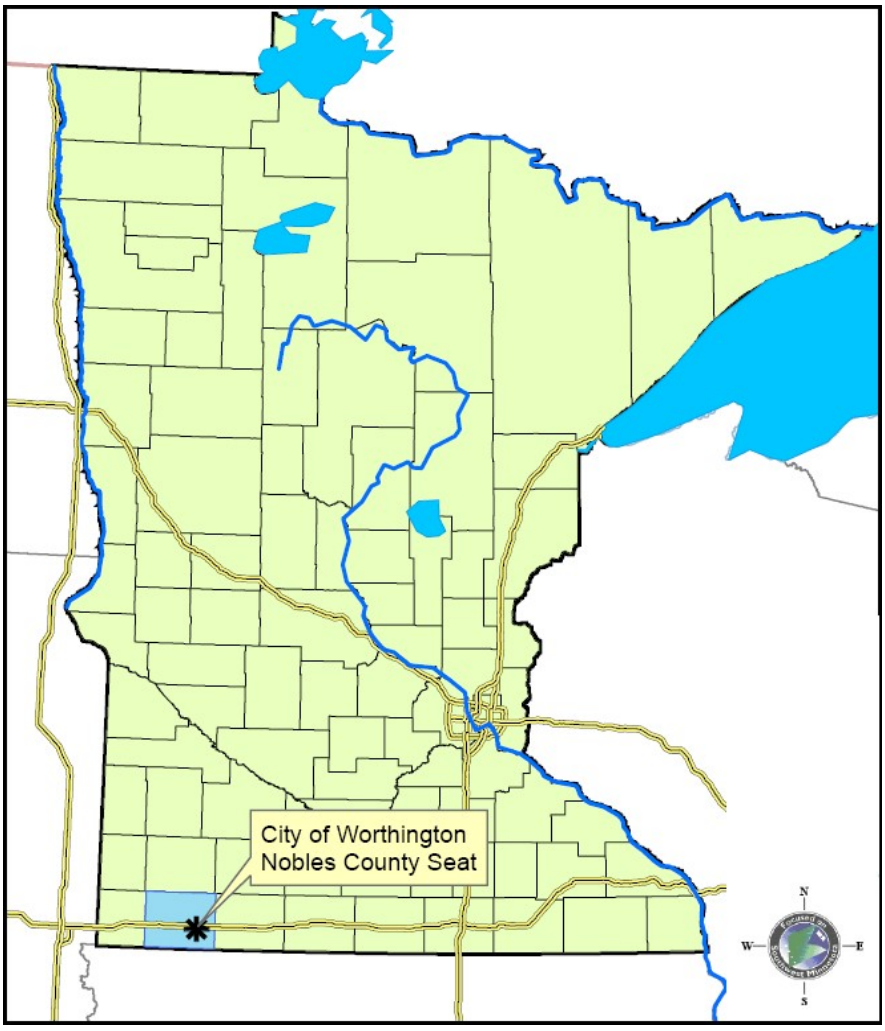
NOBLES SOIL AND WATER CONSERVATION DISTRICT

2019 ANNUAL PLAN OF OPERATIONS



INTRODUCTION

The purpose of the Nobles SWCD Annual Plan of Operations is to provide a mechanism to implement the Nobles County Comprehensive Water Management Plan by identifying the goals and objectives that need to be implemented during the year. The annual plan provides specific statements about the actions to be performed, the programs to be implemented, and the budget allocated for the overall program. The annual plan serves as a tool for guiding actions during the year and for measuring performance at appropriate time intervals.

PRIORITY INITIATIVES:

Surface Water Quality
Drainage Management
Public Water Supply

Descriptions and goals of the Priority Initiatives can be viewed in the Nobles Local Water Management Plan

Implementation Activities to Address Priority Concerns

This section establishes the implementation program for local water management to address priority concerns by watersheds. Action items describe specific measures that the County intends to implement, in cooperation with appropriate local, state and federal agencies and organizations. Action items listed below were reached by consensus and are not necessarily in rank order.

Priority Concern 1. Improve Surface Water Quality

Goal 1: Prevent further degradation of stream and lake water quality, with a priority for Shoreland, TMDL-listed waters, and unsewered communities.

Objective 1.a Address TMDL Impaired Waters.

1.a.2 Provide public information on water quality.
1.a.3 Provide technical and administrative assistance to MPCA on impaired waters listings and water monitoring
1.a.4 Work with MPCA, BWSR, DNR and USFWS to improve quality of waters entering Heron Lake.
1.a.5 Work with MPCA and private wildlife and sportsmen's organizations to improve quality of waters entering Okabena, Ocheda and Bella lakes
1.a.6 Provide technical assistance for the Des Moines River TMDL, Rock River TMDL, Missouri River TMDL and other TMDL preparation and implementation plans as needed.
1.a.7 Promote, assist and seek funding to implement BMPs towards improving the water quality of the Heron Lake Watershed.
1.a.8 Promote, assist and seek funding to implement BMPs towards improving the water quality of the Des Moines River.

Objective 1.b Prevent soil erosion

1.b.2 Promote, assist, seek funding and install field windbreaks, living snow fences and farmstead windbreaks to reduce the amount of wind erosion.
1.b.3 Promote conservation practices and programs to landowners in Nobles County. These include State Cost-Share, RIM, RIM/WRP, CRP, EQIP, CSP and others.
1.b.4 Promote, assist, seek funding and install practices that reduce erosion in ravines, on working lands, reduce gully erosion, decrease sediment as well as reduce flooding.
1.b.5 Promote, assist, seek funding and install Critical Area Plantings on meandered intermittent streams with less than 0.5% grade.
1.b.6 Promote, assist, seek funding and install practices that reduce erosion on working lands, reduce gully erosion and decrease sediment loading to surface waters.
1.b.7 Promote and seek funding for the installation of alternative tile intakes.
1.b.8 Promote, assist and seek funding for the installation of streambank stabilization projects.
1.b.9 Inventory status of all stream and ditch buffers on DNR Protected Waters and Public Ditch Systems.
1.b.11 Develop a Soil Loss Ordinance, for Nobles County, that addresses soil loss related to agricultural production, drainage and other possible causes of reductions in water quality.

Objective 1.c Promote Ag Best Management Practices (AgBMPs).

1.c.1 Promote buffer strips along ditches, streams and lakes within Nobles County utilizing available conservation programs and incentives.
1.c.2 Assist, seek funding and install acres into a buffer strip program along ditches, streams and lakes.
1.c.3 Assist and seek funding to enroll riparian land into a perpetual buffer program.
1.c.4 Assist producers in applying for cost share opportunities for conservation practices
1.c.5 Promote, assist and seek funding to establish cover crops.
1.c.6 Provide incentives for sign up of 100 acres of buffer strips along ditches and streams within the Des Moines, Rock, Kanaranzi-Little Rock Watersheds.
1.c.7 Promote and Provide incentives for 300 acres of filter strips in Okabena-Ocheda Watershed.
1.c.8 Promote Cost share programs and designate funds to watershed district cost-share programs

1.d – Facilitate compliance of nutrient management, feedlots & SSTS with state and federal requirements

1.d.2 Promote, assist and seek funding for livestock producers with feedlots containing 300-999 animal units to develop and maintain a compliant manure management plan.
1.d.4 Provide technical assistance for feedlot improvements.
1.d.5 Promote, assist and seek implementation funding through EQIP, CSP, State Cost-Share and Clean Water fund for livestock waste management BMPs.
1.d.6 Maintain a GIS layer of all registered feedlots and manured acres.
1.d.7 Continue Delta reporting for registered feedlots in Nobles County.
1.d.8 Provide manure sample kits to livestock producers.
1.d.9 Assist the HLWD with a Level III Inventory and onsite inspection for the WFDMR and Heron Lake TMDL Implementation Plan.
1.d.10 Promote, assist and seek funding to help livestock producers in the WFDMR watershed that need waste management upgrades as found with the Level III Inventory.
1.d.17 Keep public informed on the Nobles County SSTS Ordinance and Ordinance changes.

Priority Concern 2. Drainage Management

Goal 2: Restore more natural flow in the drainage system, with a priority for Shoreland.

Objective 2.a: Improve Shoreland and Impervious surface areas

2.a.1 Administer and promote shoreland zoning regulations.
2.a.2 Administer and promote Watershed District rules.
2.a.3 Promote, assist and seek funding for the installation of streambank and lakeshore stabilization projects and educate landowners regarding lakeshore and streambank BMP's
2.a.8 Consider County ordinance provisions encouraging soil erosion mitigation during construction.

Objective 2.b: Improve Flood Control, drainage systems and storm water retention.

2.b.4 Cooperate with City of Rushmore efforts to improve storm water drainage.
2.b.6 Facilitate City of Adrian efforts to improve storm water drainage.
2.b.7 Develop a GIS layer of all public drainage systems and include: system name, watershed size, outlets, date established, system type, repair history, improvement history, and other relevant data.
2.b.8 Promote, assist and seek funding for the installation of storm water retention projects such as rain gardens to reduce peak storm event flows.
2.b.9 Promote conservation drainage practices in Nobles County. Seek incentive funds and cost-share to assist producers with the installation of conservation drainage practices; these practices include alternative tile intakes, structures to control tile drainage and bioreactors. High priority areas would include impaired water bodies and reaches of impaired water bodies.
2.b.10 Seek funding for the installation of storm water retention projects within the Jack Creek and Elk Creek (Des Moines).
2.b.11 Seek additional funding for water retention structures within the Okabena-Ocheda watershed.
2.b.12 Seek additional funding for water retention structures within the Kanaranzi-Little Rock watershed.
2.b.13 Seek additional funding for water retention structures within the Rock and Little Sioux watersheds.
2.b.14 Promote, assist and seek funding for the installation of Urban BMPs, to individuals and the communities of Worthington, Adrian, Ellsworth, Rushmore , Reading, Brewster, Lismore, Wilmont, Leota and Round Lake, as found in the MN Stormwater Manual.
2.b.15 Promote, assist and seek funding for the installation of grass waterways.
2.b.16 Promote, assist and seek funding for the installation of water and sediment control structures.
2.b.17 Develop a Comprehensive Drainage Management Plan (DMP), for Nobles County, that addresses present and future drainage needs as well as methods to mitigate the unintended consequences of agricultural drainage on water quality. Hiring of technical personnel to investigate and resources to complete work by present staff in developing plan.

2.b.18 Redetermination of Benefits. Continue the redetermination of benefits on all public ditches and tile systems.

Objective 2.c Encourage Wetland Restoration and Protection of natural habitat

2.c.1 Administer the Wetland Conservation Act and assemble Technical Evaluation Panel (TEP) to minimize the amount of wetland acres lost county wide.
2.c.2 Work with DNR and USF&WS to expand or enhance wetland in existing wildlife areas. Educate landowners on the benefits of converting drained wetlands back to a permanent native vegetated state, using RIM/WRP and CRP or other long term conservation program.
2.c.3 Promote, assist and seek funding to enroll marginal land into available wetland restoration programs including RIM/WRP and CRP or other long term conservation program.
2.c.4 Provide information to landowners on benefits of appropriate natural cover on habitat for threatened and endangered species.
2.c.5 Consider benefits of wildlife habitat in project prioritization.

Priority Concern C.3 Protect Groundwater.

Goal 3: Assure long-term quality and quantity of public water supplies, with a priority for DWSMAs and areas not currently served by public/community systems

Objective 3.a Support Well Head Protection planning and implementation

3.a.1 Assist cities with completing and implementing their Wellhead Protection Plan.
3.a.2 Protect DWSMA and surficial aquifer areas from agricultural and industrial contamination through zoning ordinances. Manure management plans to be completed and followed in DWSMA and surficial aquifers.
3.a.3 Educate landowners and residents on DWSMAs and measures to protect the groundwater. Emphasis on City of Worthington, Adrian, and Ellsworth DWSMA
3.a.4 Protect long-term water supply by enforcing zoning ordinances through Conditional Use Hearings for municipal, industrial, irrigation and public water supply wells.
3.a.6 Promote, assist and seek funding to enroll eligible acres (highly vulnerable wellhead areas) into the RIM Wellhead Protection Program and Continuous Conservation Reserve Program.
3.a.7 Support water conservation by using existing educational materials.
3.a.8 Monitor water level elevations in MN DNR Observation Wells as part of a state-wide effort to measure depth to aquifer.

Objective 3.b Prevent groundwater contamination from unused wells, gravel pits and fertilizer application

3.b.1 Work with well contractors to promote proper well protection and sealing.
3.b.2 Inventory unused wells in GIS layer
3.b.4 Promote, assist and seek funding to prevent contamination of groundwater by providing cost-share for the sealing of unused wells.
3.b.5 Provide information to County residents concerning proper well protection and sealing programs.
3.b.7 Promote proper application of fertilizers and pesticides and partner with local crop consultants.
3.b.8 Promote, assist and seek funding to assist landowners and operators with nutrient management plans.
3.b.9 Promote Ag BMPs along ditches, rivers, lakes and streams.

Objective 3.c Facilitate land retirement in critical areas.

3.c.1 Work with water suppliers to identify opportunities to permanently retire lands in vulnerable areas.
3.c.2 Consider benefits of wildlife habitat and recreation in project prioritization.
3.c.3 Establish public and private partnerships to take advantage of opportunities to retire land as they become available.
3.c.4 Seek additional funding from State and Federal resources and other sources for land retirement.

D. Implementation Schedule of Ongoing Activities

This section identifies other local activities and programs of the County, SWCD, watershed districts and cooperators that make up the local water management program, which may not be reflected in the priority concerns above. There are also many other public and private efforts at the regional, state and federal levels which serve to promote the goals of sound water management. These particular ongoing activities typically encompass all watersheds in the county, reaching a broad cross-section of local residents and businesses.

- Educate the public and promote water quality and conservation.
- Participate in state Impaired Waters Program
- Administer Wetland Conservation Act
- Administer National Flood Insurance Program
- Administer Shoreland management program.
- Administer Watershed District rules.
- Provide technical assistance for conservation programs.
- Promote the SWCD tree and no-till drill program.
- Administer and provide assistance for the State Revolving Fund for Ag BMP's.
- Promote and help facilitate the RIM, CRP and similar conservation programs.
- Promote and help facilitate stormwater retention and lakeshore restoration.
- Administer base-line water quality testing program.
- Inspect and assist producers in maintaining compliance with County and State rules.
- Assist the County Board of Commissioners with drainage management.
- Continue to promote and provide Household Hazardous Waste Program for proper disposal.
- Provide a collection program for waste pesticides and empty containers.
- Promote recycling and solid waste management.
- Take applications for watershed district regulated activities, evaluate applications, issue or deny permits.
- Evaluate watershed district rules effectiveness and update rules when appropriate.
- Achieve wildlife habitat and recreation benefits through land retirement.

2009-2013 LAND TREATMENT ACTION GOALS

Conservation Practice	***2009 Actual***	***2010 Actual***	***2011 Actual***	***2012 Actual***	***2013 Actual***	***Water Plan 5 year Progress***	***Water Plan 5 Year Goal***
Conservation Tillage (acres)	5,259	3,352	5200	5120	4575	18,931	40,000
Critical Area Planting (#)	1	0	0	0	1	2	15
Grassed Waterways (#)	6	7	8	8	10	38	35
Terraces and Water and Sediment Control Basins (#)	75	61	50	46	25	257	57
Diversions (#)	1	0	2	1	0	4	5
Farmstead Windbreaks (acres)	13.5	18.9	9.1	11.2	23.1	75.8	50
Field Windbreaks (feet)	0	600	0	0	0	600	12,500
Tree Mat - Weed Barrier (feet)	15,000	14,100	8,000	11,000	16000	64,100	50,000
Private Wildlife Plantings (acres)	4	4.3	5	0	3.5	16.8	35
Living Snow Fences (acres)	0	0	0	0	0	0	25
Riparian Buffers (acres)	0	6.7	17.3	17.5	5.8	47.3	50
Permanent Easements (acres)	0	0	29.7	0	173.6	203.3	100
CRP (non-wetland) (acres)	232.5	290.8	304.8	303.6	274.4	1406.1	1000
CRP Wetland Restorations (acres)	22.3	43.9	24.2	0	0	90.4	100
Nutrient Management Plans (#)	0	9	7	4	6	26	25
Ag. Waste Management System (#)	0	2	1	4	3	10	15
Streambank and Shoreline protection (feet)	0	0	1200	1200	2500	4,900	2500
Alternative Intakes (number)	0	0	8	6	0	14	75

2014-2019 LAND TREATMENT ACTION GOALS

Conservation Practice	***2014 Actual***	***Water Plan 6 year Progress***	***2015 Actual***	***2016 Actual***	***2017 Actual***	***2018 Actual***	***2019 Goal***	***Water Plan 10 Year Goal***
Conservation Tillage (acres)		18,931	5120	6275	7255	7697	8000	80,000
Critical Area Planting (#)		2	2	1	12	-	3	30
Grassed Waterways (#)		38	6	3	12	-	7	70
Terraces and Water and Sediment Control Basins (#)		257	12	25	48	-	13	115
Diversions (#)		4	-	1	1	-	1	10
Farmstead Windbreaks (acres)		75.8	9.5	5.5	20	8	10	100
Field Windbreaks (feet)		600	1000	11,400	1,200	0	2500	25,000
Tree Mat - Weed Barrier (feet)		64,100	17,550	18,400	16,121	11,730	10,000	100,000
Private Wildlife Plantings (acres)		16.8	4	8.5	3	10.5	7	70
Living Snow Fences (acres)		0	-	-	-	0	5	50
Riparian Buffers (acres)	213.5	47.3	10	15.4	1,016	0	10	100
Permanent Easements (acres)	85	203.3	805	84.2	217	15.6	20	200
CRP (non-wetland) (acres)	467.1	1406.1	1150	944.1	740	1364	200	2,000
CRP Wetland Restorations (acres)	30.6	90.4	15.7	130.3	230	2102	20	200
Nutrient Management Plans (#)		26	-	-	1	7	5	50
Ag. Waste Management System (#)		10	2	-	1	-	3	30
Streambank and Shoreline protection (feet)		4,900	400	1300	-	-	500	5,000
Alternative Intakes (number)		14	-	-	-	-	15	150

WORKLOAD ANALYSIS

WORK COMMITMENT

Water Quality Protection	Water Erosion Control	Wind Erosion Control	Flood Control	Resource Management Education	Wildlife Habitat Creation & Enhancement

POSITIONS:

District Manager (100% FTE; 52 weeks)
Work hours available = 2080

550	550	400	280	100	200

Accountant/Administration Assistant (100% FTE; 52 weeks)
Work hours available = 2080

500	500	200	200	500	180

District Technician (100% FTE; 52 weeks)
Work hours available = 2080

300	400	500	400	200	280

Farmbill Technician (100% FTE; 52 weeks)
Work hours available = 2080

300	400	500	400	120	280

TOTAL WORK HOURS AVAILABLE = 8320

1650	1850	1600	1280	920	940

BUDGET SUMMARY

January 1 through December 31, 2019

REVENUES:	
Intergovernmental	
State	
District Operations	$ 187,786
Cost-Share Program	$ 88,466
County	$ 133,127.00
Local	$ 76,500.00
Charges for Services	$ 64,000.00
Miscellaneous	$ 1,650.00
Fund Balance Withdrawal	$ 0.00
TOTAL REVENUES	**$ 551,529.00**
EXPENDITURES:	
District Operations	
Personnel Services	$ 256,803.36
Other Services and Charges	$ 76,600.00
Supplies	$ 2,000.00
Project Expenses—Cost-Share & Grants	$ 116,716.48
Project Expenses- District	$ 85,500.00
TOTAL EXPENDITURES	**$ 537,619.84**

APPENDIX A: COST-SHARE PROGRAM REQUIREMENTS

High Priority Problems

1. High Priority Erosion Problems

High priority erosion problems are areas where erosion from wind or water is occurring to, or in excess of, 2 X T tons per acre per year or is occurring in any area that exhibits gully erosion or is identified as high priority in the comprehensive local water plan or the conservation district's comprehensive plan.

2. High Priority Water Quality Problems

High priority water quality problems means areas where sediment, nutrients, chemicals, or other pollutants discharge to Department of Natural Resources designated protected waters, or any high priority waters as identified in a comprehensive local water plan or the conservation district's comprehensive plan, or discharge to a sinkhole or groundwater. The pollutant delivery rate to the water source is in amounts that will impair the quality or usefulness of the water resource.

a. High Priority Feedlots are those where the pollution potential rating from the feedlot model is greater than or equal to one and which are discharging pollutants to Department of Natural Resources designated protected waters or to a sinkhole or shallow soils overlying fractured or cavernous bedrock or within 100 feet of a water well. Feedlots not meeting these criteria are not eligible for cost-sharing assistance unless cited by the Minnesota Pollution Control Agency.

b. High Priority Sedimentation Problems are areas within 300 feet of a water course or 1,000 feet of a water basin or wetland where the water erosion rate exceeds three tons per acre per year or areas where the District can show that sediment delivery occurs from a watershed or direct conveyance structure such as a storm sewer or paved outlet channel discharging to these waters. The water basin, wetland, or watercourse must be classified by the Department of Natural Resources as protected waters. Sedimentation problems not meeting these criteria are not eligible for cost-sharing assistance.

Maps containing regions of Nobles County that are prone to Erosion, Sedimentation and Flooding can be found in the Nobles Local Water Management Plan.

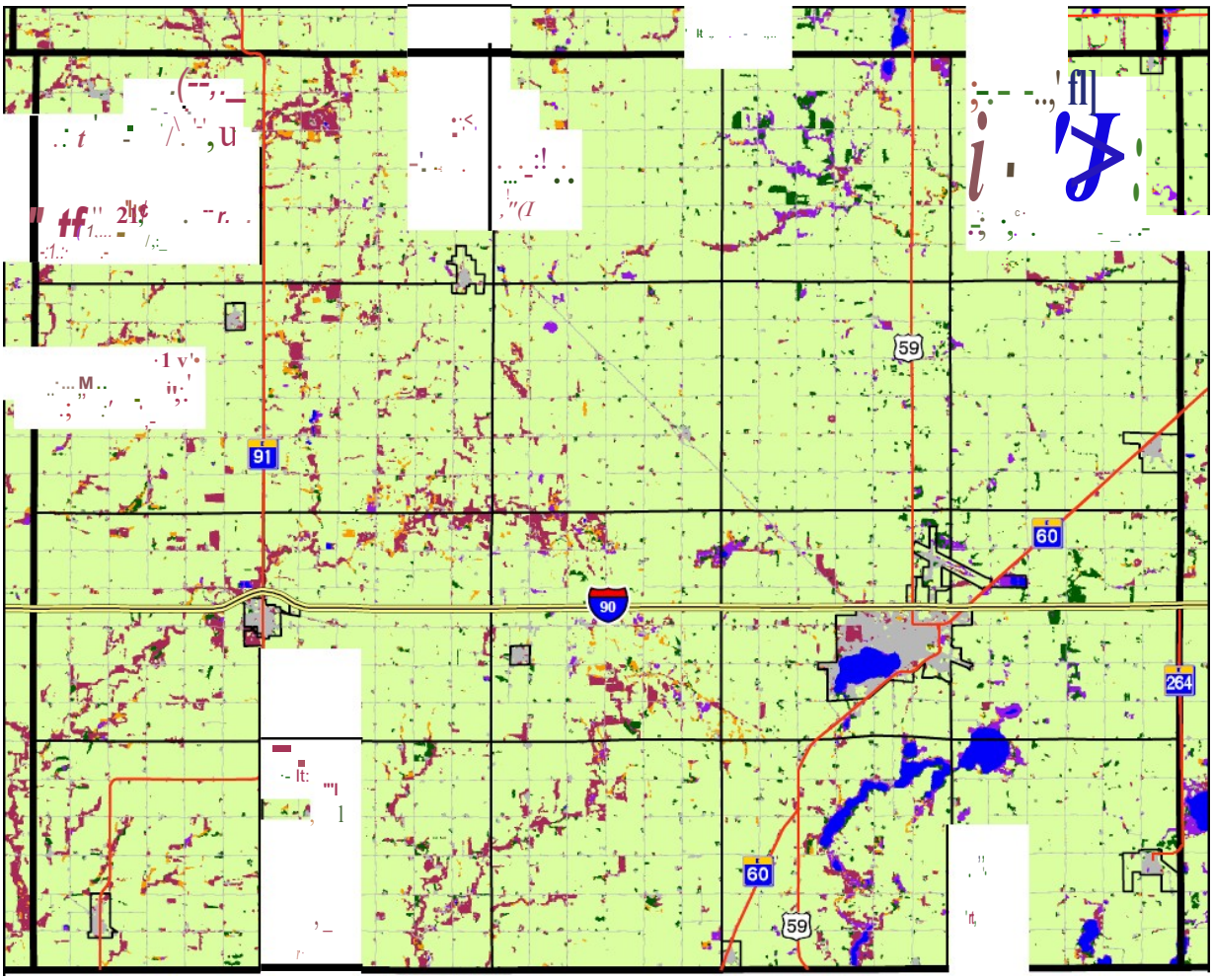
APPENDIX B. STATE COST-SHARE NEEDS

1. Water quality protection	$ 5,000.00
2. Water erosion and sedimentation control	$ 5,906.40
3. Wind erosion control	$ 1,000.00
4. Flood control	$ 2,000.00

Nobles SWCD received $17,383.00 for its state cost-share program for 2019. Of this amount, 20% or $3,476.60 will be used for administration and the remaining 80% or $ 13,906.40 for high priority cost-share practices or additional technical assistance if allowable by BWSR.

This current plan may be adjusted based on additional EQIP funds. As additional EQIP funds are allocated to the Nobles NRCS office the Nobles SWCD may increase the funding requested for the Technical Assistance option to meet the technical needs of the landowners in Nobles County

Land Use and Cover



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-- Trunk Highways
D Urban/Developed
LJ Agricutture
- Grassland
- Forest
- Water
- Wetland
[:] shrubland

This is a level one land covertype map for the entire state of Minnesota representing the year 2000 The covertype was derived via multitemporal, multispectral supervised image classification of satellite imagery aquired by the Landsat TM and Landsat ETM+ satellites. Seven level one land covertype classes were: urban, agriculture, grassland forest, water, wetland and shrubland. This data may be used for educational and non-commercial purposes, provided proper attribution is given. Secondary distribution of the data is permitted, but not supported by the University of Minnesota. By accepting the data, the user agrees not lo transmit this data or provide access to it or any part of it lo another party unless the user includes with the data a copy of this disclaimer. Source: Remote Sensing and Geospatial Analysis Laboratory, University of Mim esota

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Source Univ. Minnesota, MnDOT, ESRI

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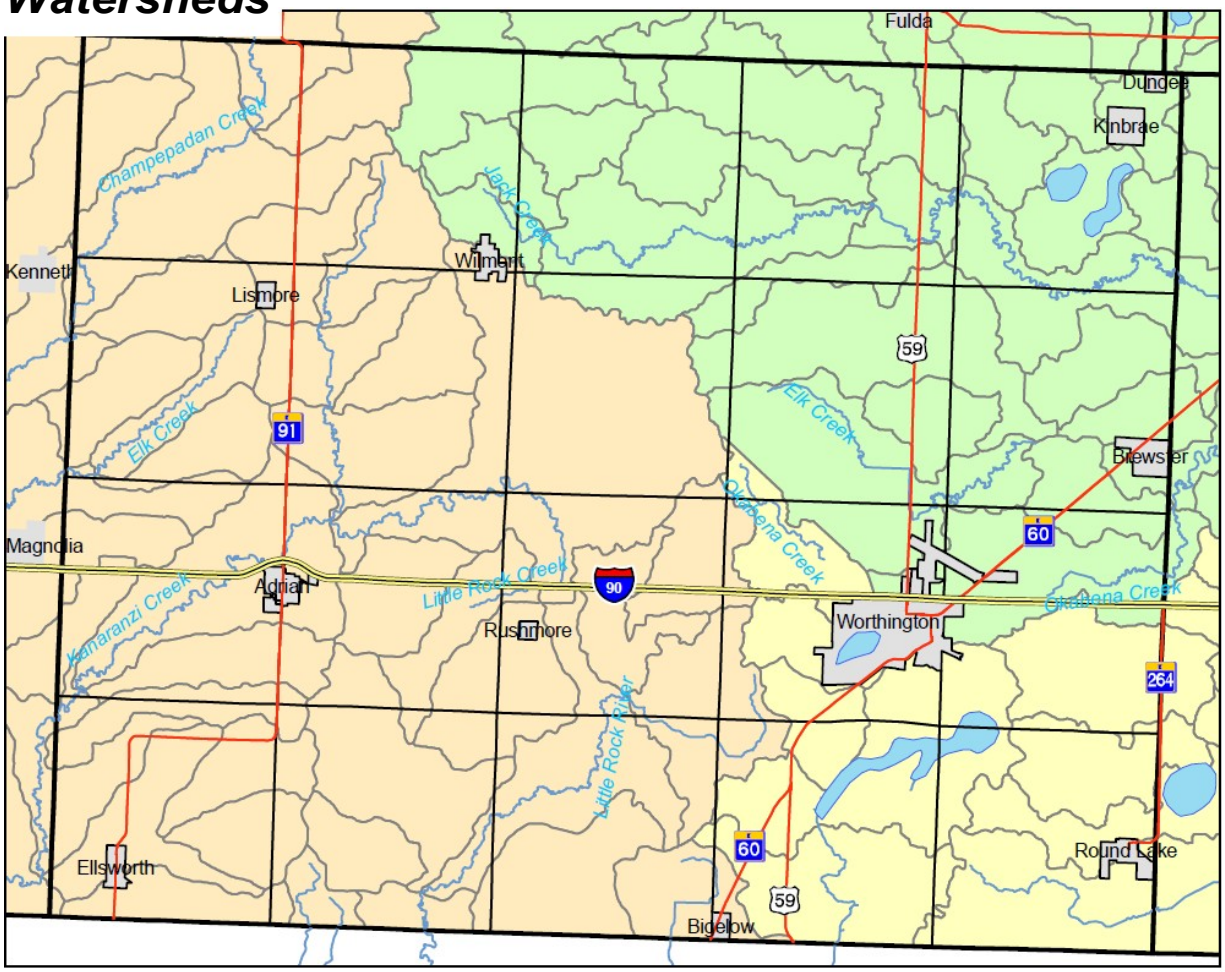
Watersheds



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Named Streams and Rivers

Major Watersheds

C3 Little Sioux River

C3 Rock River

C3 W Fork Des Moines

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Projection: UTM15N
Source: MOH, MN ONR, MnDOT, ESR

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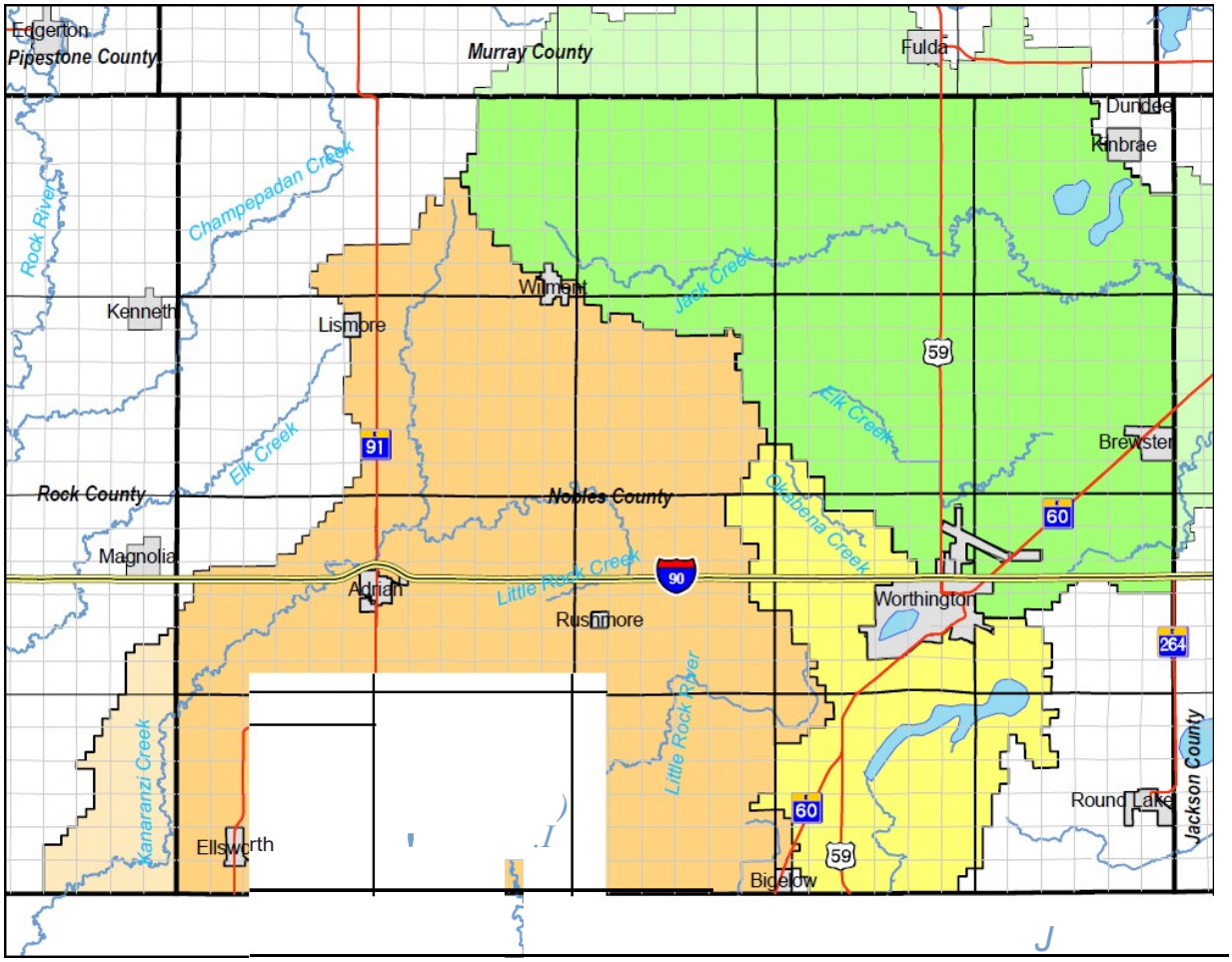
Watershed District Boundaries



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Sections

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Heron Lake WD

Kanaranzi-Little Rock WD

Okabena-Ocheda WO

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Source Watershed Districts, MN DNR, MnDOT, ESRI

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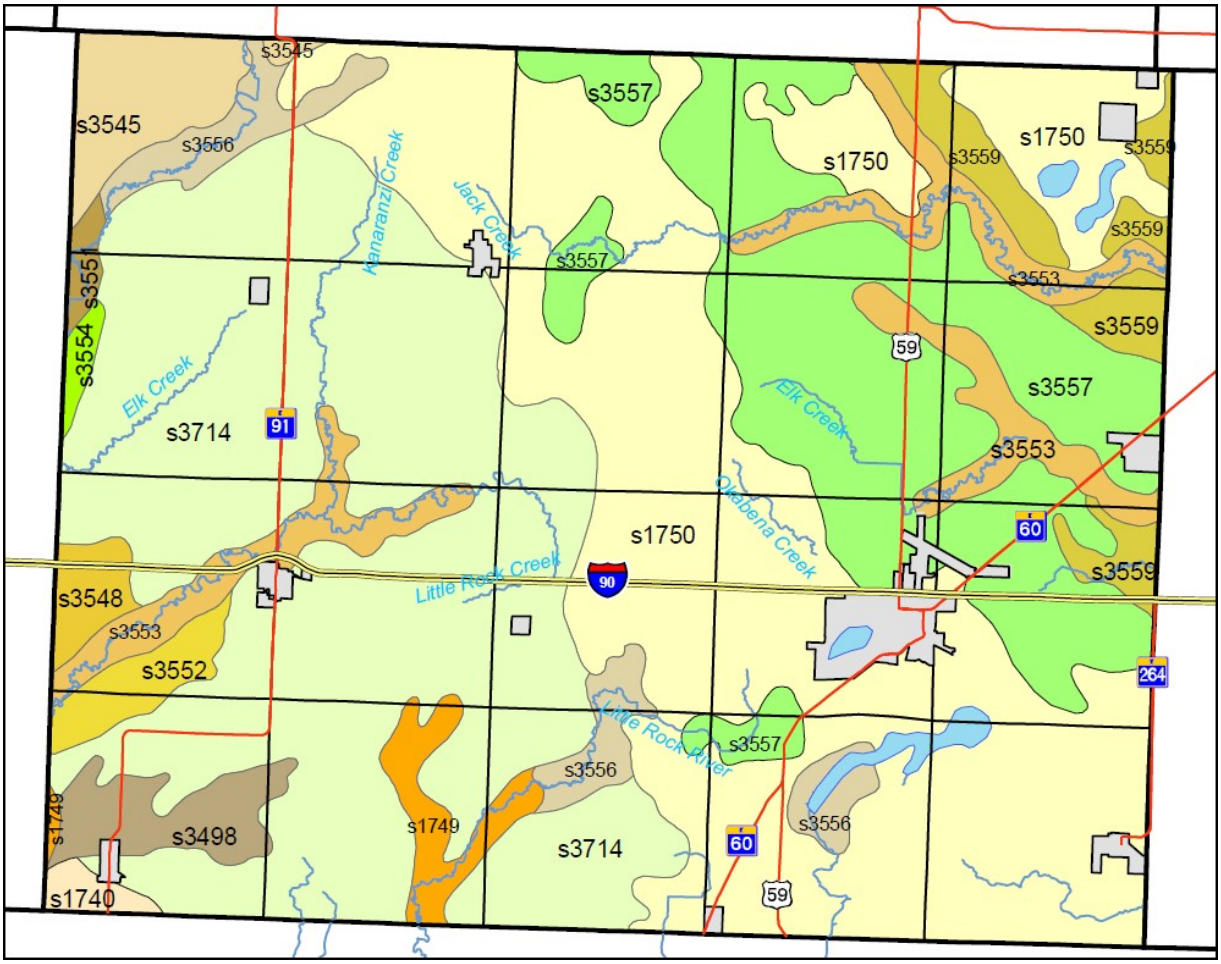
General Soils



Soil units in Nobles County

Primghar-Galva (s1740)
Spillco-Millington (s1749)
Webster-Nicollet-Clarion-Canisteo (s1750)
Fairhaven-Estherville (s3498)
Vienna-Kranzburg-Hidewood (s3545)
Trent-Sac (s3548)
Talcot-Millington-Fairhaven (s3551)
Fairhaven-Dickman-Biscay (s3552)
Spillville-Millington-Comfrey (s3553)
Flandreau-Everly-Dickman (s3554)
Storden-Everly (s3556)
Webster-Nicollet-Glencoe-Crippin-Canisteo (s3557)
Waldorf-Lura-Collinwood-Clarion (s3559)
Wilmonton-Letri-Everly (s3714)

County
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Lakes
Named Streams and Rivers

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Projection UTM 15N
Source: NRCS STATSGO, MN DNR, MnDOT, ESRI

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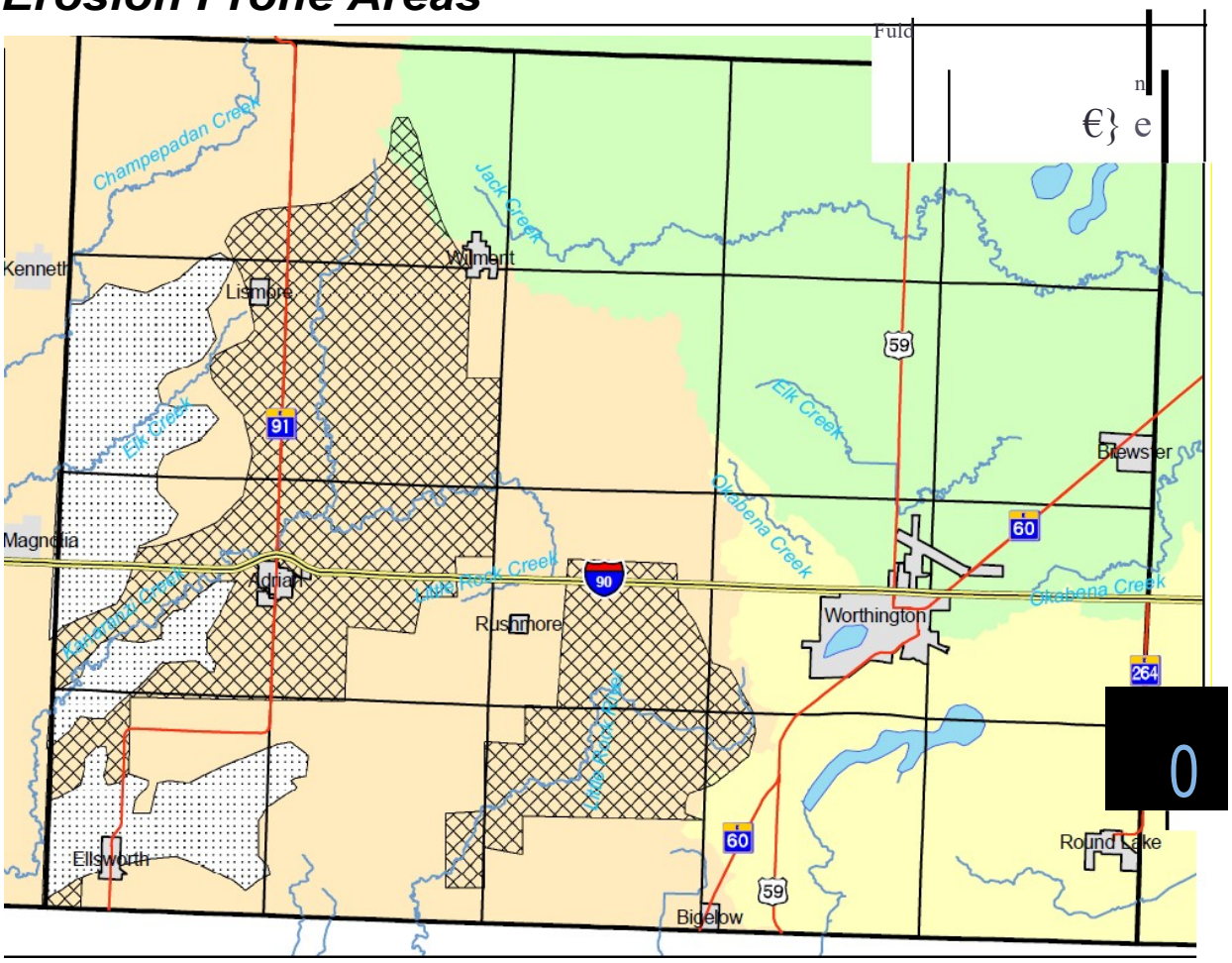
Erosion Prone Areas



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Wind Erosion Areas

Water Erosion Areas

Major Watersheds

Little Sioux River
Rock River

W Fork Des Moines

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Projection UTM 15N

Source N obles Co Env Svcs, MN DNR, MnDOT, ESRI

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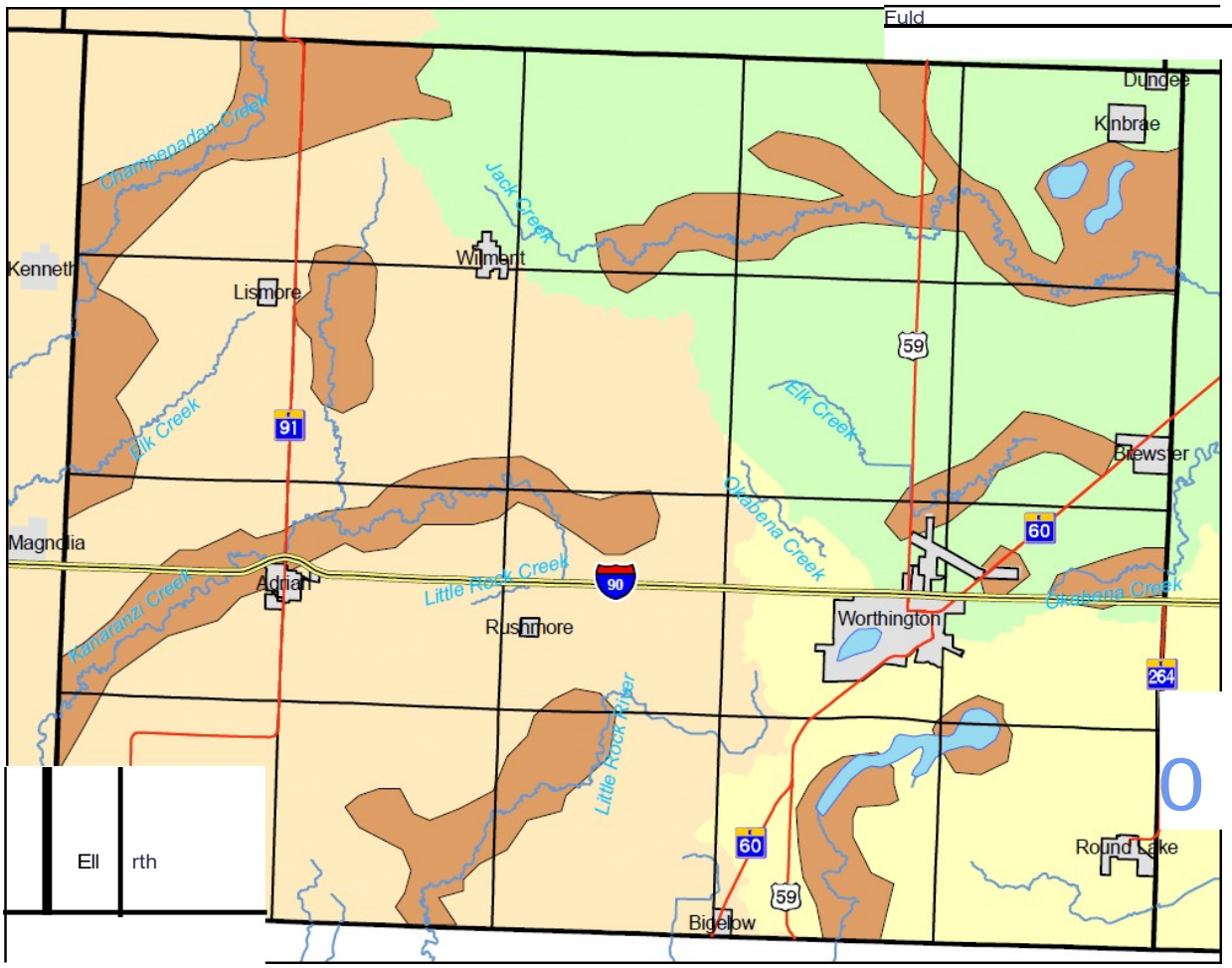
Sedimentation Prone Areas



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W Fork Des Moines

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Source Nobles Co Env Svcs, MN DNR, MnDOT, ESRI

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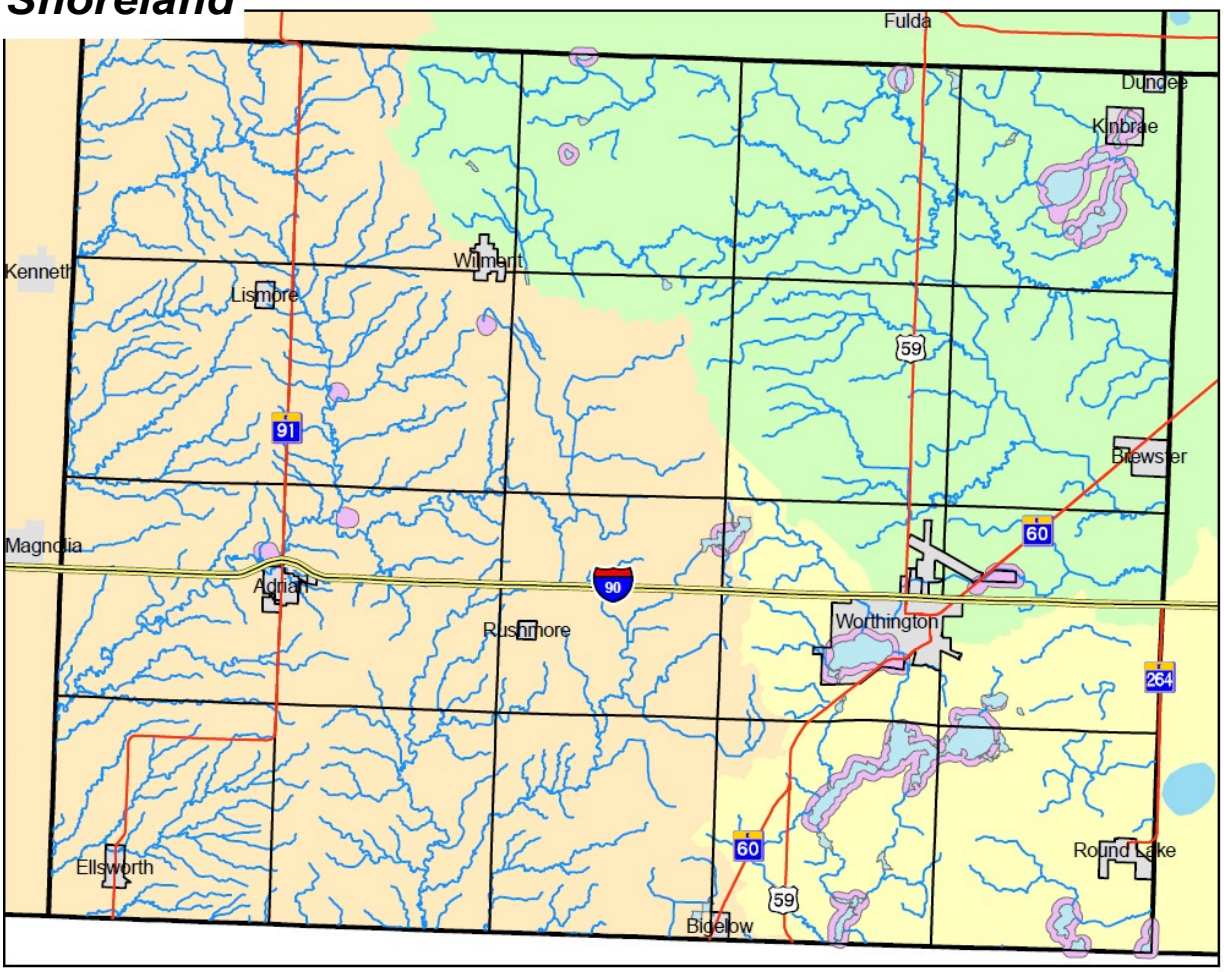
Shoreland



Note: This map is a general representation only of areas likely to be in or adjacent to shoreland Shoreland zoning areas are as shown on the Official Zoning Map of Nobles County, and/or other local jurisdictions. Refer also to DNR Protected Waters and Wetlands Map 1984 for further information.

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-- USGS mapped rivers & streams

CJ Shoreland Area

Lakes

Major Watersheds

Little Sioux River

Rock River

W Fork Des Moines

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Projection UTM 15N

Source: FEMA, Nobles Co Env Svcs, MNDNR, MnDOT, ESRI

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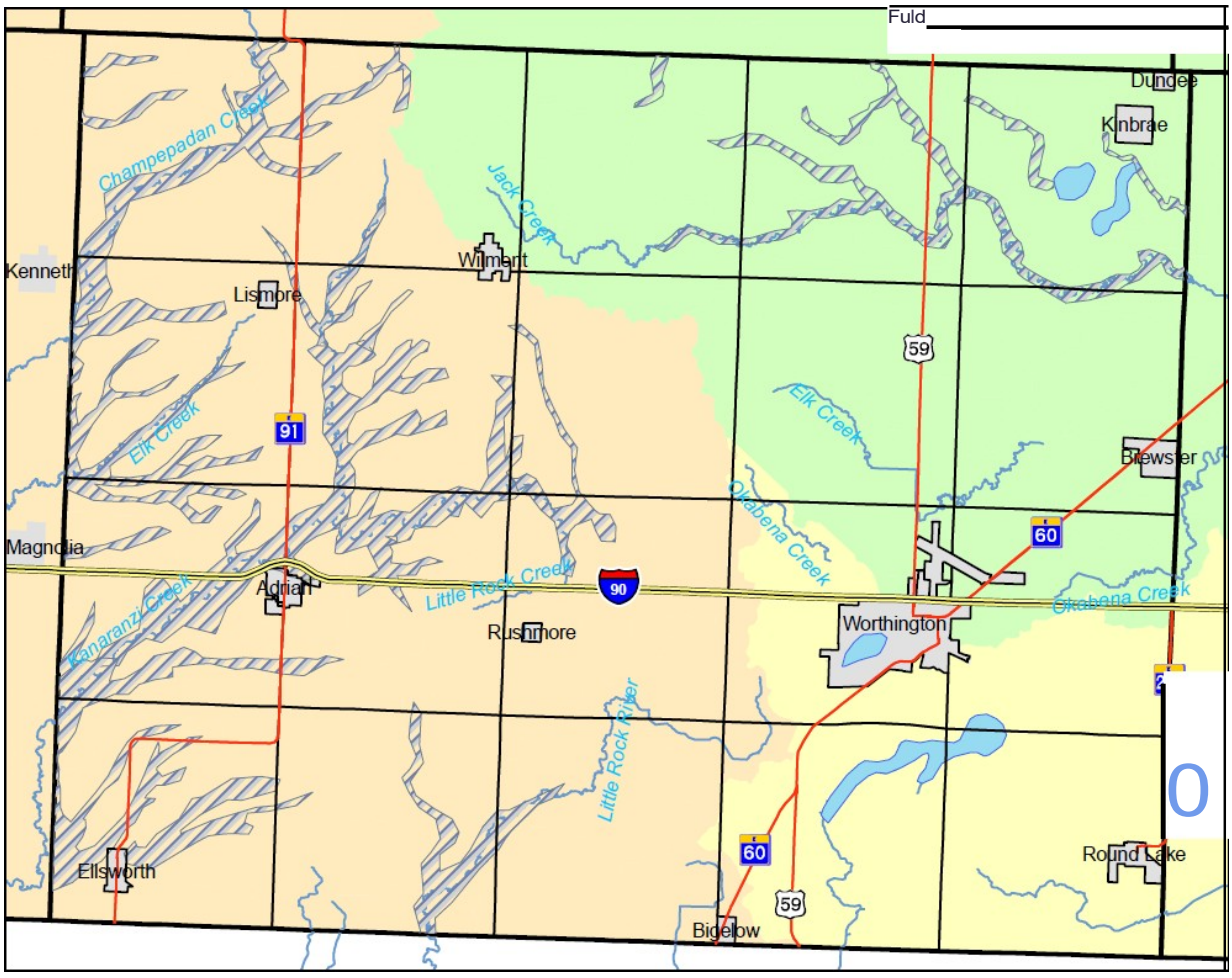
Floodplains



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Townships

Floodplains

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Major Watersheds

Little Sioux River

Rock River

W Fork Des Moines

Note: Floodplain is a rough estimation of the FEMA 100-year flood hazard area as shown on the Flood Insurance Rate Map. Not to be used for other than planning purposes. Additional hazard areas do exist. Actual location is only accurate by field elevation.

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Projection: UTM 15N
Source FEMA, Nobles Co Env Svcs, **MN** DNR, MnDOT, ESRI

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Lake

Named Streams and Rivers

Major Watersheds

Little Sioux River

Rock River

W Fork Des Moines

N

E

S

Southwest Regional
Development Commission

JCS09.08

Projection UTM 15N
Source: MOH, MN ONR, MnDOT, ESRI

0 1 2 4 6 8

Miles