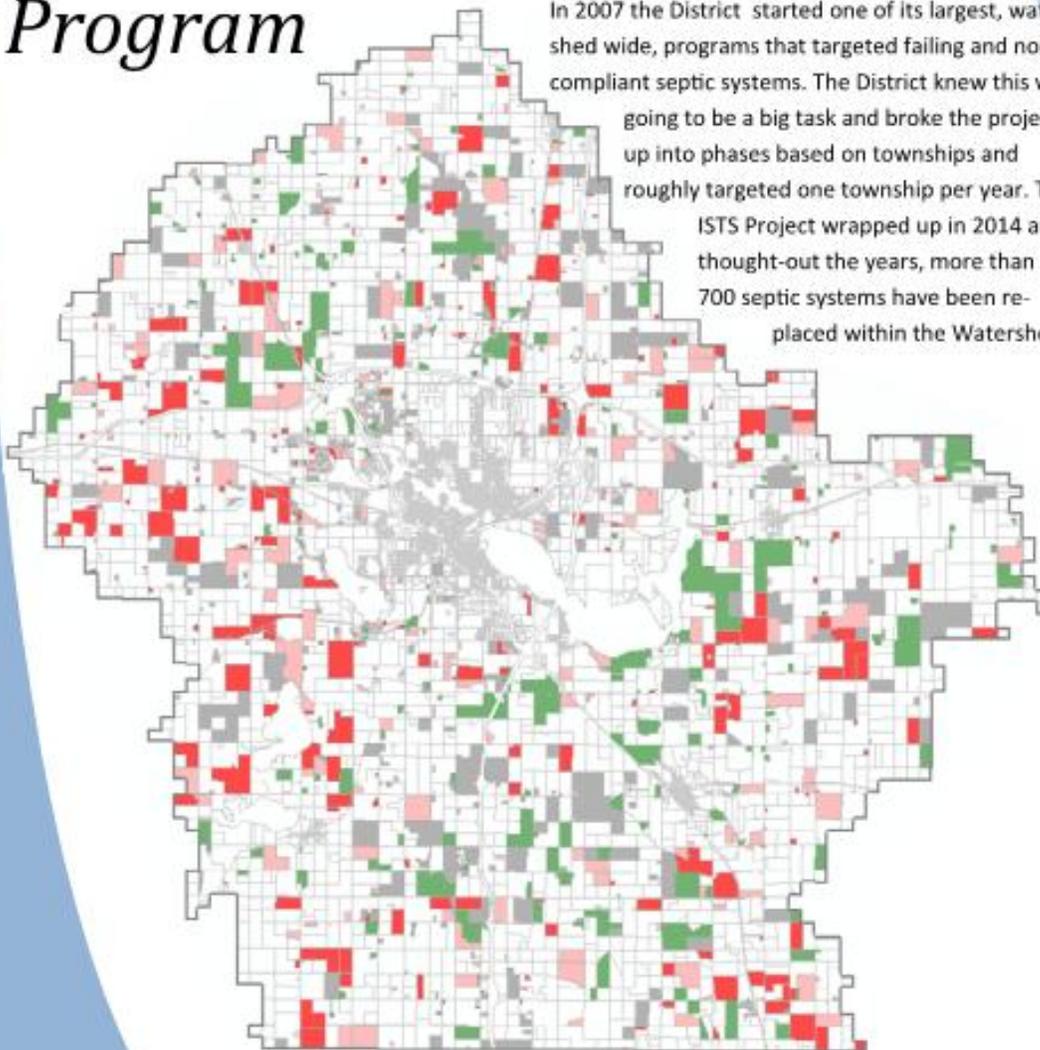
Please contact Environmental Services Department
for additional information at (507) 377-5186.

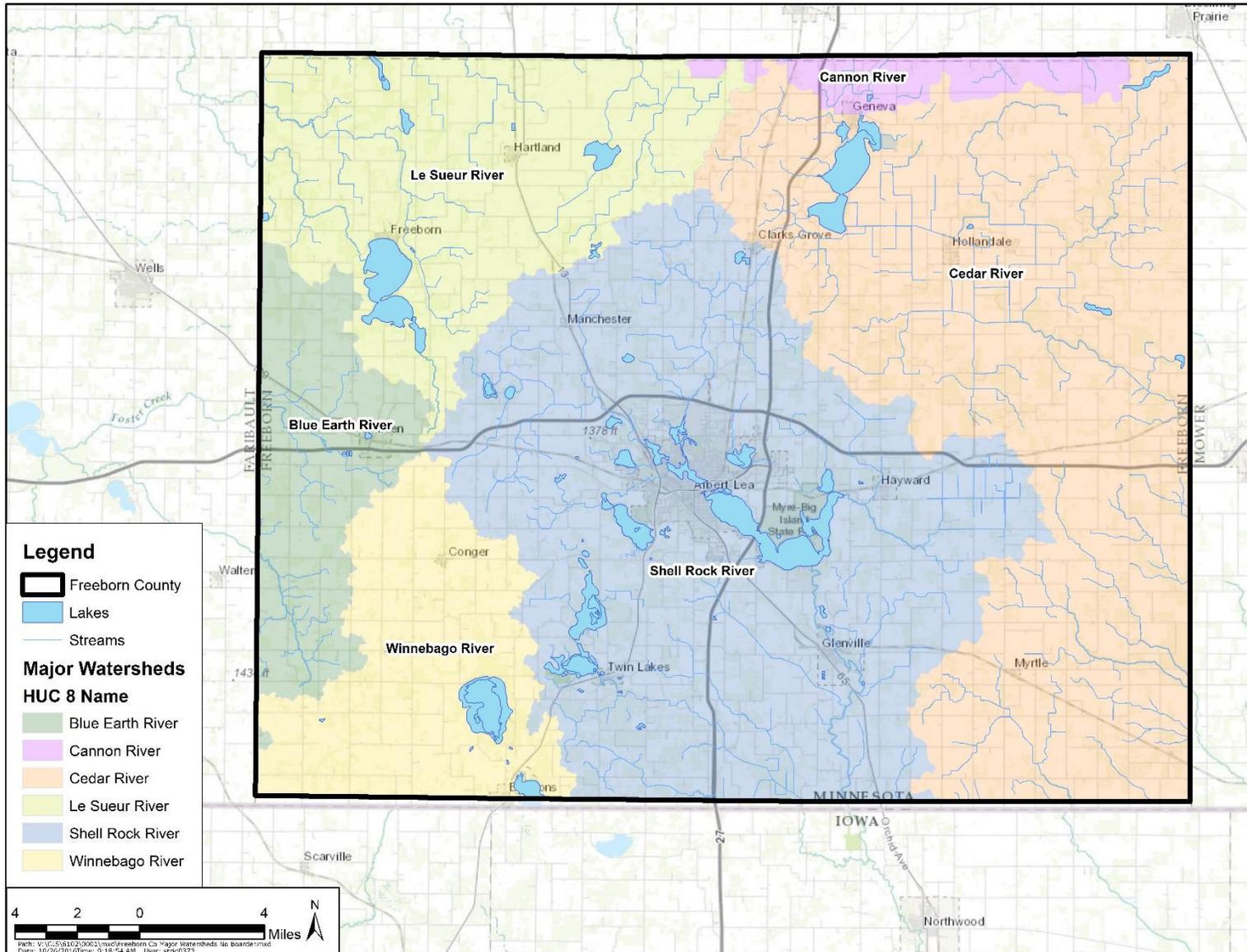
Freeborn County SSTS Compliance Program - Years of Inspection

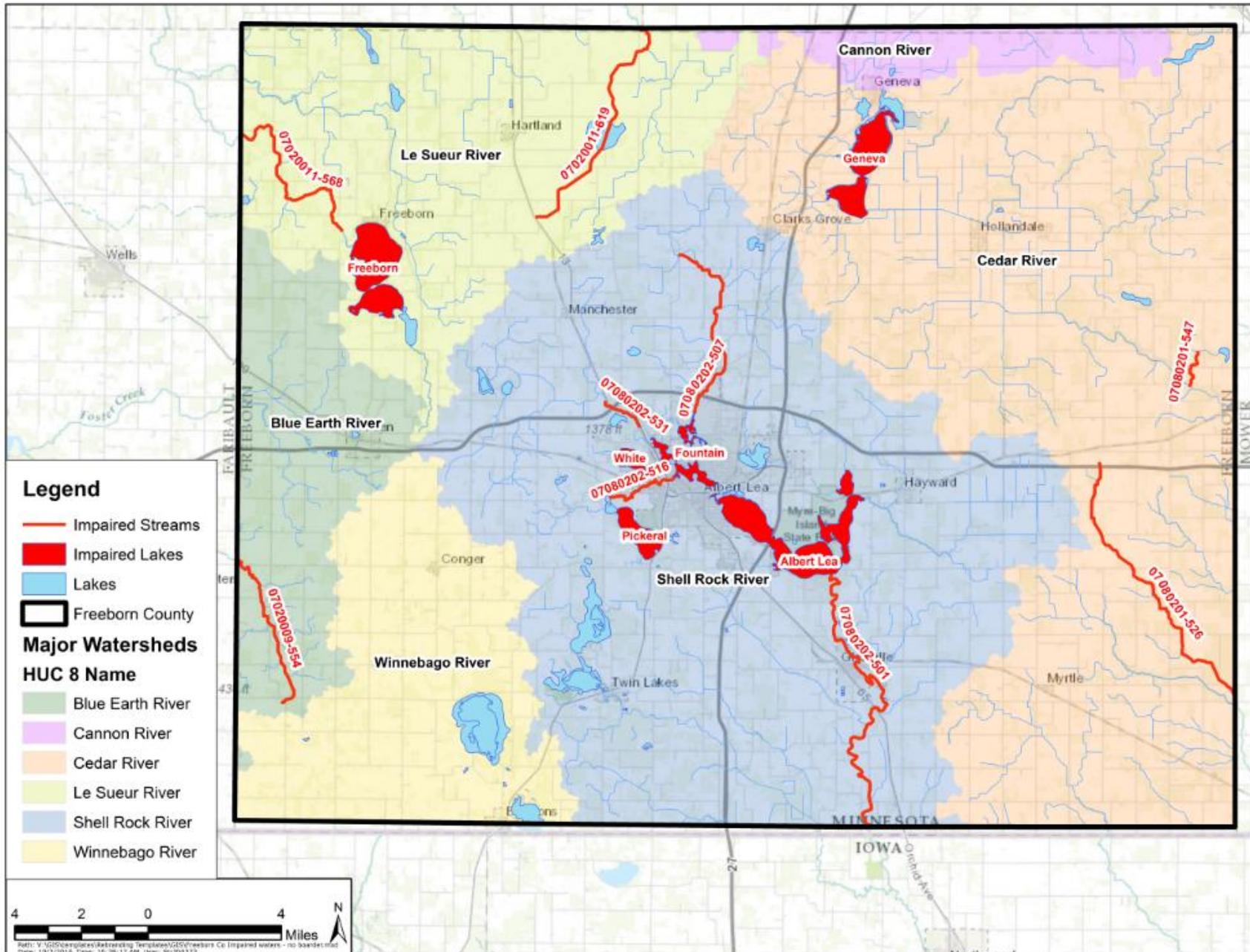


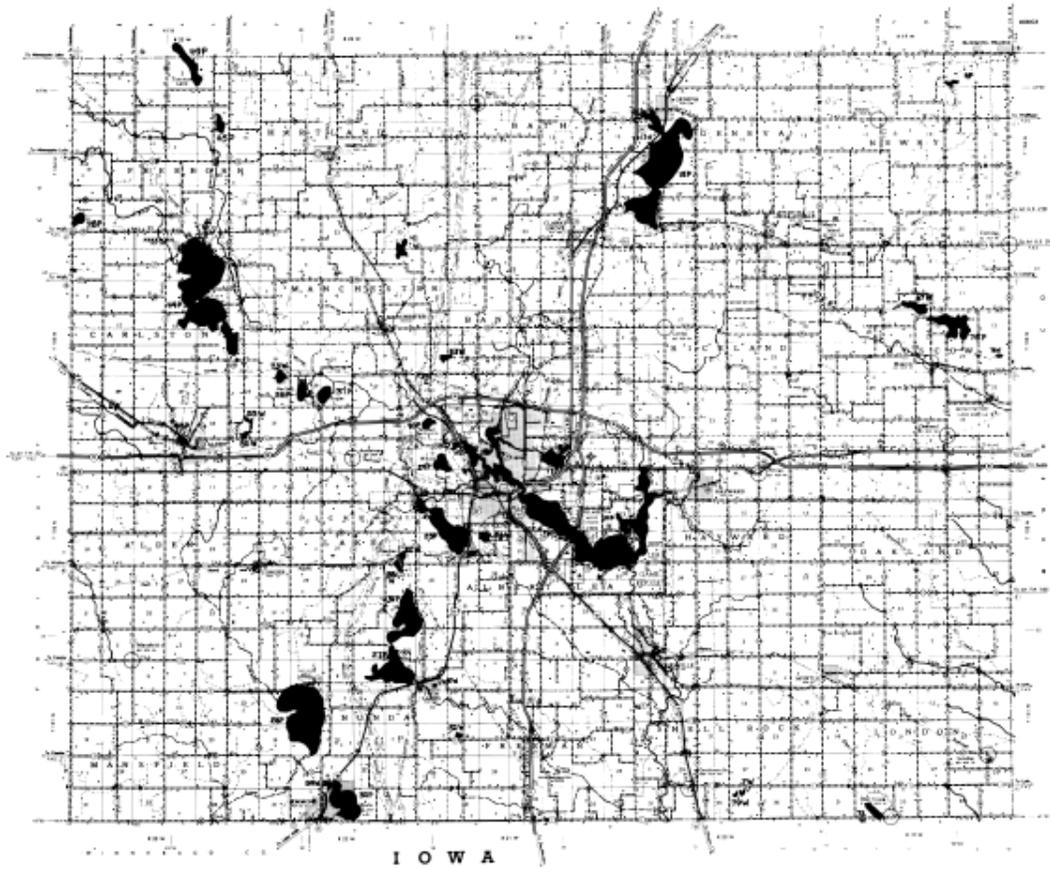
SRRWD ISTS Program

In 2007 the District started one of its largest, watershed wide, programs that targeted failing and non-compliant septic systems. The District knew this was going to be a big task and broke the project up into phases based on townships and roughly targeted one township per year. The ISTS Project wrapped up in 2014 and thought-out the years, more than 700 septic systems have been replaced within the Watershed.





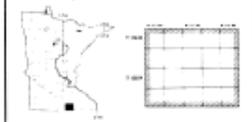




PROTECTED WATERS AND WETLANDS

FREEBORN COUNTY MINNESOTA

SHEET 1 of 1



LEGEND

- Protected Waters:**
- Basins are identified with a number and the letter "P".
 - Water courses are identified with a heavy, dark line.
 - Public ditches are identified with a dashed line.

- Protected Wetlands:**
- Identified with a number and the letter "W".

This map is intended for use with a separate descriptive list. The boundaries of the protected water bodies shown on this map are plotted as accurately as possible, consistent with the map scale, but are still approximate. A protected water body boundary coincides with the ordinary high water mark of a water body as defined in Minnesota Statutes, Section 108.37 and is determined through DNR field inspection or survey.

Protected waters and wetlands are subject to Minnesota Statutes, Section 100.42, which requires that a permit be obtained before making any alteration in the course, current or cross section of these waters. Contact the DNR office in your area for further information.

Trespass

The designation and mapping of protected waters or wetlands does not entitle anyone to cross private land in order to gain access to the water. Please respect the property of others.

Water Bank

Wetland owners may be eligible for compensation for preservation of protected wetlands. Contact the DNR office in your area for further information.

SCALE: 1/2" = 1 MILE



