

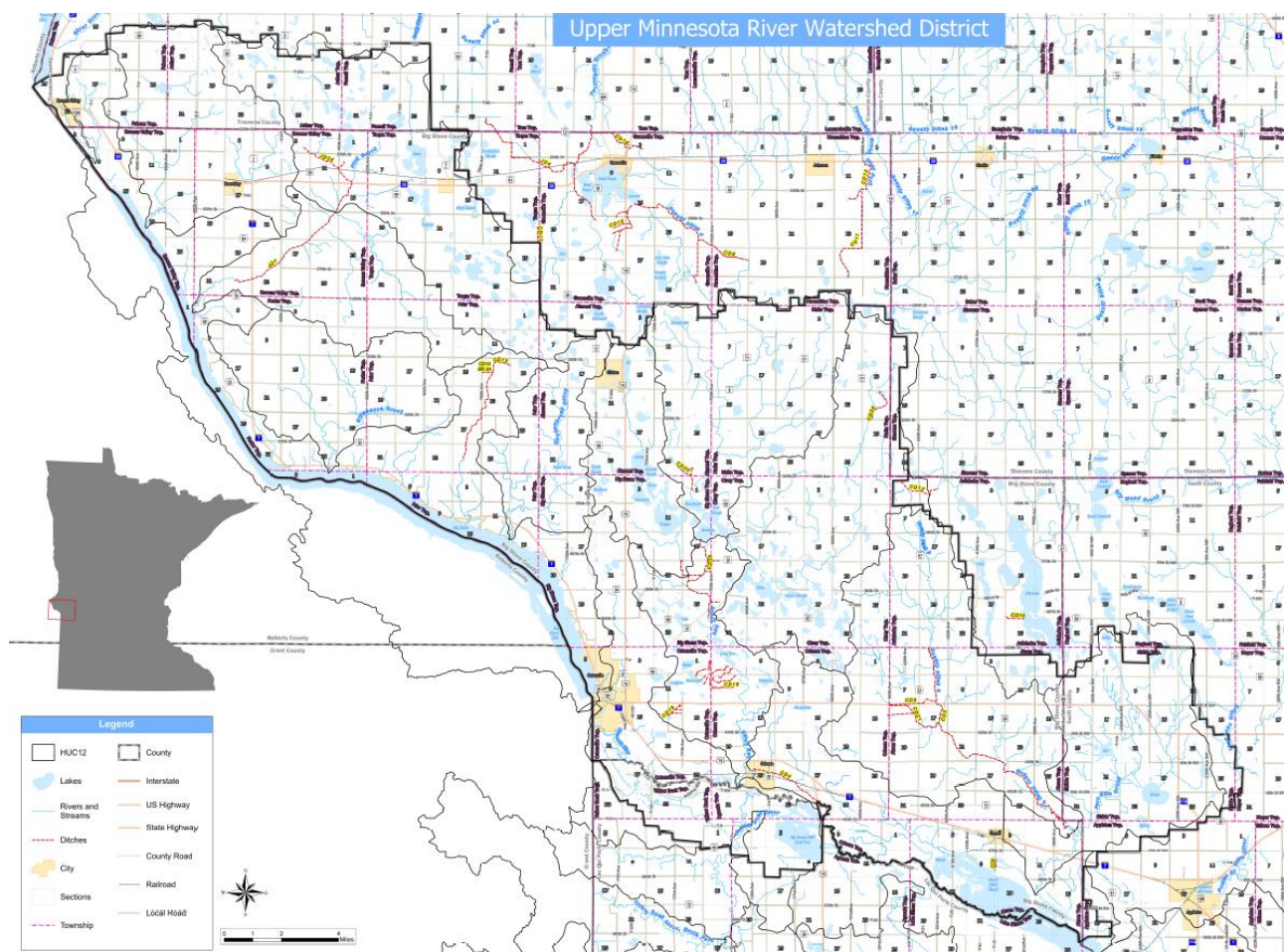
# Upper Minnesota River Watershed District

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## 2019 Annual Report



# 1. Introduction

The Upper Minnesota River Watershed District was formed by Order of the Minnesota Water Resources Board on September 7, 1967. The Big Stone County Board of Commissioners signed a nominating petition for the District on September 8, 1966. The first overall plan was developed in 1970 and the Watershed District Board of Managers adopted it on December 15, 1970. The Minnesota Water Resources Board, as part of the state review and approval process, conducted a public hearing on the plan on March 11, 1971. On July 14, 1971, the Minnesota Water Resources Board approved the Upper Minnesota River Watershed District's first Overall Plan. The Watershed District encompasses approximately 505 square miles primarily in Big Stone County, with smaller areas in Traverse County, Swift County, Lac Qui Parle County, and Stevens County.

The District continued operation under the policies identified in the first overall plan until approval of a Revised Plan, initiated in 1984 and adopted and approved on November 30, 1988. The District operated under the policies identified in the revised Overall Plan from 1988 through 1999. In November of 1999 the District submitted their third generation plan, approval of the plan was granted by the Minnesota Board of Water and Soil Resources in August of 2001. In July of 2013 the District submitted their fourth generation plan, approval of the plan was granted by the Minnesota Board of Water and Soil Resources in September of 2013.

The organizational structure of the Board of Managers remains unchanged since inception. The County Board of Commissioners for Big Stone appoints three of the District's Board of Managers, the County Board of Commissioners for Swift County appoints one Board Manager and the County Board of Commissioners for Traverse County appoints one Board Manager. Each Manager must be a resident of the District. Managers are prohibited from being a public official of the county, state or federal government. Each Manager serves a three-year term, which is renewable by approval of the County Board of Commissioners.

The Watershed District is located in west-central Minnesota. Big Stone Lake and the South Dakota border form the western boundary of the District. The continental divide and Traverse County are located to the north. Areas south of the continental divide contribute runoff southerly to the Minnesota and Mississippi Rivers and north of the divide northerly to the Hudson Bay via the Red River of the North. Generally, the watershed district includes all of the land east of Big Stone Lake draining into Big Stone Lake and into the north side of the Minnesota River above the Marsh Lake Dam.

Approximately 80% of the land area of Big Stone County is in the District. The small area of north central and northeast Big Stone County, not in the District, casts its runoff northward through the west branch of the Mustinka River. In Stevens County the few acres in the District are along the west line of the township situated in the southwest corner of Stevens County. Most of Shible Township in southwestern Swift County is in the District.

On the south, southwest of the Minnesota River, the District includes the northern part of Agassiz and Yellow Bank Townships in Lac Qui Parle County west of State Highway 75. The territory of the District in northwestern Lac Qui Parle County includes the Big Stone National Wildlife Refuge.

Subwatersheds within the District flow to the Minnesota River, some through Big Stone Lake and others directly to the Minnesota River. Subwatersheds flowing into Big Stone Lake include Little Minnesota River, Hoss Creek, Fish Creek, Salmons Creek, Lindholm Creek, Meadowbrook Creek, direct drainage area in or near Ortonville and a number of small-scattered direct tributaries to Big Stone Lake. Subwatersheds which are tributary on the northeast of the Minnesota River include: Stony Run, Upper Stony Run, County Ditch No.4, Five-Mile Creek, Shible Lake and a few areas that contribute runoff directly to the Minnesota River. On the southwest side of the Minnesota River there are about 18 square miles that contribute runoff to the Minnesota River.

Like many early water management agencies, the original goals and objectives of the District focused on managing water quantity. The early goals and objectives of the District included: To slow down weed and algae growth in the District's Lakes. To reduce the pollution of the water in the lakes and water courses within the District. To intelligently regulate the water levels of the various lakes within the District. To keep adequate records of the water levels, the chemistry, and other useful data. To enhance the recreational facilities and scenic beauty of the District. To improve the needed drainage, prevent excessive runoff or seepage, and provide needed soil and water conservation in the District. To provide funds to accomplish these objectives and to engage technical assistance and advice. Investigate the possibility of securing additional watershed area to supplement the present water supply. To preserve, maintain, and improve habitat for fish and wildlife.

The Board of Managers understood the plan's purpose as providing a framework for operation of the District, rather than identifying all possible future projects. As technology, societal attitudes and economic conditions changed, the Board of Managers understood plan review and revision might be needed.

The District has undertaken and completed a number of activities in an effort to achieve their original objectives. The District has initiated and completed many projects since formation. Past District projects have included surface and groundwater quality studies, flood control, surface water level management, wetland restorations, natural resource management, ag BMP implementation, education and erosion control projects.

## **2. Mission Statement**

The mission of the Upper Minnesota River Watershed District is to serve the residents of the District by wisely and judiciously managing water, in a manner that sustains and enhances the social, economic and natural resources of the District. The District prefers the use of innovative water management methods, which recognize the unique agricultural, community, lake and stream, and natural resources within the District. These innovative approaches as reflected by the policies of the District should be oriented toward ensuring the economic viability of the District's agrarian community.

### 3. FINANCIAL REPORT

#### 3.1 2019 Audit

3.1.1 A complete copy of the 2019 Audit is included in Appendix B of this report.

#### 3.2 2019 Budget

A hearing for the 2019 proposed operation budget was held on August 14, 2018 during the regular board meeting. No public attended the hearing. The proposed budget was presented and a levy amount of \$250,500 for the year was proposed. The Board of Mangers approved the budget and the levy amount of \$250,500.

### 4. ANNUAL ACTIVITY REPORT

#### 4.1 Board Manager's, Staff and Consultants

Manager	Position	Term Expires	County
Wanda Holker U.S. Highway 75 Ortonville, MN 56278	Chairperson	08/09/2022	Big Stone County
Gary Haugen 30453 710 <sup>th</sup> Street Clinton, MN 56225	Vice-Chairman	08/15/2021	Big Stone County
Terry Gillespie 30787 660 <sup>th</sup> Avenue Clinton, MN 56225	Treasurer	08/09/2020	Big Stone County
Gene Meyer 2411 60 <sup>th</sup> St. SW Appleton, MN 56208	Secretary	8/15/2021	Swift County
Jon Bork 87288 303 <sup>rd</sup> Street Beardsley, MN 56211	Manager	8/09/2022	Traverse County

Employees	Position	Address	Telephone	E-mail
Amber Doschadis	Administrator	211 2 <sup>nd</sup> Street SE Ortonville, MN 56278	320-839-3411	amber.doschadis@midconetwork.com
Consultants	Services	Address	Telephone	E-mail
Houston Engineering	Engineer	6901 East Fish Lake Road, Maple Grove, MN 55369	763-493-4522	www.houstonengineer ringinc.com
Rinke Noonan	Attorney	1015 W St. Germain Street St. Cloud, MN 56302	320-251-6700	www.rnoon.com

**Technical Advisory Committee:**

Amber Doschadis, UMRWD Administrator  
Tammy Neubauer, Big Stone SWCD  
Darren Wilke, BS County Environmental Officer  
Danny Tuckett, BS County Environmental Office  
Chris Domeier, MN DNR Fisheries  
Jay Gilbertson, East Dakota Water Development District  
Todd Larson, BS County Highway Engineer  
Ryan Bjerke, MN DNR Area Hydrologist  
Dennis McAlpine, Houston Engineering  
Lisa Odens, Houston Engineering

**Citizens Advisory/WRAPS Committee:**

Amber Doschadis, UMRWD Administrator  
Chessa Frahm, LqP SWCD  
Trudy Hastad, LqPYB Watershed District  
Darren Wilke, BS County Environmental Office  
Andy Albertson, Swift County SWCD  
Jennifer Breberg, LqP Environmental Office  
Tammy Neubauer, Big Stone SWCD  
Ryan Bjerke, MN DNR Area Hydrologist  
Jay Gilbertson, East Dakota Water Development District, SD  
Dennis Skadsen, Day County Conservation District, SD

## 4.2 2019 Annual Work Plan

### 4.2.1 Water Quantity

The Browns Valley Flood Mitigation Project:

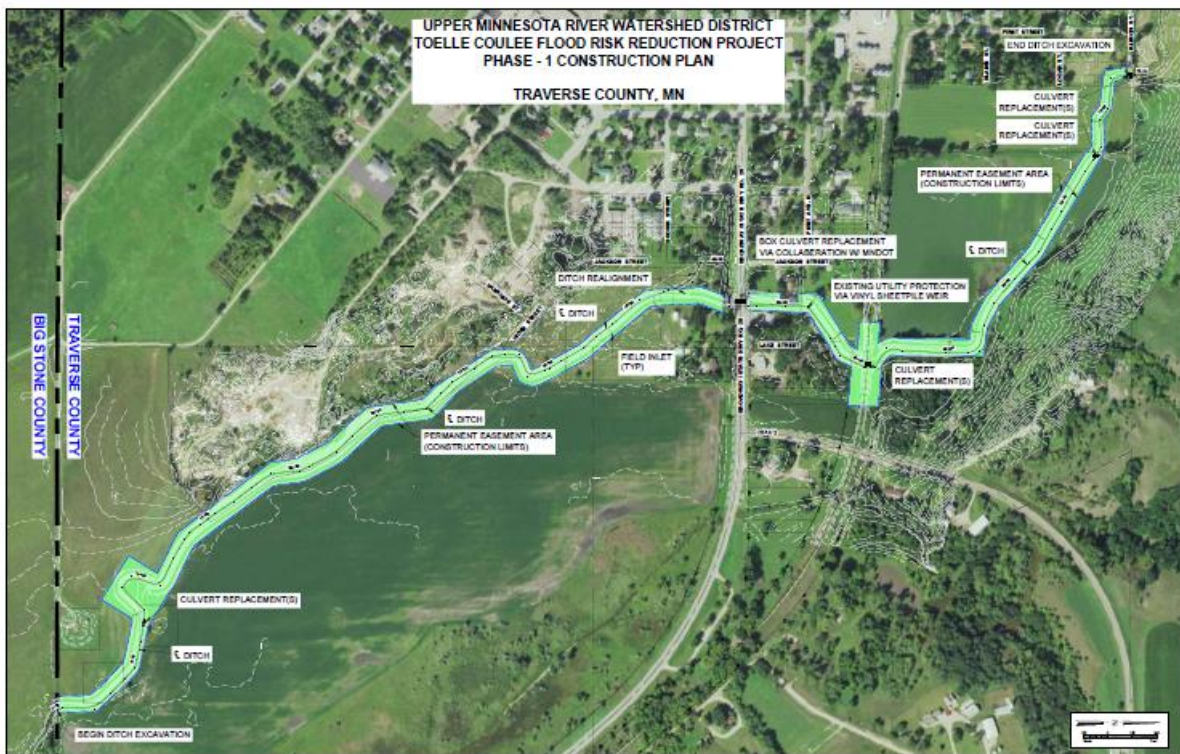
The annual bridge inspections were completed.

The annual inspection of the weir structure, box culvert and floodway were completed.

Sediment deposited during the 2019 Spring Run-off event were studied and plans will be created for a 2020 cleanout in cooperation with MN and SD FEMA.

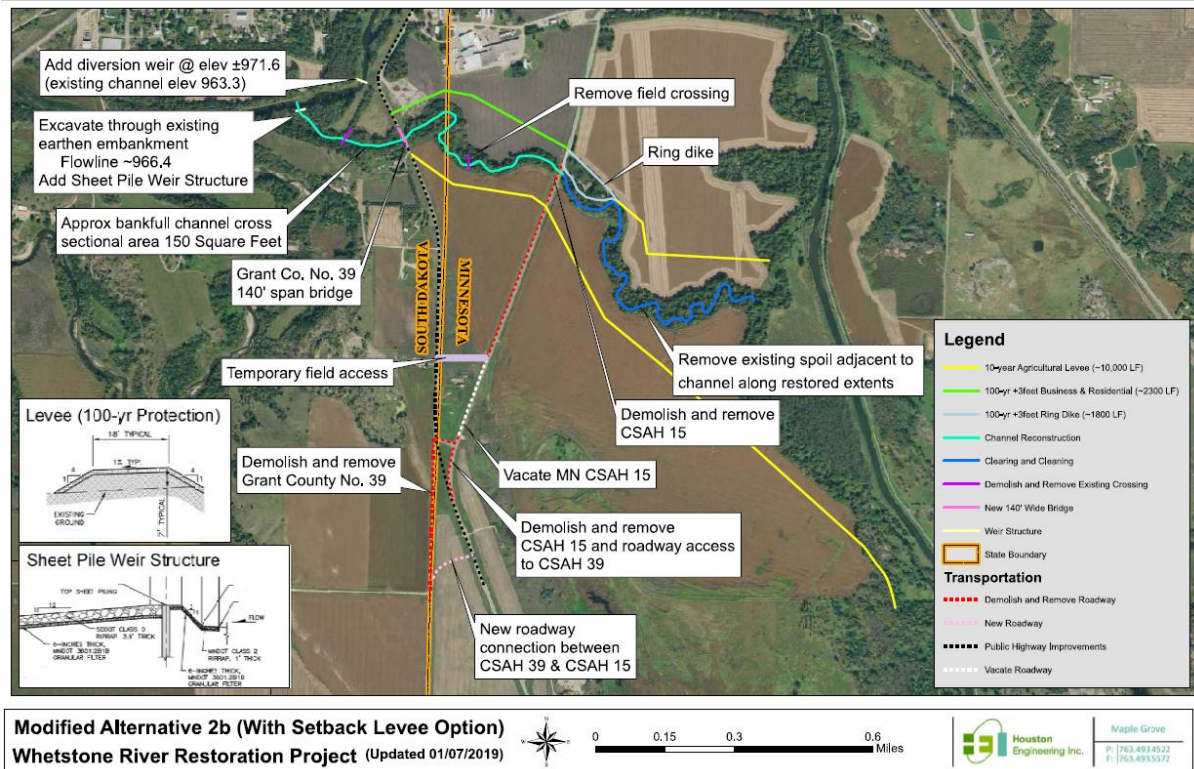
Haying of the diversion channel continued in 2019.

### The Toelle Coulee – Phase One



Final designs for the Project were completed along with required permits. The District worked on acquiring the needed easements for the project. Houston Engineering and the District are working with MN DOT on the culvert replacement under State Highway 28. Project is scheduled for completion in 2020.

# Whetstone River Restoration



The Little Minnesota River and the Whetstone River are the two primary tributaries to Big Stone Lake, which was the focus of intensive restoration efforts during the early 1990's under the Environmental Protection Agency's Clean Lake Program, administered by the MPCA. Big Stone Lake is located at the Headwaters of the Minnesota River and is a Minnesota, South Dakota border water. MPCA lists aquatic life, aquatic recreation and industrial consumption as beneficial uses of Big Stone Lake. MPCA has also noted stressors in Big Stone Lake of excess nutrients and mercury in fish tissue which have both directly affected the lakes ability to provide aquatic life and aquatic recreation. Big Stone Lake was listed as impaired for aquatic consumption in 2006 for excess mercury found in fish tissue and was listed in 2018 as impaired for aquatic recreation due to excess nutrients.

The hydrologic modification most affecting the water quality of Big Stone Lake and the headwaters of the Minnesota River was when the Whetstone River was diverted into Big Stone Lake from its historic channel which originally flowed directly into the Minnesota River. The US Army Corp of Engineers (USACE) accomplished this by diverting the Whetstone into Big Stone Lake and constructing a dam at the outlet of the Lake.

By disconnecting the Whetstone River from the floodplain, river water quality became poorer and contributed additional nutrient loads to Big Stone Lake, which were previously filtered by floodplain wetlands along the 9000 foot historic channel.

The Whetstone River Restoration project covers two state jurisdictions and two county jurisdictions and is a priority to the Upper Minnesota River Watershed District (UMRWD) based on three areas of the Watershed District Plan. Those three areas are Big Stone Lake water quality, Big Stone Lake water levels, and river biotic diversity. The most pressing need is

related to water quality. The Plan essentially includes a loading capacity established using the data gathered during and evaluated through the EPA Clean Lakes study. Contained in the Plan are Big Stone Lake Water Quality Goals. The present total phosphorus and total nitrogen loads to Big Stone Lake for a "normal" hydrologic year are 16,346 kg/yr and 80,054 kg/yr, respectively. Monitoring necessary for completing the TMDL has been completed and a draft document should be available soon.

Water from the Whetstone River and Big Stone Lake flow south through the Big Stone Lake Dam which is where the Minnesota River begins. Flows continue south toward the Big Stone Refuge and proceeds to Marsh Lake. The reach of the Minnesota River from Big Stone Lake to the Marsh Lake Dam is listed as impaired for aquatic consumption, aquatic life and Escherichia coli (E.coli).

Biotic diversity is also addressed in the Plan. "The District recognizes the value of its biotic resources and will seek to maintain the conditions and habitats critical to the existence of these resources." By restoring the historic Whetstone Channel, the Big Stone Lake Dam will be bypassed as a barrier that inhibits upstream movement of both fish and various invertebrates.

The District worked continuously with the primary landowner to successfully finalize the land purchase agreement in 2019. The District and the City of Ortonville entered into a grant agreement with MN DNR Flood Damage Reduction to complete an Engineered/ Permitted Design of the Project as well as funds to purchase easements and land necessary for the project to be ready for construction by 2022.



## Beardsley Dry Lake Flood Control Project



In 1996-97 over 100 inches of snowfall covered the City of Beardsley. Runoff during the melting period caused flooding in Dry Lake, located just north of town. The lake's water surface rose 19 feet and the surface of the lake grew eleven times larger than the levels recorded in the last survey.

The flooding of Dry Lake inundated the Beardsley wastewater treatment system, overtopped two state highways and a county road and caused wide-spread basement flooding to those within the city limits of Beardsley. After exploring several solutions, the city, FEMA and many other agencies, agreed that building a gravity pipe system would be the best way to combat Beardsley's flooding problems.

In summer of 1997 crews constructed a 2.6 mile, 36" reinforced concrete pipe, drain line with maximum depths of 28 feet to drain the excess water out of Dry Lake and provide a long-term outlet for Dry Lake to protect Beardsley from future flooding.

Pipe inspections in the summer of 2019 showed seepage through pipe joints and cracks in the pipe, grade issues and significant erosion within the system. A sinkhole developed in 2019 and two areas were opened up to allow flow through the outlet pipe and to prevent further damage to the system, the City of Beardsley and surrounding landowners.

A public hearing will be scheduled for early 2020 where the District and its consultants will discuss the current state of the system and future options for repairs and maintenance with all interested parties.

The annual Inspection of the Highway 12 Flood Mitigation Project was completed and the District will continue to work the MNDOT and their consultants on additional measures that could be taken to provide additional protection to the area surround the Project.

The annual Inspection of the branch 3A to County Ditch 13 was also performed.

#### **4.2.2 Drainage Systems**

The district continued with its permitting program and 121 permits were reviewed by the District.

The annual inspection of the inlet and outlet of Branch #3A to County Ditch 13 was performed. The District Board and staff worked with several landowners throughout the year to help resolve drainage issues.

#### **4.2.3 Lake Level Management**

District staff performed lake level readings of Big Stone Lake and submitted them to the North Central Rivers Forecast Center, and USGS.

Gate adjustments to the Big Stone Lake/Whetstone River Flood Control Structure were performed as necessary by staff. Routine Maintenance and tree removal were also preformed.

#### **4.2.4 Water Quality**

Wetland Restoration Monitoring continues for the Kleindl Wetland, WCA Wetland Bank in December. The Application to Deposit Credits in to the Minnesota Wetland Bank was completed and submitted to BWSR in 2015, the district and consultants continue working with the local tech. committee to get the credits banked.

The District received a BWSR Clean Water Fund Accelerated Implementation Grant in the amount of \$123,000.00 for the development and creation of hDEM (and derivative products) and PTMApp products.

Houston Engineering was hired by the District to create the products. The District staff worked closely with the engineers by doing the ground truthing for the project. The draft Upper Minnesota River Headwaters Watershed's Targeted Implementation Plan to Improve Surface Water Quality was presented in August of 2019. The PTMApp products were also presented to the local partner group in 2019.

The District continued to work on the Watershed Restoration and Protection Strategies (WRAPS) Project which is in partnership with the Pollution Control Agency. Local Partners including Big Stone, Lac qui Parle, Swift and Traverse Counties Soil and Water Conservation Districts, Lac qui Parle/Yellow Bank Watershed District, Big Stone and Traverse Environmental Offices, East Dakota water Development District, Department of Natural Resources and the Board of Soil and Water Resources.

Using the framework established from Phase I of the Project, the District continue to lead Local Partners in realizing the work plan goals. Those goals include: conducting inventories, development of tools, strengthen landowner relationships, implementing Best Management Practices, maintenance and improvement of local water quality. The District held 2 local partner

meeting and 1 CNG meeting in 2019, wrote and submitted semiannual reports as required and updated all partners of progress. Overseeing the disbursement and reimbursement of grant funds was completed by the Watershed Coordinator as well. The grant is scheduled to be completed in June of 2020 and things are moving forward on schedule.

The District worked with the City of Ortonville on the dilution of their wastewater discharges to the Minnesota River. District staff coordinates releases from the Big Stone Lake dam during the times that the city is discharging their effluent.

Water quality monitoring continued on Big Stone Lake during the year.

#### **4.2.5 Erosion and Sedimentation**

The District Administrator worked with multiple individual landowners on the installation of shoreline stabilization and ice ridge projects on Big Stone Lake.

#### **4.2.6 Intergovernmental Relations**

The District Staff worked with DNR, Big Stone National Wildlife Refuge, Citizens for Big Stone Lake, the Cities of Ortonville and Big Stone City, Big Stone and Roberts Counties and the East Dakota Water Development District, on the Whetstone River Restoration Project.

The District staff worked with the MN DNR and US Army COE on the Marsh Lake Ecosystem restoration Project which is scheduled for completion in 2020.

#### **4.2.7 Public Information and Education**

The District Administrator gave presentations to several organizations during the year.

The District Administrator presented water quality information at the Bonanza Environmental Learning Center.

The District posted several articles on their website concerning the Whetstone River Restoration and other projects completed or under construction.

#### **4.3.8 Implementation of Goals and Objectives**

The long term Maintenance Fund for the Browns Valley Flood Mitigation Project had a balance of \$121,000. Additional funds will be contributed to the accounts from a future annual levy against the City of Browns Valley and payments from the District's haying contract. It is possible that this maintenance fund may need to contribute to the Toelle Coulee Phase One Project.

Contracting with DNR for a pass through grant in the amount of \$2,630,000 started in the winter of 2013 and is expected to be completed in 2020.

During 2019 the Board of Managers held 12 Regular Meeting and 1 Public Hearing.

The Board of Managers approved the 2020 Annual Work Plan and Budget.

The District completed the 2019 annual audit and workman's comp. audit. District staff submitted the 2020 levy information to Big Stone, Traverse, Swift and Stevens Counties.

## **APPENDIX B**

### **2019 Annual Audit**