

# Calendar Year 2015 Annual Report



#### BOIS DE SIOUX WATERSHED DISTRICT ANNUAL REPORT CALENDAR YEAR 2015

#### **BOARD OF MANAGERS**

NAME	COUNTY	PHONE	TERM	<u>I EXPIRES</u>
Allen Wold	Traverse	320-563-8743	2017	Treasurer
Doug Dahlen	Grant	320-766-5794	2016	
Jerome Deal	Traverse	320-563-8377	2016	Vice President
Kurt Erlandson	Otter Tail	218-739-4561	2017	
Linda Vavra	Stevens	320-677-2586	2016	President
Scott Gillespie	Big Stone	320-748-7149	2018	Secretary
John Kappahn	Grant	218-685-4604	2017	-
Jason Beyer	Wilkin	218-651-0135	2018	
Steven Schmidt	Traverse	320-563-8104	2018	
(replaced Ron Vol	d June 2015)			
	<b>CONSULTI</b>	NG STAFF		

#### Thomas C. Athens

Attorney Svingen, Athens & Russell 125 South Mill Street Fergus Falls, MN 56537 218-998-4088 P 218-998-4087 F

#### Chad L. Engels

Engineer Moore Engineering, Inc. 925 10<sup>th</sup> Avenue East West Fargo, ND 58078 701-499-5810

#### **DISTRICT STAFF**

#### Jon Roeschlein

District Administrator 1603 1st Avenue North Wheaton, MN 56296

#### Monica Wilson Assistant Administrator 901 6th Avenue North Wheaton, MN 56296



## **OFFICE**

#### **Bois de Sioux Watershed District**

704 Highway 75 South Wheaton, MN 56296 320-563-4185 P 320-563-4987 F bdswd@frontiernet.net www.bdswd.com

#### **Project Team Members**

The Bois de Sioux Watershed District is a subwatershed of the Red River of the North basin. In December of 1998, many agencies and organizations signed the Red River Basin Mediation Agreement which outlined how projects will be developed in the Red River Valley in Minnesota. That agreement states that the districts within the basin will attempt to balance each project design with Flood Damage Reduction (FDR) benefits and Natural Resource Enhancements (NRE). Part of that process requires that each district establish a Project Team for each project containing members from local, regional, state and federal agencies along with environmental organizations and local landowners.

#### **2015 Board Meetings**

January 15, 2015 February 2 & 19, 2015 March 19, 2015 April 16, 2015 May 21, 2015 June 18, 2015 July 16, 2015 August 20, 2015 September 17, 2015 October 15, 2015 November 19, 2015 December 17, 2015

The Bois de Sioux Watershed District Board of Managers meets regularly on the third Thursday of each month starting at 8:00 a.m. April through October and at 9:00 a.m. November through March.

#### **Background**

The Bois de Sioux Watershed District was established on May 11, 1988 by order of the Minnesota Board of Water and Soil Resources (BWSR). The district represents an area of about 1,420 square miles and includes Traverse County (38%), Grant County (27%), Wilkin County (14%), Stevens County (10%), Big Stone County (7%) and Otter Tail County (4%).

The district includes the drainage basins of Lake Traverse and the Bois de Sioux River within the State of Minnesota. The major tributaries are the Mustinka River and numerous creeks in the south and east and the Rabbit River to the north.

#### **MISSION STATEMENT**

To provide coordinated water resource management over the entire hydrologic basin of the Bois de Sioux River lying within the State of Minnesota.

#### **Board Activity**

The Big Stone County Board of Commissioners re-appointed Scott Gillespie of Johnson, MN as the Big Stone County board manager to a three year term, set to expire in 2018.

The Traverse County Board of Commissioners appointed Steven Schmidt of Dumont, MN as the Traverse County board manager to a three year term, set to expire in 2018.

The Wilkin County Board of Commissioners re-appointed Jason Beyer of Breckenridge, MN as the Wilkin County board manager to a three year term, set to expire in 2018.

The board held twelve (12) regular monthly meetings in 2015. Numerous Staff meetings were also conducted for purposes of reviewing issues identified at the board meetings and to meet with landowner groups in an informal setting to discuss legal ditch repairs, permit activity, and other surface water related problems. Special Board Meetings were held on June 9, 2015, August 18, 2015, and October 30, 2015.

The board continued with their membership to the Red River Watershed Management Board. Jerome Deal was selected as the Bois de Sioux Watershed District representative with Allen Wold serving as the alternate. Jerome also was co-chair of the Flood Damage Reduction Work Group for the implementation of the Red River Basin Mediation Agreement.

Jerome Deal continued to serve as a member representing Region I for the Minnesota Association of Watershed Districts Board of Directors. Linda Vavra continued to serve on the Board of Directors representing Region I.

In 2010 the Red River Retention Authority (RRRA) was formed through a joint powers agreement between the Red River Watershed Management Board (RRWMB) in Minnesota and the North Dakota Joint Water Resources Board (NDJWRB). Jerome Deal was appointed as a member to the RRRA representing the RRWMB.

#### **Stream Gauging**

In 2015 we had fifty-four (54) gauging sites in our Stream Gage Monitor Program. Twenty-nine (29) of those sites were considered active. Two of our gage sites are in South Dakota, on the outlet of Jim Creek, into Lake Traverse. Volunteers that live within the vicinity of each gage do the actual day-to-day monitoring of the stream gage. The program is coordinated through the administrative office. Volunteer readers are compensated at a rate of Seventy-Five Dollars (\$75.00) per gage, per year, to help offset costs for accessing the gage.

Stream Gage data for 2015 has been entered into the computer data base. Data is transferred to the BdSWD Engineer for his review purposes.

Each year, gage readers are asked about the condition of their gauging site. If the gage needs work or there is a request to modify the gage, it is reviewed by the administration and assigned to an engineering technician to investigate, repair, or modify as the case may require. In the spring of 2015 there were 12 gauges repaired due to gage readers' request. The repairs included fixing the old gauges, removing and replacing with new gauges, and updating the GPS location of the benchmark location. The 12 gauges with repairs in 2015 are stream gauge 1, 16, 17, 18, 19, 31, 33, 34, 41, 42, 49, and 50.



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The Bois de Sioux Watershed District has adopted rules to control watershed activities as required by M.S. 103D.341. These rules lay out a permit process which land owners must follow. Permits are required for any type of work related to new ditching, improved ditching, drainage from one sub-watershed to the other, construction, alteration or removal of any dike, reservoir work, land forming, wetland drainage, work within natural drainage ways, lakes, wetlands and other abutting land and drainage structures. Land owners should contact the Bois de Sioux Watershed District Office for assistance and direction in filing permits.

#### FOR A COPY OF THE RULES & REGULATIONS OF THE BOIS DE SIOUX WATERSHED DISTRICT, PLEASE CONTACT THE BOIS DE SIOUX WATERSHED DISTRICT OFFICE OR GO TO:

#### HTTP://WWW.BDSWD.COM

#### PERMIT APPLICATIONS CAN ALSO BE FOUND ONLINE AT THIS ADDRESS.

Any land owner that proceeds to do work without a permit, when the project requires one, is subject to a minimum of \$250 After-The Fact Permit Fee plus any Engineering/Attorney Fees incurred in the processing of said permit.

#### There were a total of 150 permits processed in 2015.

The Drainage Committee of the BdSWD reviewed and revised the BdSWD Permit Policies, including a new permit application form. The policies and application form can be found online or by contacting the District Office. The application form was revised to reduce staff time involving permit reviews, thus reducing permit processing costs.

#### **Projects and Programs**

#### **Impoundment Inventory**

The Bois de Sioux Watershed is continuing its efforts in developing an Impoundment Inventory for the district. This project originally started out being partially funded by the Minnesota Flood Damage Reduction Program. It is intended that this particular project will continue indefinitely as new impoundment locations are identified.

In 2012, the BdSWD completed a 20% Flow Reduction Strategy for the watershed. This study focused on placing storage within the Bois de Sioux Watershed District. A total of 26 sites or potential projects were identified within the District. The storage was placed in the Lake Traverse and Rabbit River basins. Site selection was based primarily on the need for local flood control. Flooding problems are widespread in the Bois de Sioux Watershed District. In 2013, the BdSWD completed an updated version of this study,

expanding the Bois de Sioux watershed within North and South Dakota. The Watershed Board looks forward to partnering with regional interests to help solve its local flooding problems in ways that will also benefit the mainstem. This strategy will promote local and regional support for the projects. A copy of the document is available upon request from the district office.

#### North Ottawa Impoundment Project

The Flood Damage Reduction portion of the North Ottawa Project was completed in 2009 and the impoundment was fully operational for FDR in the Spring of 2010.

A full 2015 operations report is included in this annual report, and is available in the BdSWD Office.

In 2015, the District custom farmed the land in pools A and B. This would be the last year for



farming all 8 cells within these pools, however it is agreed that 2 cells would continue to be farmed in the NRE Rotation Plan, with the possibility of additional cells if needed as part of a drought contingency plan. The final construction contract was well underway and scheduled to be complete in September 2015. Equipment issues and weather delayed substantial completion until February 2016. The mild winter allowed for continued work on the project. Development of the internal Operations and Maintenance plan was begun as it was planned to manage water levels within the individual cells within pools A and B in 2015. The final overall O & M plan draft was underway as well. The project will be complete in 2016 and fully operational. A dedication program is anticipated in 2016.

In June of 2015, NRCS Headquarters Personnel toured the project to learn more about how the proposed PL-566 – RCPP Program could work when planning projects like North Ottawa.

June, 2015 David T. Marshall

# North Ottawa Project 2015 Operation – Hydro Review

The 2015 operating year at the North Ottawa Project began with all of the gates closed. The runoff began slowly in early March with very little precipitation during the melt. With construction of Phase 5C anticipated to be started as soon as conditions allowed, all inflows were to be sent to Pool C. Total inflow to the impoundment during the spring runoff period appears to be less than 200 acre-feet. Several rainfall events during May and early June caused runoff to raise Pool C to a stage of 11.71, which was the maximum for the year. This was also the maximum storage with about 3330 acre-feet stored in Pool C, the other two pools were kept as low as possible for construction. Total inflow for the year was about 15,600 acre-feet or about 4.0 inches of runoff of which most occurred during May and June. The historic average annual runoff in this area is about 2.5 inches most of which typically occurs in the spring.

Three level measuring pressure transducers are in place, one each in Pools B and C and the third one at the outlet for tail water levels in JD2. These sensors, along with an automatic rain gauge are attached to a data logger to record the stages and rainfall. The data logger is connected to a telemetry devise to send the data to a satellite, which allows real time data retrieval from a remote instrument access. Visual readings were taken from staff gages during visits to the site. These readings were compared to the automatic logger to make sure the automatic levels were reading correctly. The pool levels are shown in the graph below. The run out level of Pool B & C outlets are 1.0 foot. The maximum gated pool level is 16.2 feet. The top of dam is at 20.3 feet.

The automatic rain gauge had a total of 16.31 inches of precipitation from the beginning of March to November 12 when the data collector malfunctioned.



With very little inflow from the spring runoff, Pool C was allowed to fill during runoff events in May and June. Beginning in June, a slow draw down in Pool C began, to allow for cattail harvest in the fall as part of the nutrient study on the impoundment. When the pool level reached a stage where the ground conditions would allow conventional machinery to operate, the rate of drawn down slowed to retain some water in the borrow areas for migratory birds. Just before freeze up, the remaining water in Pool C was released to facilitate installation of extension pipes on the outlet structures.

Inflow and outflows hydrographs are shown in the chart below: Outflows are calculated based on gate openings and water level elevations. Inflows are estimated based on change in pool levels. Fluctuation in inflow rates shown may be caused by imprecise pool level measurements and wind effects. Evaporation also lowers pool levels. This results in periods of negative net inflows (not shown on the graph below).





Maximum inflow rates of just over 600 cfs occurred on June 18th following the rainfall events. To help facilitate construction, Pool A and B gates were opened on April 17 to draw down the water accumulated in the borrow areas from the snow melt. Pool C outlet gates remained closed until June 10<sup>th</sup>. The maximum discharge rate of about 60 cfs occurred in early July. On the night of July 2/3, someone removed the stop logs from 3 sheetpile structures which released the water in the distribution channel. This water flowed thru the A and B pools and was released to JD 2. This water can be seen in the outlet stage readings on July 3 when the stage increased by about 1 foot for a short duration. Flow data on the outlet structures was kept on log sheets with the data logger near Pool C outlet structure. A mouse entered the housing sometime in the fall and destroyed all written records after August 8<sup>th</sup>.

The chart below shows the tail water stage in JD2. The maximum target level is 5.0 during the growing season and 6.0 during other times. During the growing season the stage was not exceeded.



#### North Ottawa Nutrient Capture and Biomass Harvesting Project

The Red River Basin Commission North Ottawa Nutrient Capture and Biomass Harvesting Project outcome is to maximize the capture and remove of phosphorus and nitrogen nutrients found in surface runoff from the 75 square mile watershed above the North Ottawa impoundment. Cattails and other emergent aquatic vegetation growing in flood storage impoundments take up phosphorous, nitrogen and other nutrients as they grow and mature. The removal of this aquatic vegetation can provide both environmental and economic co-benefits when plants are harvested to remove nutrients and improve water quality. The project as designed is utilizing a multiple cell treatment system that uses a two stage process for pre-treatment sediment settling and treatment by vegetative nutrient uptake designed to:

- Investigate how to maximize Impoundment water quality benefits
- Evaluate treatment times for nutrient uptake
- Pre-treatment process to reduce suspended sediments entering the impoundment
- Treatment process designed for maximum nutrient uptake by vegetation
- Manage water levels in treatment cells to maximize nutrient settling and vegetative growth
- Harvest vegetation during optimal times of the growing season to maximize nutrient (phosphorus/nitrogen) removal with harvesting

The Red River Basin Commission in 2015 completed lab analysis for nutrients in water, soil, and aquatic vegetation growing within the North Ottawa Impoundment. Nitrate, Total Nitrogen, Orthophosphate, Total Phosphorus, and Total Suspended Sediment sampling data from 2015 suggest that storage of water in the North Ottawa Impoundment results in lowering the concentration of these nutrients between inflow and outflow water. Lab analysis of aquatic vegetation growing in the North Ottawa Impoundment show significant uptake of nitrogen and phosphorous within the vegetative biomass.

The fall 2015 planned harvest of cattails was not completed from the larger Pool C portion of the impoundment as anticipated. The Red River Basin Commission is planning for 2016 harvest activities to take place within the B4 Cell portion of the impoundment. The harvested biomass will be utilized as green manure on agricultural land within the upstream drainage area thus recycling the nitrogen and phosphorus back within the watershed. The amount of phosphorus and nitrogen captured and removed will be documented and a detailed nutrient budget will be prepared. Requests for additional information can be directed to:

Aaron Ostlund Project Coordinator, Red River Basin Commission aaron@redriverbasincommission.org 320.808.5090 mobile 701.356.3183 office

#### Moonshine Lakebed Restoration Project

The BdSWD continues to work to acquire necessary lands for this project area from willing sellers. Until such time that the necessary land rights are obtained for this project, no construction will take place. The Wetland Banking program was discussed in regard to this lakebed restoration project but decided to not utilize this system because of the way the project is being pursued.

In 2015, the land owned by the BdSWD in Moonshine Twp. was renewed for lease for the crop year 2016.

#### Moonshine 24/13

Land owned by the BdSWD was leased for farming again in 2015. No progress has been made to date with establishing an impoundment in this area. It is the board's intention to continue to work to establish a small impoundment on this land and land adjacent once land rights issues are worked out with the neighboring landowners. Neighboring landowners have been contacted and talks continue.

#### Elbow Lake Project

This project is driven mainly by local landowners to try to stabilize the water level on Elbow Lake and Samantha Slough. There is consensus that an outlet can be constructed, however some of the details are to be worked out yet like size of tile, where to stop with tile, open ditch alternative, outlet elevation, automatic, manual gate, pump, etc. Discussions continue in an effort to sort out the best alternative. The Elbow Lake Association was formalized in 2010 and is operational.

A concept paper was drafted describing a potential project and the benefits it would provide. The paper is on file in the district office. Discussions revolved around an operating plan that would be agreeable to all parties involved. The group was also working on determining the best location for installing the outlet and gaining landowner permission for placement.

Work in 2015 was put on hold, waiting for the outcome of the project discussions and development on Big Lake near Herman. Permitting needs will be similar for both projects.

# Bois de Sioux Watershed District River Watch Program and Activities (2015-2016)

#### Introduction

The River Watch (RW) program provides hands-on watershed science education, promotes water resources stewardship, and introduces high school participants to career opportunities in watershed science. The program focuses on education through water quality monitoring, macroinvertebrate and mussel sampling, snow and frost depth studies, and river geomorphology. Campbell-Tintah (C-T), Wheaton, Herman-Norcross, and Clinton-Graceville-Beardsley High Schools have participated in the program. In 2015 Campbell-Tintah was the most active. Herman high school went out for sampling in April, 2016 but missed sampling in May. The other schools haven't participated due to teacher availability (turnover).

#### Water Quality Training and Monitoring

The MPCA, in collaboration with the IWI and the Red River Basin Monitoring Advisory Committee, provide an annual training and certification for all monitoring partners in the Red River Basin, including RW teams. Participants learn field sampling procedures and equipment calibration and maintenance to ensure the scientific integrity of data collected. Campbell-Tintah RW advisor Roy Mayeda and C-T students attended and received certification at this training at U of MN, Crookston in March. For schools unable to attend, IWI staff, Evelyn Ashiamah provides individualized field training until teams are proficient with equipment and methods.

The schools conduct monthly water quality sampling to check the condition of ditches and streams using a multi-parameter sonde to measure water temperature, conductivity, dissolved oxygen and pH. A turbidimeter and a secchi tube are used to determine turbidity and transparency respectively. The students also take site photos and document water quality related observations. Their data are reviewed for quality assurance and then uploaded to the IWI data site (riverwatch.wq.io) and the MN water quality database known as the Environmental Quality Information System (EQuIS).

Since Campbell-Tintah was the only school that monitored regularly (monthly) last season, the water quality condition report for this year will emphasize the Rabbit River. On the whole, there was not a significant change in water quality at the sites monitored in the Rabbit River sub-watershed in 2015. It must be noted that the designated uses for the streams and rivers monitored by the River Watch teams are for recreation and aquatic life.

#### Turbidity

The Rabbit River (both the South Branch and mainstem) failed to meet the standard; except BDS39 and BDS44 which are both WQ sites located Upstream of GCR40 Inlet to the NE and SE respectively. These two sites were fully supporting a partially supporting of the state standard (25 NTU) respectively. WilkCD9 was also partially supported the standard. It is worth mentioning that WilkCD9 drains an area which has a vast amount of subsurface drainage or tile. Turbidity data collected by Campbell-Tintah can be access at: <u>river.watch/data/turbidity/campbell/sites/map</u>

#### **Dissolved Oxygen**

Dissolved Oxygen (DO) is an important indicator of water quality. Aquatic organisms depend on oxygen available in the water for survival. The Minnesota DO standard is a minimum of five milligrams per liter (mg/L). The Rabbit River mainstem and South Branch were partially supporting and some fully supporting, but the farthest downstream of the river, before converging with the Bois de Sioux was mostly partially supportive their designated use. There was an improvement at BdS28 (Non-supporting in 2014 to partially supporting in 2015). More details regarding this data can be accessed at (https://river.watch/data/dissolved-oxygen/campbell/sites/map).

#### Hydrogen ion concentration (pH)

All the sites currently monitored by the Campbell-Tintah school met the MN pH standard of between 6.5 and 8.5 pH for their designated use. More details regarding this data can be accessed at (<u>https://river.watch/data/ph/campbell/sites/map</u>). \*Designated Use Assessment report was based on data collected by RW students.

#### **River Watch Fall Kick-off and Annual Forum**

Campbell-Tintah RW students attended a Fall Kick-off training session in Barnesville in November in preparation for the March 2016 RW Forum. The Forum poster theme of "River Recreation" was derived from the River Explorers program where students explore and document conditions of their local river through kayaking. The theme of the poster was to provide students the opportunity to see their local river as a great place for adventure, and focus on developing and promoting it for recreation.

The Campbell-Tintah and RW team attended the 21st Annual River Watch Forum held at the U of MN Crookston on March 15, 2016. Over 20 RW teams with almost 200 students and teachers from throughout the Red River Basin attended concurrent sessions on a variety of current watershed science topics presented by professionals in the field plus keynote and other presentations. Campbell-Tintah students presented a poster about Recreation on the Rabbit River, ways of improving the river for recreation and water quality monitoring. They received 2nd place for the People's Choice Award. The posters can be viewed on the IWI website, (http://www.iwinst.org/education/river-watch-forum/school-water-quality-posters).

#### **Snow Study**

The Campbell-Tintah RW team continued to monitor and report on snow depth and snow water equivalency over the winter of 2015-16. They also recorded frost depth and water infiltration, with all data reported on the Community Collaborative Rain, Hail and Snow (CoCoRaHS) network for use by the National Weather Service for critical spring flood forecasting in the Red River Basin. Data for the snow study can be found at (https://river.watch/data/campbell-ss).

#### **Other Activities**

Skylar Niesche, former RW student of Campbell-Tintah participated in the 2016 RW Forum as a poster judge. While a student, Skylar was the team leader. She was a RW poster presenter for three years and the primary speaker when RW students met with the Environmental group of the Senate to testify on two separate occasions. Dylan Hensch, also a former Campbell-Tintah RW student is currently an intern at IWI, and doing great work.

#### **Future Plans**

The River Watch teams in the BDSWD will continue to conduct monthly water quality sampling during open water season, mussel and macroinvertebrate sampling, and snow study over the winter months. They will also continue to provide annual presentations about their activities to the BDSWD board at one of their regular board meetings.

#### Credits

The BDSWD provides support for the RW program by covering costs of substitute teachers, transportation, and students' lunches on sampling days and when students attend the RW Forum and the water quality training/certification session. Laboratory analyses of water samples have also been covered if a special research project is undertaken by a RW team or student. Financial support is also provided by the Red River Watershed Management Board (RRWMB) and the Minnesota Clean Water Legacy Fund. Coordination and implementation support is provided by the International Water Institute.

This partnership with the watershed district and area schools contributes to the education of the students, promotes good stewardship of our water resources and provides valuable data to area water resource managers and agencies.

# River Watch Schools Water Quality Sampling Sites



RW School	Site ID	S Code	Water Body	Station Description
Campbell Tintah	Bds28	\$003 120	Pabbit P	UNN TRIB TO THE RABBIT R AT MN-9, 1.5 MI NO. OF
Campbell-Tilitali	Duszo	3003-120	Kabbit K	RABBIT R, AT CSAH-4 RT BANK OF BRG, .1 MI SW OF
Campbell-Tintah	Bds27	S002-002	Rabbit R.	CAMPBELL
Campbell-Tintah	RabSF	S004-176	Rabbit R S Fk	RABBIT R AT CR-152, 3.1 MI SE OF CAMPBELL
Campbell-Tintah	BdS30	S003-275	JD 12	JD #12 AT 2ND STREET BRIDGE ON EAST EDGE OF TINTAH
Campbell-Tintah	BdS39	S003-272	JD 12	NORTH LATERAL ONE OF JD #12 AT CR-41, 9.8 MI SE OF TINTAH
Campbell-Tintah	BdS44	S003-273	JD 2	LATERAL THREE OF JD #2 AT CR-42, 9.1 MI ESE OF TINTAH
Campbell-Tintah	Bds51	S003-274	JD 2	JD #2 ON MN-55, 2 MI E OF NASHUA
Campbell-Tintah	BdS37	S001-053	Rabbit R	Rabbit R at Wilkin CSAH-19, 5.9 mi ESE of Campbell
Campbell-Tintah	WilkCD9	S004-177	WilkinCD9	CD-9 AT UNN RD, 3 MI NE OF CAMPBELL
Campbell-Tintah	RAB1A	S001-051	Rabbit R	Rabbit R at Campbell, W. 4miles on CR 4; CR 154; N. 1.9 miles to crossing
Campbell-Tintah	BDS31	\$006-853	Rabbit R	RABBIT R, SF AT 290TH AVE (T156), 2 ½ MI NW OF
Campbon-Tintan	BD551	5000-055	Rabbit R	TWELVE MILE CREEK E BR ON CSAH-6, 3.4 MI E OF
Clinton-Graceville-Beardsley	Bds16	S003-114	12 Mile Cr-EBr	DUMONT TWELVE MILE CREEK E BR AT CSAH 18 9 MI SE OF
Clinton-Graceville-Beardsley	Bds13	S003-112	12 Mile Cr-EFk	DUMONT
Clinton-Graceville-Beardsley	Bds18	S003-115	12 Mile Cr- W.BrEFk	UNN TRIB (E BR 12 MILE CK TO W BR) AT CR-62, 3 MI SE DUMONT
Clinton-Graceville-Beardsley	Bds19	S003-116	12 Mile Cr-WBr	TWELVE MILE CREEK W BR AT CR-62, 2 MI SE OF DUMONT
Clinton-Graceville-Beardsley	Bds20	S003-117	12 Mile Cr-WBr	TWELVE MILE CREEK W BR AT KING AVE, 1.7 MI W OF GRACEVILLE
Clinton-Graceville-Beardsley	Bds34	S003-123	12 Mile Cr-WBr	TWELVE MILE CK W BR ON CSAH-6, .25 MI E OF DUMONT
Clinton-Graceville-Beardsley	Bds15B	S003-113	12 Mile Cr-WFk	TWELVE MILE CREEK W FK AT CR-62, 5 MI SE OF DUMONT
Clinton-Graceville-Beardsley	BdS12EF	S004-189	12 Mile CkEFk	TWELVE MILE CK E FK ON CR-62/CSAH-8, 8.2 MI SE OF DUMONT
Clinton-Graceville-Beardsley	BdS13D	S004-190	12 Mile Ck	TWELVE MILE CK ON CR-62/CSAH-8, 9.7 MI SE OF DUMONT
Herman-Norcross	Bds11	S003-106	Grant CD 8	CD #8 ON MN-27, 3.4 MI W OF HERMAN
Herman-Norcross	Bds01	S003-104	Mustinka R	MUSTINKA R AT CSAH-13, 6 MI NE OF HERMAN
Herman-Norcross	Bds02	S003-105	Mustinka R	MUSTINKA R AT CSAH-8, 8 MI NE OF HERMAN
Herman-Norcross	BDS08	S004-144	Mustinka R	MUSTINKA R AT CSAH-8, 1.75 MI E OF NORCROSS
Wheaton	Bds5	S003-124	12 Mile Cr-MS	TWELVE MILE CK ON CSAH-14, 7.5 MI NE OF WHEATON
Wheaton	Bds23	S003-118	5 Mile Cr	FIVE MILE CK ON MN-27, 5.7 MI W OF HERMAN
Wheaton	BDS12E	S004-194	12 Mile Ck	TWELVE MI CK ON CR-72, 7.1 MI ESE OF WHEATON
Wheaton	BDS12W	S004-195	12 Mile CkWBr	TWELVE MILE CK W BR ON CR-72, 6.8 MI ESE OF WHEATON
Wheaton	BDS22	S004-196	18 Mile Ck	EIGHTEEN MILE CK AT MN-27, 1.2 MI E OF WHEATON
Herman-Norcross	BDS53	S002-001	Mustinka R	MUSTINKA R AT CSAH-9 BRIDGE, 1.3 MI NW OF NORCROSS

# Appendix B: Bois de Sioux Watershed District River Watch Water Quality Monitoring Sites



Appendix C: Bois de Sioux WD Dissolved Oxygen Designated Use Assessment



Appendix D: Bois de Sioux WD pH Designated Use Assessment



Appendix E: Bois de Sioux WD Transparency Designated Use Assessment

#### **Buffer Strip and Wetland Restoration Program**

The Bois de Sioux Watershed District Overall Plan identifies wetland restoration and buffer strip/ permanent grass installation as an action item identified to reduce runoff, increase infiltration, and improve habitat. The district provided financial assistance in the amount of \$10,000 each to Wilkin, Otter Tail, Grant, Traverse, Big Stone, and Stevens SWCDs to help fund a position to market the CRP and WRP programs in their portion of the district. This restoration work was identified by the East Branch 12 Mile Creek Project Team as an item needed to reduce flows in the area and provide for Natural Resource Enhancements. For each acre of permanent easement that is enrolled and approved, the district would compensate \$10 to the SWCD. In 2015 there were 3,270.62 acres enrolled in perennial vegetation easements in the Bois de Sioux Watershed District. The breakdown is as follows:

SWCD	Acres	Payment
Traverse	1,367.2	\$13,672.00
Grant	1,903.42	\$19,034.20
Ottertail	0.0	\$0.00
Stevens	0.0	\$0.00
Big Stone	0.0	\$0.00
Wilkin	0.0	\$0.00
TOTAL	3,270.62	\$32,706.20

Because of the assistance from the local SWCD offices, we were able to work together to accomplish goals for both entities. A special thanks goes out to the staff and boards of these six organizations for their assistance.

It is anticipated that this program will continue in 2016.

#### Land Acquisition

No new parcels were acquired in 2015.

#### **Redpath Project**

In 2008, the Board of Managers established the Redpath Project Team and charged them with the task of identifying the problems in the area and reviewing alternative solutions. The team did their work in the first 8 months of the year and recommended a project solution to the Board in August 2008.



The impoundment dike on the south side will be constructed on the section lines. Traverse County Ditch 35 (TCD35) will be relocated south of its current location to facilitate construction of the dike. The west dike will be constructed approximately 350' east of CSAH13 to allow room for TCD35 and a sedimentation pond between the dike and road. The north dike of the impoundment will be built north of JD14 and a new By-pass Corridor will be constructed north of this dike. From the county line east one mile, dikes will be built on either side of JD14 to form a diked inlet from the inlet structure to the impoundment. A floodway will be constructed along the existing JD14 channel to provide improved conveyance from the inlet structure to the impoundment pool areas.

The impoundment is divided into 3 pools as shown in Figure 6. The inlet structure will allow Pool 1 to fluctuate at river level. As the pool rises, some of the JD14 flow will bypass the impoundment using the new channel within the By-pass Corridor. Increased flows from the upstream drainage area will be split between the By-pass Corridor floodway and the impoundment. A culvert at the entrance to the By-pass Corridor will restrict the amount of flow that takes that route. The By-pass Corridor will extend from the inlet structure, follow along the north dike and outlet back into JD14 at the northwest 10 corner of the impoundment. Flows into the impoundment will be from Pool 1 to Pool 2 to Pool 3 via overflow spillways and ultimately through the outlet structure to JD14.

Support for this project appears to be very widespread, from local landowners to the federal agency level.

The NW corner of Section 21 is the only parcel remaining to be acquired for the impoundment footprint with additional ROW needed for the TCD #35 area and along the north side to accommodate the by-pass corridor. Appraisals were completed for the lands left to acquire and negotiations began with each of the landowners.

In 2014, the Environmental Assessment Worksheet (EAW) was completed. Staff have continued to work through the necessary steps to obtain a USCOE 404 and 408 permit along with the State WCA permit.

#### East Branch Twelve Mile Creek Project/Eldorado 7

The East Branch Twelve Mile Creek Project Team did not meet in 2015. In December 2005, the team made a recommendation to the BdSWD Board that there needed to be about 3,300 acre feet of storage implemented in this sub-watershed. There were a few suggested locations for impoundments to provide a part of that storage.



#### **Big Lake**

The Bois de Sioux Watershed District received a copy of a letter from the MnDNR regarding their ability to secure necessary land rights to implement water level management on Big Lake located just east of Herman, MN. Outflow from Big Lake flows through the City of Herman. This project would complete the third of three phases identified for flood damage reduction within the City of Herman. The first two phases included a re-design of the city stormwater conveyance system and the outlet channel to Pullman Slough west of the city. Water level control on Big Lake would provide additional protection to the city where flows could be metered through the system in an



attempt to prevent exceeding the conveyance system's design capacity.

The City of Herman Council petitioned the BdSWD in early 2008 to establish the Big Lake Project along with two individual landowners. After careful consideration, the BdSWD suggested that they recall the petition and pass a resolution asking the BdSWD to establish the project. This was done to allow the project to fit the statutory requirements and put the City of Herman in a better position to proceed. The BdSWD did establish the Big Lake Project and has initiated contact with the landowners of the land where the outlet work would be done.

Engineer Anderson was instructed to complete the engineer report for this project so that a hearing could be held to move the project forward. Priorities for other projects put those ahead of this project but work does continue to bring this project to fruition.

In fall of 2011, a preliminary engineer report was presented to the board for their review. Staff met with MnDNR representatives to discuss the proposed operating plan. There was some concern for the draw down levels proposed as they would exceed the MnDNR

regular allowances. Staff were advised by MNDNR to apply for a permit to get their official position on the draw down proposal. In 2014, it was determined that the BdSWD would develop the EAW for this project but not until the Project Team finished it's work and made a positive recommendation for the project to be developed. The project team was instructed to meet and document the problems in the Five Mile Creek sub-watershed as well as discuss alternatives to address those problems, Big Lake being one of those alternatives. To determine the extent of level manipulations on Big Lake, it was felt that the PT should look at how additional alternatives could work in conjunction with Big Lake overall. The PT work was then put on hold until the Board could explore the potential to receive a planning grant from the NRCS PL-566 program recently awarded to the Red River Valley. This grant could provide significant funding for the alternatives development in the sub-watershed. See PL-566 discussion elsewhere in this report.

## **Other activities 2015**

- MPCA continued to provide funding for the Bois de Sioux Watershed Restoration and Protection project. The project is on track for completion June 2016. Total budget for this work is \$250,000, fully funded by MPCA.
- MPCA continued to provide funding for the Mustinka Watershed Restoration and Protection project. The project was completed in June 2015 with the final reports out for public review and comment. Total budget for this work is \$250,000, fully funded by MPCA.
- The Bois de Sioux Direct, Five Mile Creek, and the Rabbit River Project Teams met briefly in January 2015 to continue their work on addressing the problems identified in their respective subwatersheds. With Federal Planning Grant Money becoming available to continue this effort, all Project Team activity was put on hold to apply for funding through this program.
- The District, in partnership with the SWCD offices of West Otter Tail, Grant, Stevens, Big Stone, and Traverse, were successful in 2012 (for the third time) in securing a Clean Water Fund Grant from the Board of Water and Soil Resources Clean Water Legacy Fund in the amount of \$330,000. These funds are being used for implementation of Best Management Practices to improve water quality in the Mustinka River system. This brings the total grant awards to \$708,000 to be used in the Mustinka Watershed. Work continued in 2015 to establish projects that will improve our local water quality.
- The BdSWD Policy Manual was adopted in 2014 and continues to be updated regularly. In 2015, there were revisions to the personnel policy and it was adopted on October 30, 2015. A copy is available upon request from the District Office and on the website at <u>www.bdswd.com</u>.
- The BdSWD has continued the culvert inventory in the district, completing the inventory on the northern boundary and continued data collection in other priority areas of the district. It is anticipated that this inventory will be completed by summer 2017.
- The Northern boundary investigation is now finished and the necessary adjustments to the alignment were approved by BWSR in January 2016
- The BdSWD was granted an extension for the update of their overall plan to April

of 2017. This was done to accommodate the WRAP work that is going on now and to incorporate the implementation plans from those two projects into the revised overall plan.

- The BdSWD Advisory Committee was re-appointed in 2015. The membership list is shown in the Appendix to this report. The Advisory committee met 1 time throughout the year to stay informed of the BdSWD activities. It was decided that the Advisory Committee will meet annually unless directed to meet for specific purpose by the board. Members were encouraged to attend the monthly board meetings and review the meeting minutes as they become available. Each member receives the minutes upon approval by the full board.
- The TCD #52 Project Team was appointed in September of 2013 to identify the problems in this specific subwatershed and begin to identify alternative solutions to those problems. Work continued into 2014 in which a summary report was developed and presented to the BdSWD board. A copy is on file in the district office. The board met with landowners several more times in 2015 to discuss the solutions to the problem. The District Board proposed that they do a retention project and repair the erosion problem in the lower portion of the channel as a district project to assist the landowners with the need for improvement on the rest of the system.
- The BdSWD awarded the bid for construction of WD #3 to States Borders Construction of Graceville in Fall 2014. The excavation work was substantially completed by December 2014. Final construction and seeding was done Spring 2015. This ditch system is 1.25 miles in length located on the south side of Sections 13 and 14 in Tintah Township, Traverse County.
- As part of the BdSWD Overall Plan Amendment, the board held the biannual Project Informational Hearings to provide the public with the opportunity to be informed of all projects that the BdSWD is considering, or the status of those which are moving forward. These hearings were well received.
- The BdSWD, in an attempt to obtain a larger pool of individuals for viewing legal ditch systems, promoted and implemented a viewer training event through Ridgewater College in Wilmar, MN. The training was held at the BdSWD Office October 19 through 23, 2015. A total of 11 people attended the 5 day session, including two board members, 8 local representatives, and 1 from the southern part of the state.
- A revision to the drainage policy was completed as part of the management of the policy manual in 2015. To complete this task the BdSWD invited tiling contractors to have a discussion about the tiling policies in January. This was a very well received meeting and it led to better understandings between the contractors and the Board. A copy of the policy is available upon request.
- As noted in the Overall Plan, the district held several public informational meetings to update and inform the public regarding the work they are doing. This effort gives the public the opportunity to better inform themselves on the status of the BdSWD workload and projects.
- A State of Minnesota Buffer Strip Statute was passed in 2015 requiring perennial grass buffer strips adjacent to public waterways with shoreland classification and MS 103E drainage systems. The BdSWD worked to stay abreast of the new law

as it unfolded in 2015. The BdSWDs involvement will be in regard to those MS 103E drainage systems that they are the Ditch Authority.

- Grant County approached the BdSWD to partner in hydraulic study work on three crossings in the upper reaches of the Mustinka River. MnDOT also agreed to partner. Three road crossings were studied; MN Trunk Highway 55, Grant County Road 42, and Grant County CSAH 1. These three crossings are key to transportation needs in the area. The BdSWD interest is to provide flow control from the upper reaches of the Mustinka River. The study was underway at the end of the year. Results will be forthcoming in late spring 2016.
- The Bois de Sioux Watershed District is pleased to announce a new free service available to our permit holders that have pumps, gates or other control structures that have been permitted for installation. Permit holders may now receive text messages on their cell phone when the BdSWD would require that pumps, gates, or other control structures be closed or turned off due to flooding conditions and when they would be allowed to be opened or turned back on. A letter was sent to approximately 150 permit holders announcing this service with instructions on how to subscribe.
- The BdSWD requested de-authorization of the USCOE Mustinka Diversion project as they could see no need for the USCOE to be involved in managing this project going forward. The project has been established as Judicial Ditch #14 and will continue to be managed for it's intended use. This is an effort to streamline management and be more efficient.
- In 2014, the BdSWD changed engineering firms to Moore Engineering, Inc. The transition continued in 2015 with MEI picking up more of the workload as WSN completed the tasks they had started. At the end of the year the only 2 tasks WSN was involved in is finalizing the Redpath 404 and WCA permitting and finishing the North Ottawa Impoundment construction supervision, Operations and Maintenance Manual, permit reporting.
- The BdSWD Board approved a preliminary Resolution establishing the Walls/Windsor Project. This project concept includes a flow/flood control impoundment above Highway 27 on TCD #52 and channel stabilization downstream of there to it's outlet in Lake Traverse. The board continues to work with landowners to fix this age old problem.

## • <u>Ditches</u>

Since 1992 sixty (60) ditch systems have been under the jurisdiction of the Bois de Sioux Watershed District, with JD#3 added in 1995. This includes approximately four hundred (400) lineal miles of ditch. Ditch funds are managed by the district office. Annual ditch inspections are completed each year and a copy of reports are kept on file.

An annual spray program for heavy vegetation and trees in legal ditch systems is also administered by the BdSWD. In 2015, the Board changed their approach to vegetation control in the ditch systems. They essentially decided to hire 2 contractors, one for cattail control and the other for brush control. Each contractor will drive by one third of the ditch systems and treat



the vegetation found. Each year they would continue in this manner, effectively treating each ditch once every 3 years. If additional vegetation issues are found on other systems, they would be noted and added to the contractor's list of systems to address in any given year. It was felt this would be more efficient use of time and provide a cost savings to the ditch systems. The contractors would provide a report of the areas treated for vegetation with their invoice.

In 2015 there were 6 requests for maintenance submitted to the BdSWD Board of Managers for work. The following table describes these requests. The process that the board has adopted includes research of the ditch records and surveying of the system as necessary.

Ditch	RFM #	Problem
TCD #52 L2	001-15	Sediment and Flooding
TCD #52 Main & L2	002-15	Sediment
TCD #51	003-15	Sediment
TCD #37	004-15	Sediment
TCD #30	005-15	Sediment
TCD #41	006-15	Sediment



### Legal Drainage Ditch Work 2015

No spring runoff preparations were needed due to the lack of snow cover.

The 2015 brush control was completed in a timely manner with all areas identified in the inspections treated. Cattail herbicide application was performed during the fall.

Ditch reports were completed and presented to the board for TCD 7, TCD 11, TCD 37, TCD 41, TCD 43, TCD 51 and TCD 52.

Ditch maintenance activities for 2015 included the following:

#### TCD31

Cleanout was completed in the fall. Once snow cover is gone seeding will be performed.

#### TCD37 L2

Tree removal was completed in the fall. Once snow cover is gone the tree piles will be removed. Improvement survey was completed.

#### TCD41

Cleanout of the North Outlet branch was completed in the fall. Once snow cover is gone the tree piles will be removed and seeding will be performed. Maintenance survey was completed for the outlet of the main ditch.

#### TCD51

Maintenance was completed in the fall. Once snow cover is gone seeding will be performed.

### JD11

Maintenance was initiated in the fall on the E-W Main, N-S Main, and Lateral 5. Spoil to be spread and seeding to be performed once snow cover is gone.

### JD12 L1

Field approach and culvert was removed in Section 26 of North Ottawa Township. Once snow cover is gone seeding will be performed.

### JD12 L4

The remaining maintenance from 2014 was completed in the fall using the "hopscotch" method in Sections 1, 2, and 3 of Gorton Township and Section 31 of Elbow Lake Township. Once snow cover is gone seeding will be performed.

#### TCD52

Maintenance survey and plans completed on Lateral 2 and the upstream mile of the main ditch.

#### (continued)

#### TCD17

Ditch Retrofit plans were completed and grant application for Clean Water Fund Grant was submitted.

TCD 4

Maintenance survey completed.

TCD 30 Maintenance survey completed.

**JD12** Maintenance survey completed of the main ditch.

**WCD9** Hydraulic Analysis plans were completed

WCD10

Hydraulic Analysis plans were completed

#### Projections for 2016

- The North Ottawa Project is scheduled to be fully complete in 2016. The construction contract and FHM Grant will be closed out. The final reporting for permits will be complete. The Operations and Maintenance Manual will be finalized. There will be some vegetation management needed to get the desired cover established on the new construction.
- The Bois de Sioux Watershed District will conduct the necessary procedures to maintain the 400 lineal miles of legal ditch systems under their jurisdiction. This includes inspections, vegetation control, repairs, accounting, reports, etc.
- The Bois de Sioux Watershed District will continue to work towards acquisition of lands for the purpose of finalizing the needs for the Redpath Project.
- The Bois de Sioux Watershed District will continue to develop the Redpath Impoundment as it moves into the final stages of design and permitting. Permits still needed are the Federal 408 (alteration of a federal project) State of Minnesota Dam Safety Permit, and potentially a MnDNR Public Waters Permit. They will continue to manage the funding needs of the project and consider grants from additional sources as they see appropriate.
- The Bois de Sioux Watershed District Board and staff will continue to serve on the many boards, committees, and commissions that they are currently a part of. They will also consider serving any new capacities they are asked to participate in to further the goals of the district and Red River Basin.
- The Bois de Sioux Watershed District will continue to meet with the Rabbit River, Bois de Sioux Direct, Five Mile Creek, and TCD #52 Project Teams as necessary to continue development of the necessary Summary Reports and Recommendations as directed by the Board of Managers.
- The BdSWD will continue the support for the River Watch Program and encourage new schools to participate.
- The BdSWD will continue to promote education through the distribution of the educational video and periodic public informational meetings.
- The BdSWD will continue the Buffer Strip/Restoration incentive program with the local SWCD offices.
- The BdSWD will continue to facilitate additional project teams, as needed, to work towards resolving water problems in the watershed.
- The BdSWD will continue work on the Bois de Sioux WRAP project in the 2016 calendar year with the Bois de Sioux WRAPS scheduled to be complete by the end of June.

# BOIS DE SIOUX WATERSHED DISTRICT

# **ANNUAL REPORT**

# **CALENDAR YEAR 2015**

**Appendix** 

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First Name	Last Name	Affiliation
Ron	Staples	Stevens County Commissioner
Drew	Mosberg	Grant County SWCD
John	Walkup	West Ottertail County SWCD
Jack	Lampert	Stevens County Citizen
Doug	Jahnke	Big Stone County Citizen
Steven	Schmidt	Ag Business
Terry	Amundson	Ag Business
Jerry	Deal	Traverse County Commissioner
Bob	Perry	Wilkin County Commissioner
Blayne	Johnson	Big Stone County SWCD
Vernyl	Fronning	Ottertail County Citizen
Robert	Marts	Traverse County Citizen
Duane	Duin	Ag Business
Scott	Bauer	Toqua Sportsman's Club

# BdSWD Advisory Committee

# **BdSWD** Project Teams

The Bois de Sioux Watershed District administers eight (8) Project Teams as follows:

- 1. North Ottawa
- 2. Redpath
- 3. East Branch Twelve Mile Creek
- 4. West Branch Twelve Mile Creek
- 5. Moonshine
- 6. Rabbit River
- 7. Bois de Sioux Direct
- 8. TCD #52

With the exception of the Moonshine PT and the TCD #52 PT, they are organized on a sub-watershed alignment as shown on the following map.



# Permit Report 2015

A=Approved; C=Approved with Condition; D=Denied; W=Withdrawn;
0=No Action, further review needed

Name	Permit #	Date of Action	Action Taken	Type of Work
Richard Young	15-001	3/12/2015	А	TILING
Traverse County Hwy Dept.	15-002	3/2/2015	А	BRIDGE
David Stock	15-003	3/2/2015	А	DITCH CLEANOUT
Mark Kleindl	15-004	3/2/2015	А	TILING
Loren Pederson	15-005	3/12/2015	А	TILING
Kevin Pattison	15-006	3/2/2015	А	TILING
Kevin Deal	15-007	3/13/2015	С	CROSSINGS/GATES
Mark Severance	15-008	3/25/2015	С	TILING/PUMP
Mark Severance	15-009	3/25/2015	С	TILING/PUMP
Donald Gieselman	15-010	3/12/2015	А	ENBANKMENT/SPILLWAY
Darin Raguse	15-011	3/25/2015	С	TILING
Darin Raguse	15-012	4/8/2015	D	TILING
Darin Raguse	15-013	3/25/2015	А	TILING
Lyle Pederson	15-014	3/30/2015	А	TILING
Jeffrey Borgheiinck	15-015	3/27/2015	А	TILING
Darin Raguse	15-016	4/3/2015	А	TILING
Jeff Boom	15-017	3/30/2015	А	TILING
Alan Schmidt	15-018	3/30/2015	С	TILING
Alan Petersen	15-019	8/24/2015	А	TILING
Alan Petersen	15-020	4/10/2015	С	TILING
Alan Petersen	15-021	3/30/2015	А	TILING
Terry Tolifson	15-022	4/10/2015	С	TILING/PUMP
Duane Porter	15-023	3/30/2015	А	TILING
Larry Raguse	15-024	4/13/2015	С	TILING
Larry Raguse	15-025	4/13/2015	С	TILING
Larry Raguse	15-026	4/13/2015	С	TILING
Larry & Bill Raguse	15-027	4/20/2015	А	TILING
Grant County Hwy Dept.	15-028	5/10/2015	W	CROSSING
Jason Steenbock	15-029	4/20/2015	С	TILING/PUMP
Robb Dohman	15-030	4/13/2015	А	TILING
Mark Summer	15-031	4/20/2015	С	TILING
Mark Botker	15-032	4/20/2015	С	TILING
David Botker	15-033	4/20/2015	А	TILING/CONTROL
Larry & Kristi Biss	15-034	5/26/2015	А	TILING
Steve Larson	15-035	4/20/2015	А	TILING
Pat Peyton Et Al/Rod Thiel Et Al	15-036	6/24/2015	A	TILING
Jody Coleman	15-037	5/26/2015	A	TILING
Kevin Deal	15-038	5/18/2015	A	DITCHING

Dennis Zimbrick	15-039	5/18/2015	С	TILING
Gary Dierks	15-040	5/18/2015	А	DITCHING
Sheldon Tyberg	15-041	5/18/2015	А	TILING
Scott Tyberg	15-042	9/11/2015	С	TILING
Sheldon Tyberg	15-043	7/14/2215	С	TILING
Lande's High Prairie Farm/Paul Lande	15-044	7/14/2015	D	DIKE
Darin Raguse	15-045	5/11/2015	А	TILING
David Stock Farm Services, Inc.	15-046	5/18/2015	А	TILING
Charles Johnson	15-047	5/18/2015	А	TILING
Douglas Jahnke	15-048	8/20/2015	С	TILING
Grant County Hwy Dept.	15-049	5/18/2015	А	CULVERT/RIP RAP
Roland Sperr	15-050	5/18/2015	А	TILING
Duane Sperr	15-051	5/18/2015	А	TILING
Steve & Chuck Grimes	15-052	6/30/2015	А	TILING
Wilkin County Hwy Dept.	15-053	5/26/2015	С	CROSSING
Wilkin County Hwy Dept.	15-054	5/26/2015	С	CROSSING
MnDOT	15-055	5/26/2015	А	ROAD IMPROVEMENT
Ralph Smith	15-056	6/8/2015	С	TILING/PUMP
Jody Coleman	15-057	8/20/2015	С	CROSSING/CLEANOUT/DIKE
Earl Adolphson	15-058	6/15/2015	А	TILING
Mark Severance	15-059	7/1/2015	С	TILING
David Stock Farm Services, Inc.	15-060	1/0/1900	0	TILING
Wilkin County Hwy Dept.	15-061	9/25/2015	С	CROSSINGS
Jason Beyer	15-062	6/24/2015	А	DITCHING
Jason Beyer	15-063	6/22/2015	А	DITCHING
Steven Endreson	15-064	6/15/2015	А	TILING
Wayne Zych	15-065	6/18/2015	D	TILING
Mark Summer	15-066	6/22/2015	А	TILING/PUMP
Ryan & Tina Biss	15-067	8/25/2015	С	TILING
Ryan & Tina Biss	15-068	7/31/2015	С	TILING
David Hasse	15-069	6/24/2015	С	CROSSING
Keith Olson	15-070	7/24/2015	Α	TILING
Jon Mathias	15-071	7/20/2015	А	TILING
David Lande/Ruth Pederson	15-072	7/1/2015	С	CROSSING/TILING
Darwin Karsky	15-073	6/22/2015	А	TILING/DITCH
Gary Dierks	15-074	7/29/2015	Α	TILING
Krump Bros./Dean & Jeff	15-075	7/13/2015	С	CROSSING
Traverse County Hwy Dept.	15-076	9/17/2015	D	CROSSING
Lacey Ridge Farm Co./Brian Lacey	15-077	7/16/2015	А	TILING
Terry Tubbs & Wayne Summer	15-078	7/20/2015	С	TILING
Jirak Bros Farming Partn.	15-079	7/20/2015	A	RING DIKE Removal
Dale Webb	15-080	7/16/2015	D	CROSSING
Dale Webb	15-081	7/20/2015	А	TILING/PUMP

Dale Webb	15-082	7/16/2015	С	DITCHING
Lacey Ridge Farm Co./Brian Lacey	15-083	7/20/2015	А	TILING
Brent Davison/Progressive Farms	15-084	8/14/2015	А	TILING
Brent Davison/Progressive Farms	15-085	10/20/2015	W	TILING
Tim Backman	15-086	8/11/2015	А	TILING
Ryan & Tina Biss	15-087	8/11/2015	С	PUMP
Brent Jennen	15-088	8/14/2015	А	TILING
Allen Yaggie	15-089	8/14/2015	А	TILING
Brent Davison/Davison Inc.	15-090	8/11/2015	А	TILING
Jay Johnson	15-091	8/11/2015	С	TILING
Mitch Ronhovde	15-092	8/11/2015	С	TILING
Robert Ehlers	15-093	8/11/2015	А	TILING
Todd Ronhovde	15-094	8/27/2015	А	TILING
Brent Davison	15-095	8/14/2015	А	TILING
William Fuhrman	15-096	8/31/2015	С	TILING
Valley Ridge Ag Service/Steenbock &				
Lacey	15-097	8/31/2015	A	TILING
BNSF Railway Co.	15-098	9/17/2015	D	CROSSING/DAMS
BNSF Railway Co.	15-099	9/17/2015	D	CROSSING/DAMS
Mitch Ronhovde	15-100	8/31/2015	A	TILING
Anthony Hasbargen	15-101	9/14/2015	А	TILING
Anthony Hasbargen	15-102	9/14/2015	A	TILING
Larry Schneeberger	15-103	9/8/2015	А	TILING
Champion Ag Inc.	15-104	10/7/2015	A	TILING
Mark Severance	15-105	9/14/2015	С	CROSSING
Jeff & Dean Krump	15-106	9/14/2015	A	TILING
Jirak Bros Farming Partn.	15-107	9/14/2015	A	CROSSING
3 Miller Farms	15-108	9/15/2015	D	TILING
Dan Wiegman	15-109	9/14/2015	А	TILING
Dan Wiegman	15-110	9/15/2015	С	TILING
Gorton Township	15-111	9/14/2015	С	CROSSING
Elbow Lake Township/Jody Coleman	15-112	9/17/2015	A	CROSSING
Valley Ridge Ag Service/Steenbock	15-113	10/6/2015	А	CROSSING
Chase Meixel	15-114	11/9/2015	A	TILING
Boone Carlson	15-115	10/2/2015	А	TILING
Dan Oachs	15-116	10/2/2015	A	TILING
Kurt Skinnemoen	15-117	10/2/2015	С	TILING
Joe Kohout	15-118	11/23/2015	A	TILING
Bruce Yaggie	15-119	10/6/2015	С	TILING
Joan Koser	15-120	10/2/2015	A	WETLAND RESTORATION
Josh Deal	15-121	10/6/2015	А	TILING
Dean Kjesbo	15-122	10/12/2015	A	TILING
Ryan & Tina Biss	15-123	10/12/2015	А	TILING

Michael Flint	15-124	10/12/2015	С	TILING
Roger Nosbusch	15-125	10/22/2015	С	TILING
Riverview Dairy/Dollymount Twp.	15-126	10/22/2015	С	ROAD IMPROVEMENT
Brent Davison	15-127	10/22/2015	С	CROSSINGS/GATES
Traverse County Hwy Dept.	15-128	10/22/2015	С	CROSSING
3 Miller Farms	15-129	10/22/2015	С	TILING
Big Stone County Hwy Dept.	15-130	12/17/2015	С	CROSSINGS
Mark Severance	15-131	10/22/2015	С	CROSSING
Mary Ann Fridgen	15-132	1/0/1900	0	TILING/PUMP
Don Stueve	15-133	11/9/2015	А	TILING
Don Stueve	15-134	12/21/2015	А	TILING
Don Stueve	15-135	11/9/2015	А	TILING
Mike Marks	15-136	11/9/2015	А	TILING
Mike Marks	15-137	11/9/2015	А	TILING
Duane Rogahn	15-138	11/16/2015	А	CROSSING
Loren Pederson	15-139	11/23/2015	А	TILING
Nathan Burmeister	15-140	11/23/2015	А	TILING
John Berlinger	15-141	11/23/2015	А	TILING
Summer Inc.	15-142	12/8/2015	С	TILING
Grant County Hwy Dept.	15-143	12/1/2015	А	BRIDGE/CROSSING
John Berlinger	15-144	12/8/2015	С	TILING
Douglas Toussaint	15-145	12/8/2015	С	CROSSING
Arlyn Hensch	15-146	12/17/2015	W	DIKE
Tom Hofer/Big Stone Colony	15-147	12/21/2015	A	TILING
Vernon Koltes	15-148	1/13/2016	A	TILING
Lowell Ricks	15-149	3/30/2016	С	TILING/PUMP
Dean Frisch/Mary Ann Fridgen	15-150	1/15/2016	A	TILING

