

TWO RIVERS WATERSHED DISTRICT

IN ROSEAU, KITTSOON, & MARSHALL COUNTIES



2015 ANNUAL REPORT

**410 South 5th Street, Suite 112, Kittson County Courthouse,
Hallock, MN 56728
www.tworiverswd.com**

INTRODUCTION

The Board of Managers of the Two Rivers Watershed District would like to present this 2015 Annual Report. It contains information about the District's projects, programs, and initiatives through the year.

The Two Rivers Watershed District is a local unit of government and operates under Minnesota Statutes 103E – the drainage law – and 103D – the Watershed law. These statutes assign the duties of water management relative to lakes, rivers, streams, groundwater and other water related parameters. The District focuses on flood control, drainage, water quantity, and water quality.

The District, organized in 1957, was the second watershed district in the State of Minnesota to be established, and is governed by a 7 member Board of Managers, each of who are appointed by either the Roseau County or Kittson County Commissions to serve a 3 year term. The District employs 2 full time staff. The duties of the District are to carry out activities set forth in statute. To do this, the District manages over 92 miles of legal ditch systems, has constructed 3 impoundments which store over 9,000 acre feet of flood water, and has constructed 10 projects. The District is also involved with water quality studies, flow monitoring, and has adopted rules which require permits for certain water related activities.

High on the list of course is flood control, and the District is continuing to work on its latest project, the “Klondike Clean Water Retention Project #11”. This project will focus on flood control and providing an adequate drainage outlet for Lateral 1 of State Ditch #95. It will also provide a means to handle overflow flooding that comes from State Ditch 72 and the Roseau River. In addition, water quality benefits and natural resource enhancements will be accomplished. Plans are in the works which will give the project the ability to store approximately 37,000 acre feet of water.

For 2015 the District will continue with maintenance of existing projects and infrastructure, monitoring of stream flows and water quality, and planning for future projects. We strive to work with landowners to solve water related problems to ensure that drainage, flood control, and water quality concerns are addressed.

2015 LIST OF MANAGERS

Roger Anderson, **President**

1561 110th Street

Drayton, ND 58225

(218) 455-6269

Term Expires: October, 2015

Allen Brazier

20463 230th St

Greenbush, MN 56726

(218) 782-2456

Term Expires: October 2015

Jim Kukowski, **Vice President**

17485 County Road 6

Strathcona, MN 56759

(218) 781-2478

Term Expires: October, 2017

Daryl Klegstad

4151 210th St,

Halma, MN 56729

(218) 265-2073

Term Expires: October 2016

Darrel Johnson, **Treasurer**

2224 190th Ave

Hallock, MN 56728

(218) 843-2496

Term Expires: October, 2017

Paul Olsonawski

3762 285th Ave

Lancaster, MN 56735

(218) 762-1911

Term Expires: October 2016

Jon Vold, **Secretary**

2418 310th Street

Hallock, MN 56728

(218) 843-2556

Term Expires: October 2015



2015 Board of Managers

Paul Olsonawski, Darrel Johnson, Allen Brazier, Jim Kukowski, Roger Anderson, Jon Vold, Daryl Klegstad

Office Staff

Dan Money
District Administrator
daniel.money@mn.nacdnet.net

Matt Thompson
District Technician
matthew.thompson@mn.nacdnet.net

Office Information:

Two Rivers Watershed District
410 South 5th Street, Suite 112
Hallock, MN 56728

Location: Lower Level, Kittson County Courthouse
Office Hours: 8:00 am – 4:30 pm, M-F

Phone (218) 843-3333

World Wide Web: www.tworiverswd.com

Office Administration

OFFICE STAFF

The District employs 2 full time staff persons. Their titles and duties are listed below.

- *District Administrator:* The Administrator carries out all administrative and technical duties as determined by the Board of Managers. Specific duties include long range plans, coordinating meetings, financial management, coordinating projects, processing permit applications, handling requests from the public, water quality sampling, managing a geographic information system, data analysis, and performing investigations relating to District projects.
- *District Technician:* The District Technician is responsible for field work relative to District programs, ditches, projects, and inventories. This includes survey work, stream flow monitoring, culvert inventory, reporting, permit review, modeling, geographic information systems, data analysis, and all other technical duties.

CONSULTANTS

Engineering services for 2014 were performed on a project specific basis by Widseth, Smith, & Nolting – Crookston, MN, Houston Engineering – Fargo, ND, and HDR Engineering, - Thief River Falls, MN. Consulting engineers are used on an as needed basis at the discretion of the Board of Managers.

Legal services are provided by the law firm of Brink, Sobolik, Severson, Malm, & Albrecht, P.A. of Hallock.

Payroll services are provided by the accounting firm of Dahl, Hatton, Muir, & Reese, Ltd. of Hallock.

Auditing services are provided by the firm of Drees, Risky & Vallager, Ltd. of Crookston.

MEETINGS

The Board of Managers meets the first Wednesday of each month in the District office in Hallock, MN beginning at 8:00 a.m. Special meetings are held from time to time at the discretion of the Board. Advisory meetings are held at least once per year as required by law and otherwise as determined by the Board. All meetings are properly posted as required by law.

ADVISORY COMMITTEE

The District Technical and Citizen's Advisory Committees are made up of concerned citizens, appointed officials, and representatives of governmental agencies that in some way work with or affect the water resources of the District. These committees meet at least once per year to provide input and guidance to the Board of Managers regarding District programs and activities. The Advisory Committee members for the year 2015 are listed below.

Citizen's Advisory Committee

Name	Location	Representing		Name	Location	Representing
Keith Cummins	Karlstad	Rural		Luke Novacek	Greenbush	Rural
Sue Dufalt	Karlstad	City		Jim Pederson	Karlstad	Township
Don Craigmile	Hallock	Rural		Bob Boychuck	Hallock	Rural
Rick Sikorski	Lancaster	Rural		Vern Langaas	Karlstad	Rural
Mark Foldesi	Greenbush	Roseau Co		Leon Olson	Lancaster	Kittson County
Todd Truedson	Kennedy	City		Mike Docken	Hallock	City
Heather Peterson	Hallock	Rural/SWCD		Terry Osowski	Hallock	Rural
Harold Moose	Donaldson	Township		Brach Svoboda	Greenbush	Rural
Ed Walsh	Badger	Rural		John Gaukerud	Badger	Rural
Shayne Isane	Greenbush	Rural		Ron Jacobson	Greenbush	Rural
Mayor	Greenbush	City		Mayor	Badger	City

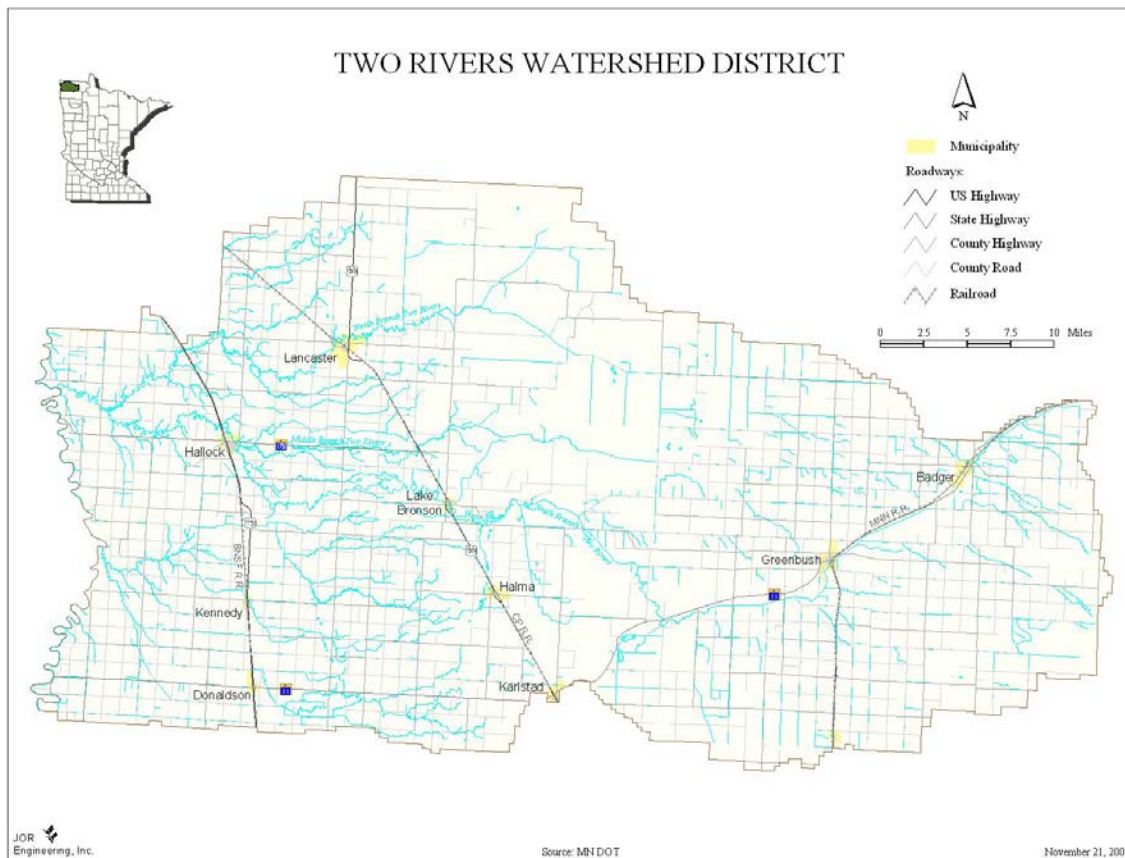
Technical Advisory Committee

Name	Location	Representing		Name	Location	Representing
Kelly Bengtson	Hallock	Kittson Hwy Dept		Brian Kettring	Roseau	Roseau Hwy Dept
Darren Carlson	Hallock	Kittson SWCD		Jonathon Eerkes	Karlstad	TNC
Laurie Fairchild	Middle River	US Fish & Wildlife Srv		Jim Schwab	Hallock	NRCS
Tara Mercil	Detroit Lakes	MN Pollution Control Agency		Matt Fischer	Bemidji	BWSR
Dennis Topp	Baudette	DNR Fisheries		Joel Huener	Middle River	DNR Wildlife
Stephanie Klamm	Thief River Falls	DNR Waters		Blake Carlson	Crookston	Widseth, Smith, & Nolting
Janine Lovold	Roseau	Roseau SWCD		Danni Halvorson	Viking	International Water Institute
Barb O'Hara	Hallock	Kittson DEM				

BACKGROUND INFORMATION

The Two River Watershed District was established by order of the Minnesota Water Resources Board on October 30, 1957. It was the second watershed district to be organized within the State of Minnesota, and the first to write and approve an overall plan. The District is located in much of Kittson County, the western 1/3 of Roseau County, and extreme northwestern Marshall County, all in northwest Minnesota. The District operates under Minnesota Statutes 103D (the Watershed Law) and 103E (the Drainage Code).

The land area of the District encompasses 1,454 square miles. The District stretches 65 miles from the Red River on the western boundary to the eastern boundary located between the cities of Badger & Roseau. At its widest north-south point, the District stretches 33 miles. It is bordered to the north-west by the Joe River Watershed District; the north by the Province of Manitoba, Canada; the east by the Roseau River Watershed District; the south by the Middle-Snake-Tamarac Rivers Watershed District; and to the west by the Red River of the North, which is also the boundary with North Dakota.



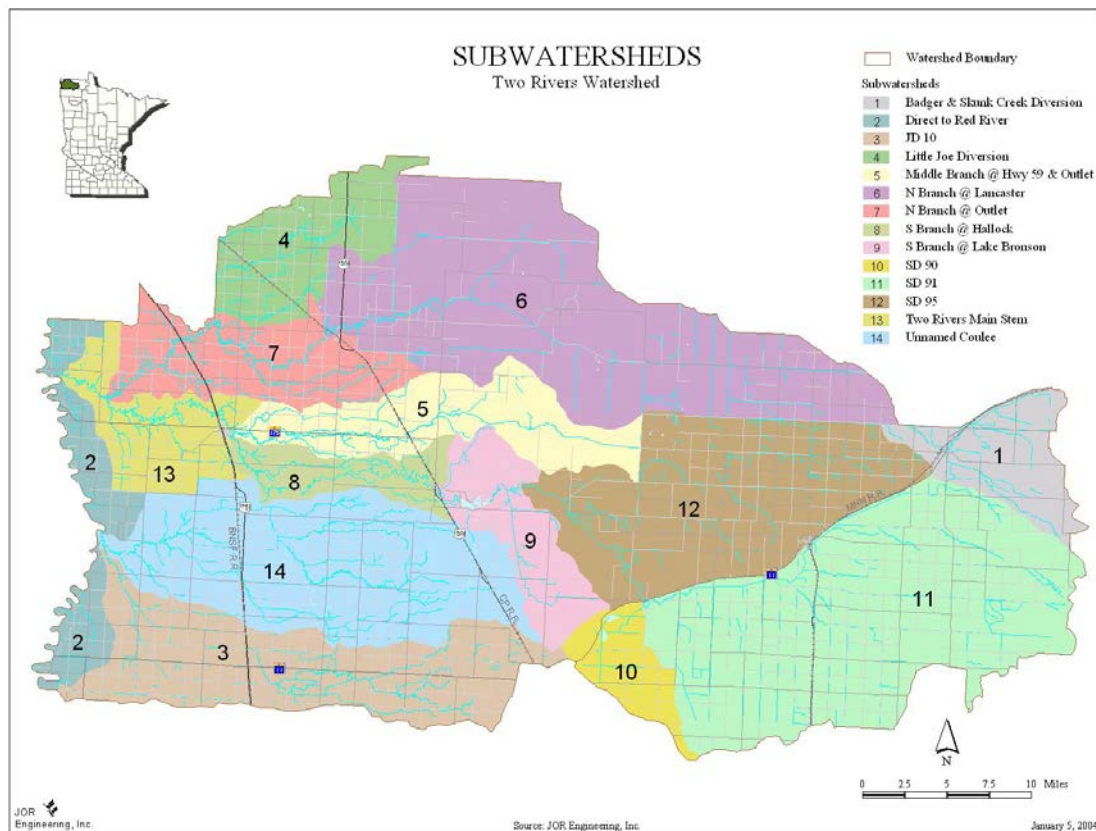
The Two Rivers actually consists of three branches – the North, Middle and South Branch. The South Branch arises southeast of Badger, Minnesota and flows in a westerly direction along the south side of Badger and through the cities of Greenbush, Lake Bronson, and Hallock. The Middle Branch drainage area begins east of the Kittson & Roseau County line and travels through the central portion of Kittson County, outletting into the South Branch just east of the city of Hallock. The North Branch drainage area

begins in northwestern Roseau County, travels through Lancaster and Northcote, and joins the South Branch to form the main stem three miles east of where it outlets into the Red River.

The southwest portion of the District is a 360 square mile stand alone drainage system that was added to the District in the mid 1980's. This drainage system is comprised of a series of coulees which outlet into legal drainage systems. These legal drainage systems in turn outlet into a series of coulee systems, and in turn they outlet into the Red River. This drainage system flows into the Red River at a point 10 miles south of the outlet of the Two Rivers.

The economy of the District is largely driven by agriculture. Of the approximately 931,150 acres of land in the District, 67% is pasture and crop land, 14% forested, 13% grassland, 5% wetland, and 1% roads, ditches, and urban. The primary crops grown are small grains, soy beans, sugar beets, and other crops such as seed potatoes, corn, canola and sunflowers.

Cities within the District include Badger, Greenbush, Strathcona, Karlstad, Halma, Lake Bronson, Lancaster, Donaldson, Kennedy, and Hallock. In addition, the unincorporated villages of Fox, Haug, Leo, Orleans, Pelan, Northcote, and Robbin are within the area of the District. Industry in the area is limited. The mining of gravel is prevalent in the beach ridge areas of glacial Lake Agassiz. A few manufacturing and assembly companies exist in the area, including a wood stove company, metal works, canola processing plant, and a vehicle track company. Also, a bus assembly plant is located in Pembina, North Dakota, just across the Red River. Area population trends show a steady decline.



PROJECT STATUS

EXISTING AND COMPLETED PROJECTS

The following are established and proposed projects of the Two Rivers Watershed District. They were built under Minnesota Statute 103D for various purposes including flood control, erosion control, water quality benefits, wildlife enhancement, and drainage for cropland. Each is inspected annually and operated and maintained by the District.

Detailed information regarding each project is on file at the TRWD office. Interested individuals can obtain copies of all project information upon request.

<i>Project Name</i>	<i>Description</i>	<i>Location</i>	<i>Established</i>	<i>Status</i>
Middle Branch Project #1	9.62 mile channel improvement	Thompson & Hazelton Townships, Kittson Co	1968; PL 566	Yearly Inspection & Maintenance
North Branch Project #2	11.13 mile channel improvement	Richardville, St. Joseph, Granville, & Poppleton Townships, Kittson Co.	1969; PL 566	Yearly Inspection & Maintenance
Soler Project #4	5 mile extension of State Ditch #72	Soler & Moose Townships, Roseau Co.	1979; Petition Project	Yearly Inspection & Maintenance
Dewey Project #5	1.8 mile lateral to State Ditch #91	Sections 26 & 35 Dewey Township, Roseau Co.	1980; Petition Project	Yearly Inspection & Maintenance
Nereson Impound Project	Flood Control Impoundment	Sections 27-28 Nereson Township, Roseau Co	1981; Board Initiated	Yearly Inspection & Maintenance
Nereson Modification Project	Flood Control Impoundment	Sections 33-34 Nereson Township, Roseau Co	2005; Board Initiated	Yearly Inspection & Maintenance
Dewey 5 Improvement Project	Improvement of Dewey #5 Ditch System	Sections 26 & 35 Dewey Township, Roseau Co	2002; Petition Project	Yearly Inspection & Maintenance
Horseshoe Lake Project	Drawdown Structure	Section 14, St. Joseph Township, Kittson Co	2006; Jointly by Kittson Co – DNR- TRWD	Yearly Inspection & Maintenance; Gate Operation
Kennedy Project #6	1.5 mile ditch to connect Kittson CD4 & CD27	City of Kennedy, MN	November 2009; Petition Project	Yearly Inspection & Maintenance
Ross Project #7	Flood Control Impoundment	Sections 26, 27, 28, 32, 33,34, Ross Township, Roseau Co	November 2007; Board Initiated	Yearly Inspection & Maintenance; Gate Operation
Springbrook PL566 Project #10	Set back dikes and Side water inlets along existing waterway	Springbrook Township sections 22,23,28,29,30; Davis Township sections 25,36	December 2013; Petition Project	Yearly Inspection & Maintenance

OTHER PROJECTS

The project listed below was a project that utilized federal, state, and local funding. It was coordinated by the District, but is not an official project of the District and therefore future maintenance is the responsibility of the landowners along its course.

Springbrook / CR 61	3.75 mile meandering channel & set back dikes – flood control	Sections 3,5,6 Springbrook & Sect. 1 Davis Twp, Kittson Co	August, 2008	Maintenance responsibility of landowners
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PROJECTS NOT CONSTRUCTED

Stokes #3	Offtake drainage ditch	Stokes Twp – 4 miles long	Dropped 1970's	Local opposition
Karlstad Project	Impoundment	Deerwood Twp sect. 8,9,16,17	Dropped 1988	Local opposition
Nereson #8	Impoundment	Nereson Twp, sect.2,3,11	Dropped 2007	Local opposition
Svea #9	Drainage Ditch	Svea Twp, sect. 1 - 12	Dropped 2006	High cost, inadequate outlet
Polonia – Barto	Drainage Ditch	12 miles sections 1-12 in 2 townships	Dropped in favor of Ross Impoundment	Inadequate outlet

POTENTIAL PROJECTS / PROJECTS UNDER INVESTIGATION

Klondike Clean Water Retention Project #11:

A “Project Work Team” was assembled in 2008 to discuss potential flood control projects and activities in the vicinity of Juneberry, Polonia & Barto Townships in Roseau County and Peatland and Klondike Townships in Kittson County. The State Ditch 72 and State Ditch 95 systems have become overburdened with high and excessive water flows from upstream areas, and do not seem to have adequate capacity. In addition, the outlet for this water is limited. The PWT was appointed by the Board of Managers to look into the problems and identify a range of alternatives that could be implemented to help alleviate the flooding conditions.

The recommendation of this project team was that impoundments should be investigated in the upstream areas of Badger Creek. A secondary recommendation was that if a satisfactory upstream impoundment could not be located, then a location at a downstream area should be investigated. It was noted that around 6,000 to 8,000 acre feet should be the target for storing water for the Badger Creek area. The Board of Managers is currently looking for a suitable site for this project.

In 2012 it became apparent that a feasible upstream impoundment site may not be found, and the Board of Managers began to look at 3 sites in the downstream area that the land is currently owned by the District. These areas are listed below, and studies were undertaken for project design at each site.

Klondike 1	Impoundment	Klondike Twp sect 27	Tabled 1991	
Klondike 2	Impoundment	Klondike Twp sect 1-2-11-12	Tabled 1991	
Quick	Impoundment	Polonia Twp sect 30	Tabled 1991	Activated under WRP 2012

The Quick site has been enrolled in the federal Wetland Reserve Program for a 30 year easement, and the Natural Resources Conservation Service is currently working with the TRWD to plan and implement a wetland restoration project which could attain 1,100 acre feet of flood storage.

The TRWD performed engineering, research and analysis regarding the Klondike 1 and 2 sites. It became known that adjacent lands were available, and the potential project footprint was broadened. It was soon apparent that a large scale project could be built within an area 12 to 14 square miles. The District proceeded with an impoundment project under MN Statute 103D, and the new project was named “Klondike Clean Water Retention Project #11”. It is planned to store up to 37,000 acre feet of water from an upstream drainage area of 143 square miles, and will achieve flood damage reduction goals, water quality improvements, habitat improvements, and numerous natural resources enhancements.

A preliminary hearing was held according to statute and the project was established by the Board of Managers. The following fact sheet shows the project details.

Klondike Clean Water Retention Project #11

Project Proposer: Two Rivers Watershed District

Description/Location: The 7,700 acre project is located in NW Minnesota, 10 miles east of the City of Lake Bronson, and 4 miles north, covering over 12 square miles on the Kittson and Roseau County line. It will control water coming from a 143 square mile upstream contributing drainage area storing 37,000 acre feet of water. Project components include a 6 mile diked inlet channel, 7 miles of diversion channels, and 17 mile long perimeter dike having an average dike height of 7 feet. There are 3 planned outlet structures, one each to the North Branch, Middle Branch, and South Branch Two Rivers.

Project Benefits:

- **Flood Damage Reduction (Primary Objective):** Store 37,000 acre feet of floodwater and reduce downstream duration of flooding and peak flows; Provide an adequate outlet for Lateral 1 of State Ditch #95; Provide for conveyance of and outlet for overflows that come from the Roseau River and impact SD 72; Reduce Two Rivers contribution to the Red River flood by 20%. Improve drainage for farmland along the SD 95 system.
- **Water Quality:** Large algal blooms currently occur on downstream Lake Bronson. This project will be designed to reduce phosphorous and nitrogen loading to the South Branch Two Rivers, thereby reducing the occurrence of algal blooms in the lake. In addition sediment loading to the lake will also be reduced. Water quality impairments on the Two Rivers will also be addressed.
- **Stream Flow Augmentation:** The South, Middle, and North Branches of the Two Rivers typically experience late summer and fall extreme low flows, and sometimes they even go dry. This has a detrimental stressor effect on the fish and other organisms. This project could be implemented to provide a source of stream flow during the times of low flow.
- **Habitat & Ag Enhancement:** The project area encompasses over 7,700 acres, most of which used to be farmland. Normal operation of the impoundment will be to flood the area during spring snowmelt and summer rains and slowly drain it down over a 3-4 week period after the flood peaks have passed. Some areas within the impoundment will be used for agriculture, and some will be used for habitat restoration and enhancement. The site is adjacent to a 'rich fen', and therefore cessation of farming practices will help to protect the integrity of the nearby fen. A 'moist soils management' unit is being designed in cooperation with MN DNR as an additional natural resource enhancement. Cropland areas are being rented out to interested individuals for hay, pasture, or possibly cash crops.

Problem Description:

- **Flooding:** Local – 1) Flood flows originating in the Roseau River cross over into the Two Rivers Watershed, causing severe flooding. 2) Lat 1SD95 has limited channel capacity and experiences break out flows that leave the ditch and flood overland, causing road and infrastructure damage, erosion and sedimentation, and extended duration of overland flooding. 3) Downstream flood flows have threatened the dam and campgrounds at Lake Bronson State Park, and flood damages occur further downstream near the City of Hallock.



Regional – Red River of the North flooding is a known problem, and this project will help to accomplish the regional goal of reducing flood flows by 20%.

- **Other:** Nutrient loads cause algal blooms at Lake Bronson reducing water quality; The Two Rivers is listed for several water quality impairments; Regional habitat losses impact wildlife, native prairie and wetlands.

Estimated Cost: \$35 million

Potential Funding Sources

Federal – committed \$500,000 State: 75% (\$26,250,000) RRWMB – committed \$5 million TRWD – up to \$3.25 million

DITCH SYSTEMS

In addition to the above projects, the District operates and maintains several legal ditch systems (See map & table below), which have either been turned over by the County Boards of the County in which each ditch is located or they have been petitioned to the Watershed District by landowners under Minnesota Statute 103E.

The table below lists both the ditch systems and the drainage projects that the District administers.

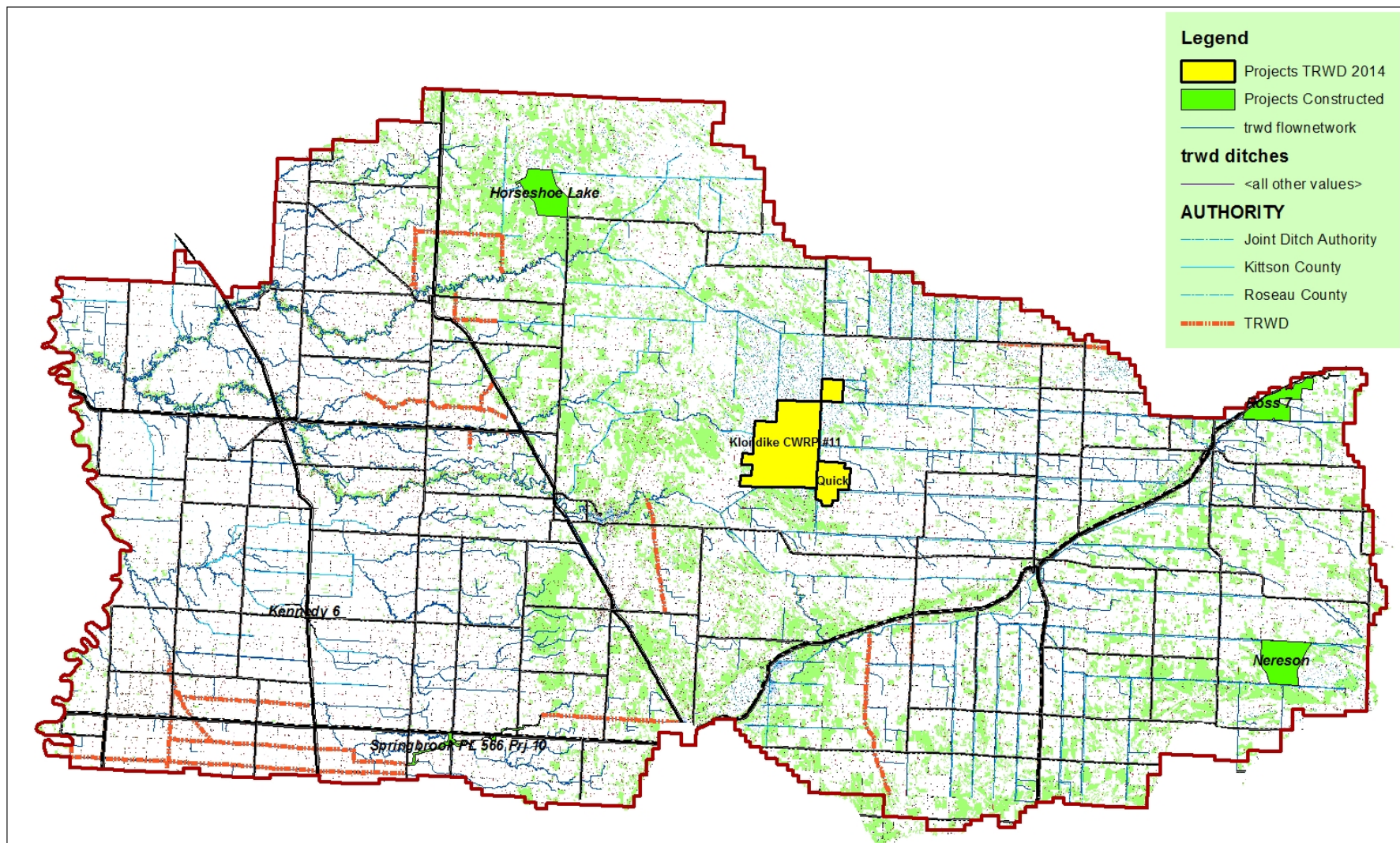
Ditches Statute 103E	Length (Miles)	Township(s); County	Fund Balance 12-31-14	2016 Levy
State Ditch #49	5.25	Norway; Kittson Co	\$ (1,265)	\$ 10,000
State Ditch #85 Improvement	0.75	Poppleton; Kittson Co	\$ 11,905	\$ 6,000
Judicial Ditch #3	5.5	Teien; Kittson Co	\$ 9,096	\$ 11,000
Judicial Ditch #10	31	Davis, Svea, Teien, Kittson Co	\$ (53,774)	\$ 42,000
Kittson CD #7	6.5	Svea; Kittson Co	\$ 501	\$ 15,000
Kittson CD #10	7.0	Deerwood; Kittson Co	\$ 14,884	\$ 5,000
Roseau CD #4	7.5	Lind, Dewey; Roseau Co	\$(32,961)	\$ 15,000
Projects Statute 103D				
Middle Branch 1	9.6	Hazelton, Thompson; Kittson Co.	\$ 20,565	\$ 10,000

North Branch 2	11.1	Granville, Hampden; Kittson Co.	\$ 21,044	\$ 7,500
Soler 4	5.0	Soler; Roseau Co	\$ 20,088	\$ 0
Dewey 5	1.8	Dewey; Roseau Co	\$ (14,303)	\$ 10,000
Kennedy 6	1.5	Tegner, Skane; Kittson Co.	\$ (95,097)	drainage lien
Ross 7	impoundment	Ross; Roseau Co	\$ 21,428	N/A
Springbrook 10 / PL566	9.0	Springbrook & Davis Townships, Kittson Co	\$ (226,336)	Drainage lien + \$10,000

These systems are inspected annually and maintenance activities are undertaken if deemed necessary. These activities range from beaver dam removal and beaver trapping to spraying of cattail and other nuisance vegetation to removal of silt and sediment to repair of sloughed side slopes or eroded culverts. Detailed maintenance reports are kept and filed each year in the ditch file.

The District as the ditch authority for these ditches is also responsible for maintaining a ditch fund to pay for maintenance expenses. Each year the District assesses the needs of each ditch and a tax is levied against the “benefited area” of each ditch, if necessary and if the funding is needed. Each year the District certifies this levy to the County Auditor of the County where the ditch is located.

A map showing the locations of each ditch system and each project of the Two Rivers Watershed District is shown on the following page.



Two Rivers Watershed District
Projects & Ditches

0 2.25 4.5 9
Miles



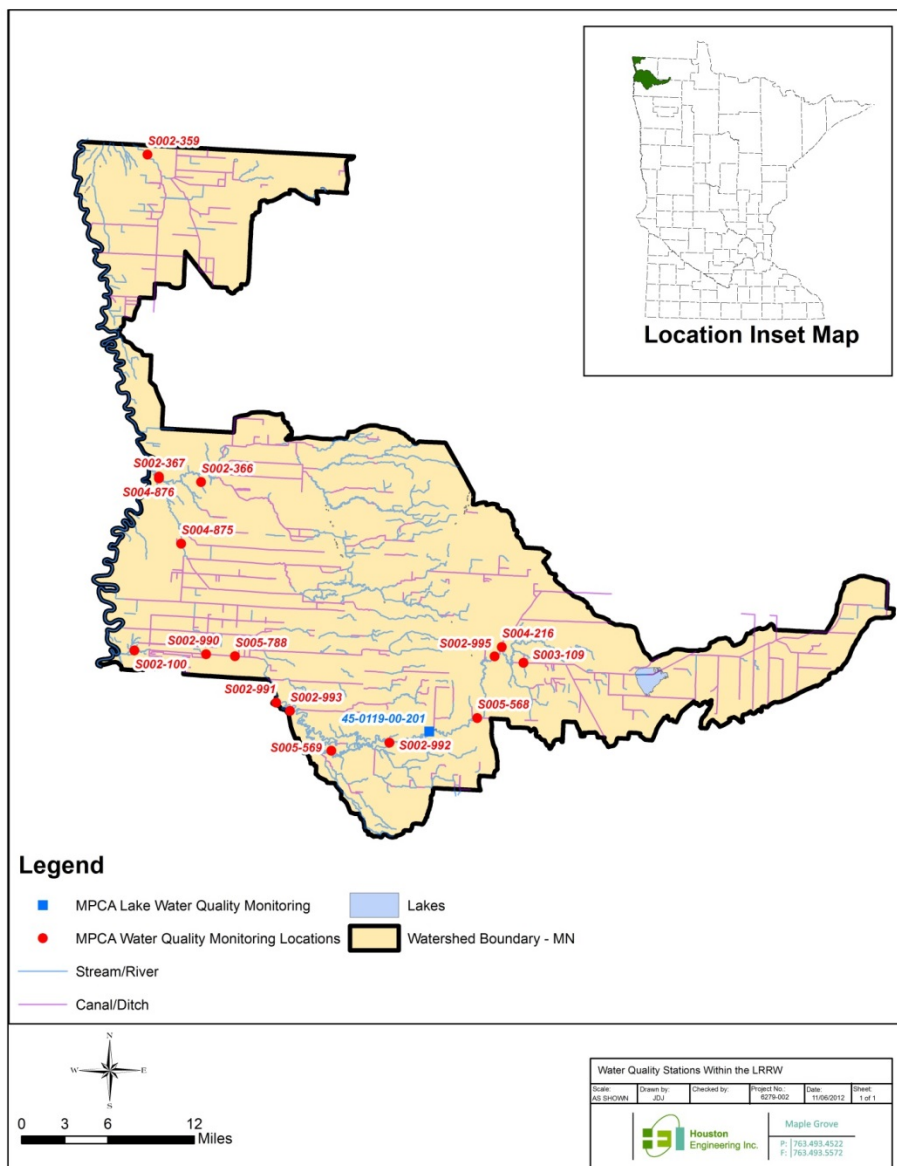
PROGRAM STATUS

WATER QUALITY – “WRAPS”

Lower Red River WRAP

The District partnered with the Joe River Watershed District, the Middle Snake Tamarac Watershed District, and the MN Pollution Control Agency to undertake the “Lower Red River Watershed Restoration and Protection Project”. This encompasses all of the Joe River, the Tamarac River watershed, and an unnamed coulee within the Two Rivers Watershed District (see map below).

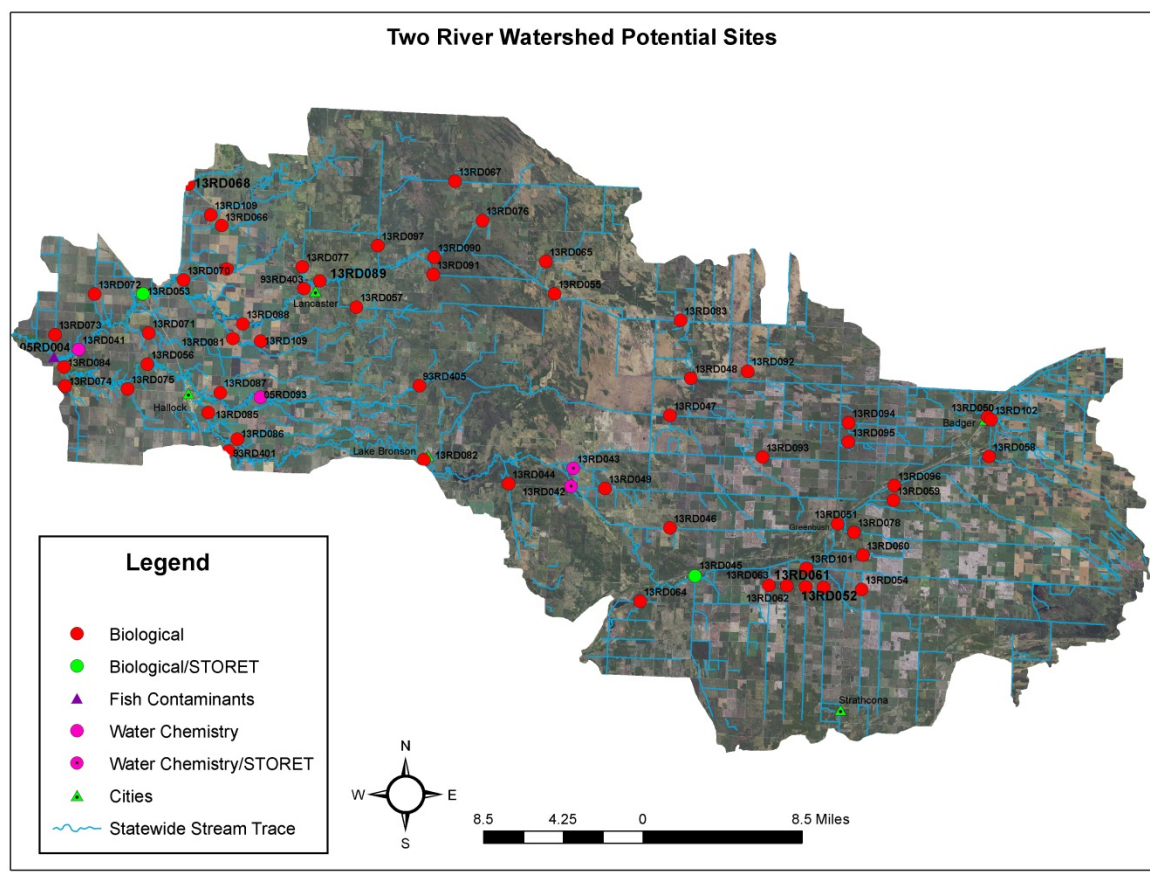
Together the 3 watershed districts received 100% grant funding from the MN Pollution Control Agency. The project is aimed first at researching all of the water quality data available for a given watercourse, then if necessary additional water quality and stream flow data is collected to produce a ‘conditions report’ to get a full picture of the quality of the resource. The data is then analyzed to determine if any portions of the sub-watershed are impaired or polluted in any way. Then, if there are impairments, the project will do further investigation and research to determine the source of impairment and how best to address the problems, if possible. The process will take up to four years to complete.



The WRAP will enter its fifth year in 2016. Several reports have been completed and are in draft form, including a conditions report, a stressor ID report, a watershed restoration and protection strategy, and a total maximum daily load report. A technical advisory committee will meet to review and comment on the various reports, and the entire process is expected to be completed by the end of 2016.

Two Rivers WRAP

This WRAP was in its third year in 2015, and as such intensive monitoring is taking place for everything from water chemistry to fish assessments to macro invertebrates. A conditions report was prepared, and a stressor ID report is being completed. Future work for 2016 will be complete the WRAPS report and the TMDL report. Once the reports are ready, a technical advisory committee can meet to review and comment. The WRAPS process is expected to be completed by the end of 2017.



Grants

Buffer Strips (Lake Bronson Upstream) – The TRWD is working with the Kittson Soil & Water Conservation District to address water quality concerns on Lake Bronson.

The lake is subject to sediment and nutrient loading from a large upstream drainage area. Several legal drainage ditches are tributary to the lake, some are buffered and some are not. The SWCD received a grant from the BWSR to identify and buffer drainage ditches upstream of Lake Bronson to help reduce the sediment load. The TRWD is contributing \$20,000 in funding to the grant.

PERMITS

The Rules of the Two Rivers Watershed District were enacted in 1981, and under these Rules, a permit from the District is required for the following activities:

- Any sanitary sewer system which discharges to surface water, storm sewer, or other major utility project which affects surface water within the district.
- Any street, road, or highway construction project which by means of its construction has any effect on the quality or quantity of water runoff.
- Any construction or alteration of any drain tile or drainage ditch that drains an area in excess of 20 acres.
- Any works which include draining, filling, excavating, or dredging of any type 3, 4, 5, or 8 wetland as defined by the U.S. Fish & Wildlife Service Circular 39.
- Any construction or alteration of any bridge, dike, culvert, or drain across any drainageway, lake, wetland, or other water body.
- Any artificial or mechanical transfer of water from a water source including but not limited to gravel pits, ponds, rivers, wetlands, and other reservoirs consistent with the general purposes of the District.
- Any artificial drainageway cut across a subwatershed to thereby deliver water into another subwatershed.
- Any drainage of water by any artificial means into any legal drainage system from any land not assessed to that drainage system.
- Construction, alteration, or removal of any dike or reservoir.

Sixty two permit applications were processed during 2015.

2015 DISTRICT ACTIVITIES

BOARD MEETINGS

Eleven regular monthly board meetings were held during the course of 2015, each on the first Wednesday of each month, except for October. The Annual Meeting was held on January 7, 2014. Three special meetings and one budget hearing of the Board were held during the year.

NON-DISTRICT MEETINGS

The District Managers and District staff attended several non-District meetings during the course of 2015 that were related to information and ongoing education. Twelve meetings of the Red River Watershed Management Board were attended regularly, various committees of the RRWMB, the Minnesota Association of Watershed District's Annual Meeting, NRCS – MN State Technical Committee meetings, and other meetings as needed.

TRAINING

Managers and staff attended, as necessary, various training sessions and meetings that were pertinent to the operation of the District.

ADMINISTRATIVE ACTIONS

The District employed a full time District Administrator and a full time Technician during 2015.

Excerpts From 2015 District Newsletter

February 2015 - Newsletter

TRWD Gearing Up For 2015 Programs and Projects

The Two Rivers Watershed District will be working on several flood control, drainage, water quality, and other water management initiatives this coming year. Some of these programs and projects are listed below.

Klondike Clean Water Retention Project #11:

This project was initiated in the fall of 2014, and is in the planning and development stage. The project will potentially store 30,500 acre feet of water (1 acre foot = 325,829 gallons) and control the runoff from 143 square miles including Badger Creek and Lateral 1 of State Ditch #95. It will be located on the Kittson and Roseau County line on a 12 square mile area. The project will have major flood control benefits, and will also provide water quality benefits for Lake Bronson, protect rare plant communities, provide waterfowl habitat, and provide recreational opportunities.

Watershed Restoration And Protection Strategies:

The District is working with the MN Pollution Control Agency and other partners to collect water quality data, analyze the rivers, streams, and ditches to determine if they meet water quality standards, and identify sources of pollution. These "WRAPS" are required by the Federal Clean Water Act for every water body in the U.S. This is a 4 year process, and will provide several products that should be useful for Soil & Water Conservation Districts,

Watershed Districts, Counties, and others to use to help protect and improve our water natural resources.

Drainage Ditch Maintenance:

There are over 90 miles of legal ditches under the authority of the District. An inspection and maintenance plan has been put together for all of them. Under this plan every mile of ditch is visually inspected each year, and a detailed gps survey is done once every 5 years. If there is debris, beaver activity, or dense vegetation present measures are taken to remove blockages. The survey's are done to determine if there is excessive sediment deposition or erosion problems. Culverts and bridges are also inspected. Once the data is collected maintenance activities are conducted when necessary.

Permits:

The Rules of the Two Rivers Watershed District require that prior to doing certain activities, a permit must be approved. These activities in general include installation of culverts and bridges, field crossings, dike construction, diversions, new ditching or alterations of existing ditches, road building, utilities, and certain works in wetlands. A permit application can be obtained at the District office. Anyone contemplating these or other activities that affect the flow of water should consult with the District before undertaking the activity. Most permit applications can be acted within 1 to 2 months, and in many cases 2 to 3 weeks.

Monitoring Activities:

Beginning in March, the District will begin monitoring. The District monitors snow depths and water content in order to help predict spring snowmelt runoff and flooding. Once the snow melts the District monitors stream flows in order to determine how much water is moving through the various systems, which in turn helps agencies like the National Weather Service provide warnings and watches relative to flooding. The District also does a fair amount of water quality monitoring, rainfall monitoring, and other data collection relative to the water cycle. All of the data collected is available to the public.

Many other miscellaneous activities are done on a yearly basis within the District. If you are interested in any of these or would like further information, please contact the District at 218-843-3333. Have a great spring and summer season!

September 11, 2015 Newsletter

TRWD RAISES BEAVER BOUNTY

In response to rising costs of transportation, trapping costs, and other factors, the Two Rivers Watershed District Board of Managers recently raised its beaver bounty from \$40 per beaver to \$75 per beaver. The old rate had not been adjusted since 2001.

The TRWD has had a long standing policy regarding problem beaver removal on legal ditch systems and water control projects that are under the District's jurisdiction, dating back to 1994. This policy states that the District will remove any beaver dams from Watershed District ditches and any other dams will be evaluated on a dam by dam basis with the approval of the District. The

District Administrator shall make decisions on beaver dam removal pertaining to the District's beaver dam policy. Beaver bounty for any beavers harvested on District ditches will be paid with prior approval from the District Administrator and/or at least one District Manager.

The beaver bounty has historically been a good management tool when it comes to maintaining a functioning ditch system. Obstructions in a ditch tend to slow water down and reduce the capacity of the ditch to move water. For agricultural fields that depend on these ditches for drainage, an obstruction can result in flooding and loss of cropped acres, which will hurt a farm operator's bottom line. Therefore it is essential that beaver dams, trees, sediment, cattails, and other obstructions be removed periodically. It is the duty of the Two Rivers Watershed District, as the drainage authority for certain ditch systems, to be vigilant in maintaining these systems in following Minnesota Statute 103E.

Persons interested in trapping and removing beavers from ditch systems must be registered with the District, and must show proof that they have obtained a permit from the MN Department of Natural Resources. The TRWD must give prior authorization before a trapper can turn in bills for removing problem beavers.

Construction on "Springbrook #10 – PL566" Phase 2 Commences

Construction of Phase 2 of the Springbrook #10 – PL566 project is underway. This project is a flood control and drainage project located in Springbrook and Davis Townships of Kittson County. Phase 1 of the project was completed in 2013. The main project consisted of constructing levees parallel to an existing coulee, designed to prevent water from breaking out of the channel and flooding farmland. In addition the project provides protection of public infrastructure (roads, culverts) and provides an adequate outlet for upstream systems. The project was funded largely by the Natural Resources Conservation Service and local funds.

Phase 2 of the project was delayed due to wetland permit concerns, but has now been cleared for construction. The current construction activity consists of excavating 6,200 cubic yards of earth from an area of 2.5 acres in size. This work is located alongside the watercourse in an area known for flooding and overtopping a township road. The removal of the material located in the floodplain will allow water to better flow through this area which will reduce the threat of backing up water in upstream areas and of flooding a township road.

Kraulik Excavating has been hired to do the work, it is scheduled to be completed by October 31, 2015. Once the excavation is completed, the area will be seeded and mulched. The project also consists of erosion control measures during construction, specifically the installation of 1,200 feet of silt fence to control sediment.

TRWD Receives Grant to Study the Klondike Clean Water Retention Project

The Two Rivers Watershed District has received grant funding from the Natural Resources Conservation Service in the amount of \$500,000. The grant is a Federal 70% to local 30% cost share and will be matched from local funding in the amount of \$214,286. The funding will be used to do planning, preliminary engineering, permitting, economic review, and to prepare an Environmental Assessment for the District's proposed "Klondike Clean Water Retention Project". This will specifically include an alternatives analysis, cost – benefit analysis, review of permits needed, analysis of environmental effects and consequences, and identification of a preferred alternative.

The purpose of the KCWRP is to prevent flooding, provide an adequate outlet for various laterals of State Ditch 95, provide an outlet for water that overflows from State Ditch 72 and from the Roseau River, and provide water quality and environmental benefits. This will reduce flooding on lateral 1 of State Ditch 95, reduce flooding on Red River, and reduce flooding on the North Branch, Middle Branch, and South Branches of the Two Rivers. Environmental benefits will be to protect and enhance a naturally occurring rich fen, provide feeding and resting areas for migratory waterfowl, reduce nutrient loading to Lake Bronson and downstream areas, and reduce sediment entering Lake Bronson.

The project will consist of impounding floodwater within a 12 square mile area. This will be accomplished by constructing a perimeter dike, inlet ditches and diversions, three gated outlet structures, an emergency spillway, and various other associated structures. The project will be located in Klondike Township in Kittson County and Polonia and Juneberry Townships in Roseau County. It is projected to store up to 37,000 acre feet of water and will cost approximately \$35 million to build. The Two Rivers Watershed District has acquired most of the land within the footprint of the project, and will be working on the rest of the needed right of way. Project design is being done by HDR Engineering.

This funding will go a long way in doing the preliminary work that is needed to be able to make educated decisions in order to proceed with a project that will address the flooding that comes from a 143 square mile upstream drainage area. The project will solve flooding and drainage problems that have persisted in that area since the mid 1940's. By completing this study, the TRWD will have collected the engineering, environmental, cultural, and economic information that is necessary to begin acquiring permits and designing the various project features. The planning phase should hopefully be completed within the next 2-3 years and after that project design will be finalized. Public information and participation will be solicited at various times during the project design in the form of news releases, newsletters, public meetings, and citizen advisory committee meetings.

2015 Water Year Summary

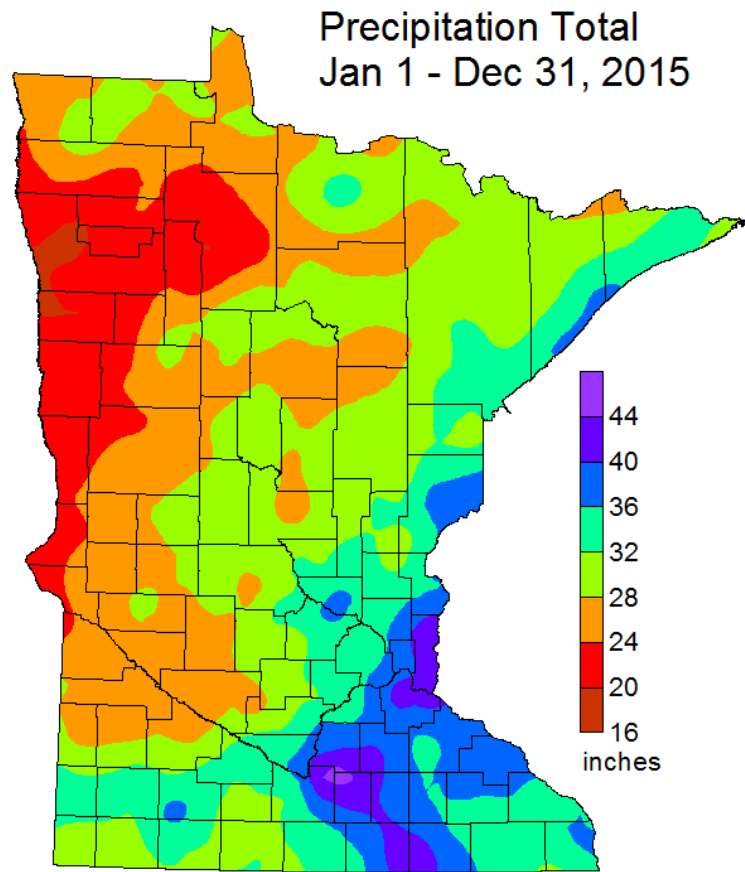
2015 PRECIPITATION

The year was characterized as having above average moisture. Yearly average precipitation was 4-8 inches above normal. The following maps, tables, and associated graphics show the snow conditions, snow water equivalents, selected rainfall amounts, and departures from normal conditions.

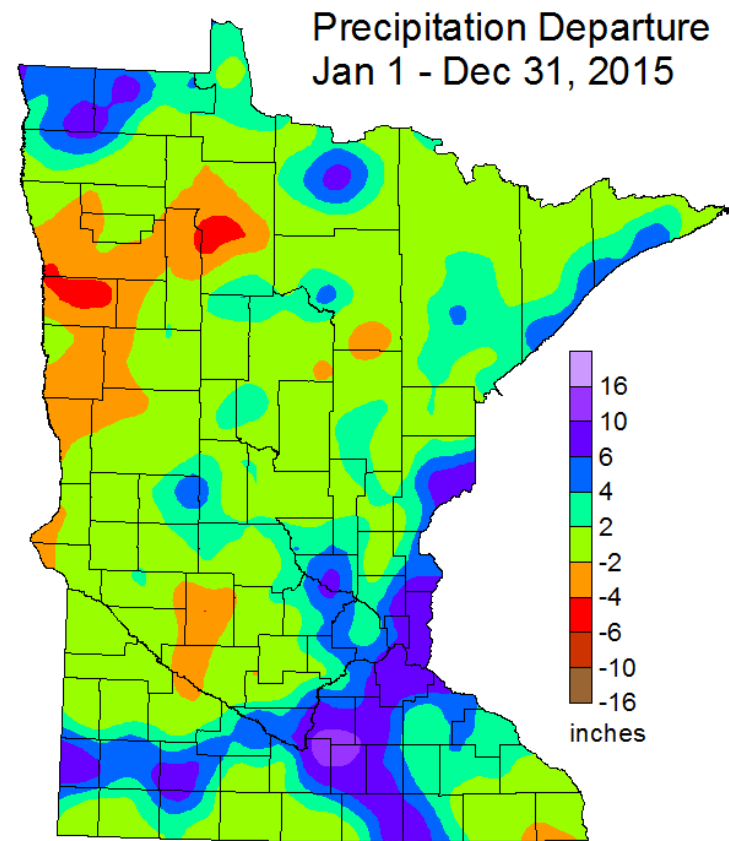
Kittson County Rainfall 2015

Township & Section	January	February	March	April	May	June	July	August	September	October	November	December	Total
Davis 3-				0.73	5.70	2.93	3.88	6.88					
Spring Brook 25					5.88	3.41	5.92	4.63					
Norway 21-				1.0	5.24	2.58	6.45	3.88					
Teien 12 -				0.66	5.09	2.22	5.08	3.07					
Teien 28 -				0.64	4.53	2.79	5.21	2.13					
Jupiter 18					4.77								
Skane 5 - M				0.80	5.12	2.31	4.19	2.66					
Svea 23-				0.89	5.17	3.13	6.16	4.62					
Percy 14 -					4.68	2.74	4.91	5.62					
Thompson 12				0.78	3.99	3.26	4.85	4.08					
Hallock 13 -	.71	.29	.52	0.70	4.66	3.16	3.38	2.56	3.44	0.82	1.80	0.74	
N Red River 9 -				0.92	5.20	3.80	3.46	2.25					
Caribou 30-				0.53	4.28	3.72	5.48	4.70					
Granville 13 -				0.88	3.59	3.71	5.41	4.67					
Hampden 13 -				1.37	3.62	2.93	4.31	3.02					
Hill 5 -				1.13	5.28	4.18	3.51	2.28					
St. Joseph 4 -.				0.57	3.24	3.61	5.63	5.05					
Richardville 10 -				1.00	3.51	3.59	6.65	3.51					
St. Vincent 24 -													
St Vincent 2 -				0.80	4.65	4.09	4.4	2.86					
Avg Rainfall Monitors	0.84 4.64 3.37 5.03 3.80												

Source – Kittson Soil & Water Conservation District



DNR State Climatology Office, March 3, 2016



DNR State Climatology Office - March 23, 2016

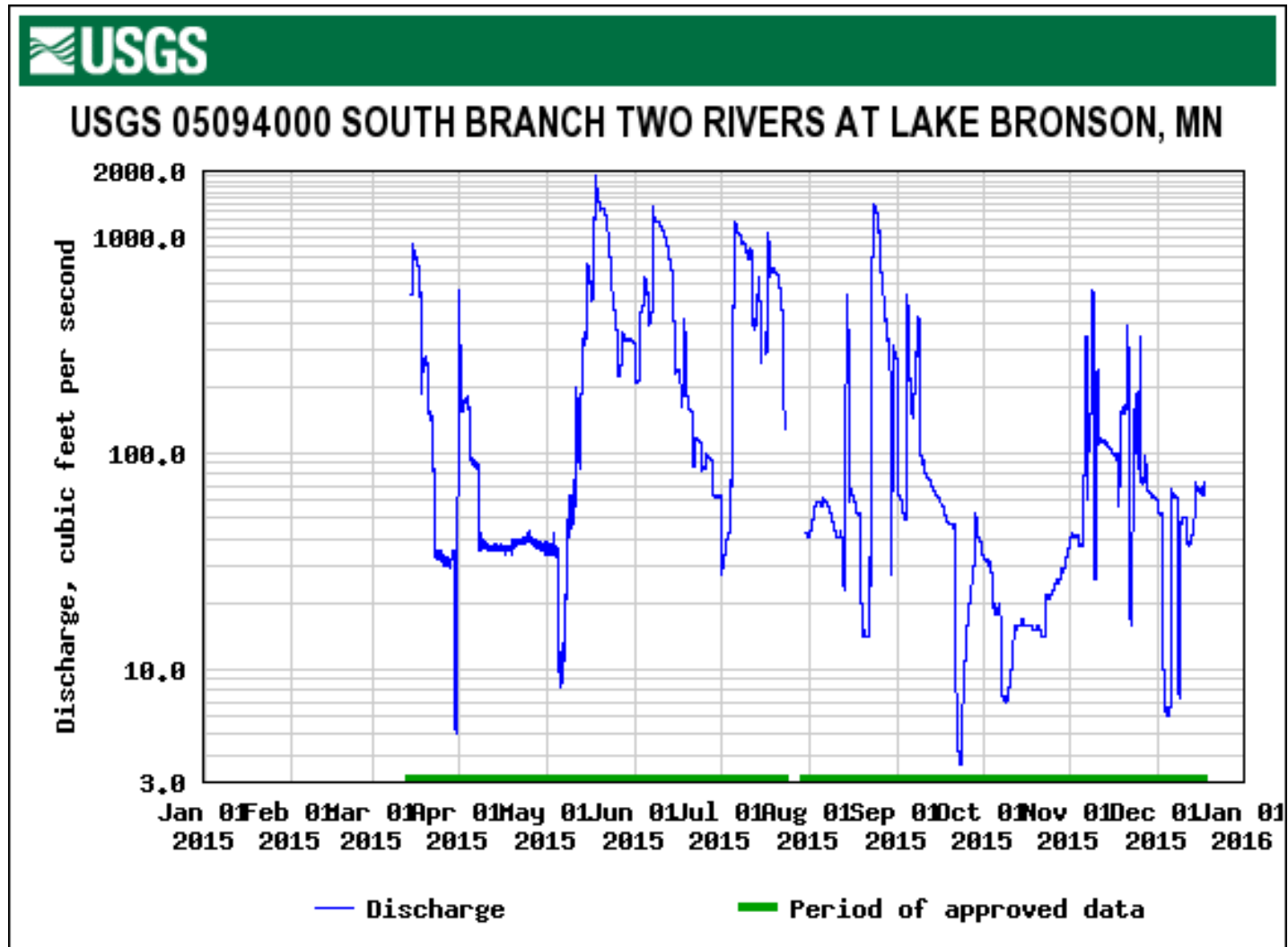
Source - Minnesota Climatology Working Group: <http://climate.umn.edu/>

The District annually collects snow depths and snow water equivalents in order to help analyze snow melt and runoff for spring flooding. Snow depths for 2015 were less than 5”, and therefore snow water equivalents were not collected for the majority of sites.

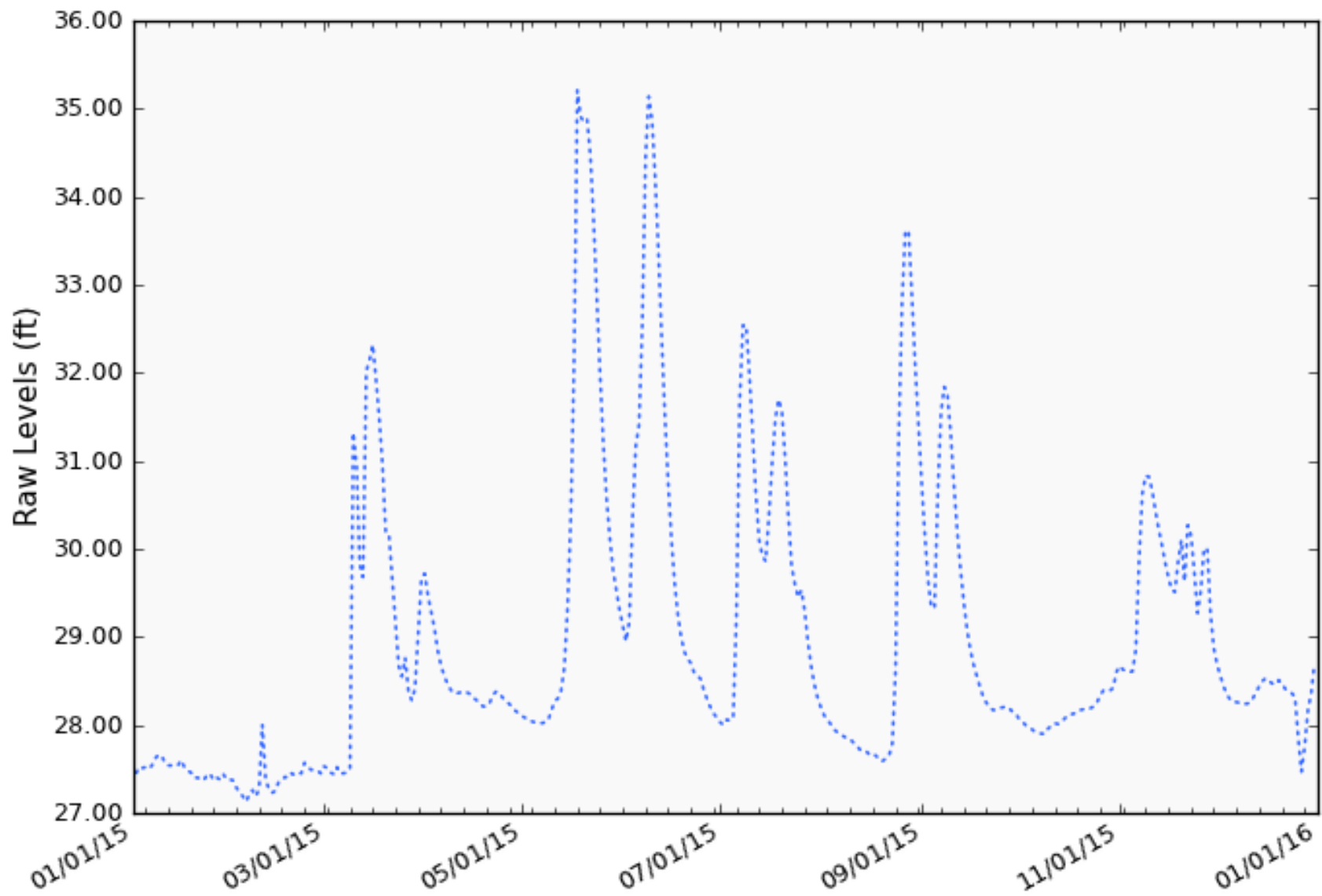
March 2015			
Location	Name	Depth	Water
SE, NE, Sect. 13, T161N, R49W Gilbert Olson Park, City of Hallock	Hallock	4	1.6
SW, SE, Sect. 16, T162N, R49W Wooded lot @ Village of Northcote	Northcote		
SE, NE, Sect. 11, T163N, R48W Meadow - scrub shrub	Richardville		
SE, NE, Sect. 31, T163N, R46W Logged area (1995)	McKinley		
NW, SW, Sect. 26, T162N, R46W CRP Field	Cannon		
NW, NW, Sect. 11, T159N, R48W Ag field, plowed	Davis		
SE, SE, Sect. 2, T160N, R48W Ag field, plowed	Tegner		
SE, SE, Sect. 1, T160N, R45W Meadow, Moose Pt. Learning Center	Pelan		
SW, SW, Sect. 16, T159N, R44W Scrub Shrub, State WMA	Lind		
NE, SE, Sect. 43, T162N, R41W Ag field, plowed *2005 Moved to the SW of SW of Sect 34 200ft N of intersection of 310th Ave and Co. 114	Ross		
NW, NW, Sect. 28, T160N, R41W Open meadow; outlet to Nereson Imp.	Nereson		

2014 STREAM FLOW

Stream flow and water levels throughout the year were varied by location. The following hydrographs depict streamflows within the Watershed District during 2014. A wet spring led to sustained flows up until July and August, followed by a drier period.

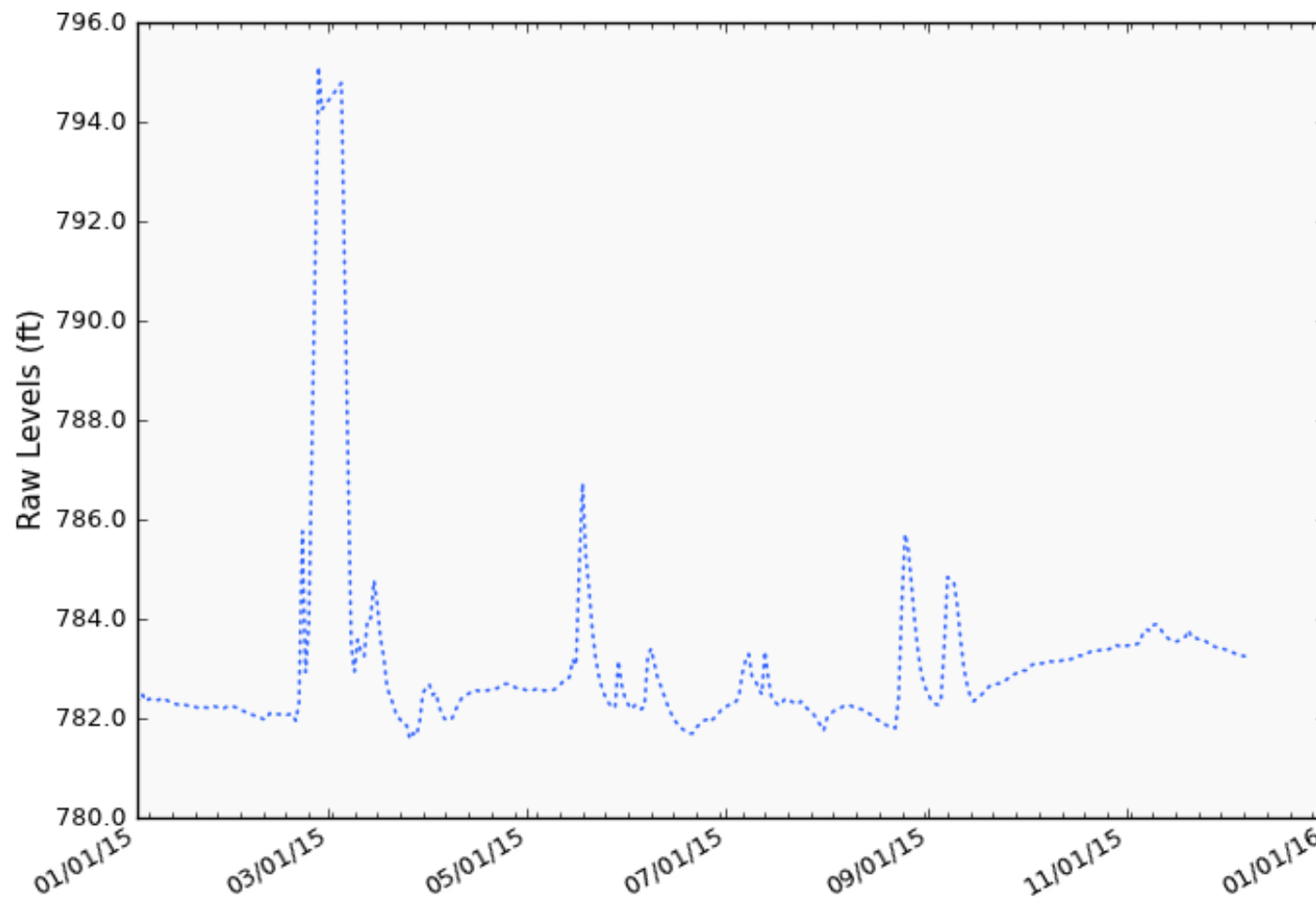


Stream Flows in Cubic Feet Per Second for South Branch Two Rivers at the City of Lake Bronson
Source: US Geological Survey



Stream levels for the North Branch Two Rivers at Kittson County Road #4, downstream of Northcote

Source: MN DNR http://www.dnr.state.mn.us/waters/csg/site_report.html?mode=get_site_report&site=70020002



Stream levels in Mean Sea Level Elevations for the Unnamed Coulee at Kittson CSAH #1, Section 19, Skane Township, Kittson County, MN
Source: MN DNR - http://www.dnr.state.mn.us/waters/csg/site_report.html?mode=get_site_report&site=69014001

OBJECTIVES FOR 2016

PROJECT ACTIVITY

Inspection and maintenance will be done on all existing projects. Normal maintenance activities include mowing of right of way, removal of brush, spraying vegetation, beaver removal and other obstructions, and repair of any sloughing or erosion and damage to any structures.

IMPOUNDMENTS

Quick – The ‘Quick’ project will continue to be jointly developed with the Natural Resources Conservation Service. This is a wetland restoration and flood control project on over 1,500 acres located in Polonia Township, Roseau County. The purpose of the project is to restore wetlands, habitat, and provide flood control. Plans and specifications for the site will be developed, permits will be applied for, and construction will hopefully be underway in 2016.

Klondike Clean Water Retention Project #11 – The District in 2016 will be working on pre project monitoring, HEC RAS model development, project plans and specifications, natural resources enhancements, permitting and environmental concerns, and funding issues. Tentatively it is hoped that this phase will be completed in one to two years and phase one construction could be undertaken in 3 to 4 years.

PROGRAM ACTIVITY

Stream Flow Monitoring: Stream flow and velocities will continue to be monitored and recorded for selected sites on the rivers, coulees, and ditches. The District will continue to recruit volunteers to read and record staff gage information for each site. Stream flows and velocities will be measured by District staff at each site during runoff events and data will be reported to interested agencies and persons, including the National Weather Service, DNR, and various other state and local agencies. The long-range goal is to record data not only for the high flow events but for summer low flows as well.

Water Quality Monitoring:

The Lower Red Watershed Restoration and Protection Plan – watershed study will proceed to year 6 in 2016. This is a study of the unnamed coulee system and series of legal ditches that include the Kennedy coulee and the JD 10 systems. It is funded by the MN Pollution Control Agency, and is a collaborative effort between the Joe River, Two Rivers, and Middle-Snake-Tamarac Rivers Watershed Districts. The process will involve analysis of existing data, collection of additional data, public information meetings, identification of sources of impairments, and implementation of correction strategies.

Two Rivers Watershed Restoration and Protection Plan – This study, similar to the Lower Red WRAP, will proceed with year 5 in 2016. Water quality data will be analyzed, potential impairments will be identified, and further monitoring of geomorphology and streamflow will be done.

Other Grants: Work will continue with the ‘Lake Bronson Upstream’ grants.

Geographic Information Systems: Data will continue to be collected and input into the District's Geographic Information System. Data sets will continue to be developed, including culvert inventory, LiDar, drainage areas, water quality, stream flow, and information regarding the ditch systems administered by the District. This is an ongoing project that will be continued from year to year.

Permits: The District will continue to review permit applications for projects that affect the water resources of the District and permits will be approved accordingly.

Newsletters: The District newsletter will continue to be published quarterly in cooperation with the Kittson Soil & Water Conservation District. This is an excellent way to communicate to the public the various programs, projects, and water management initiatives being contemplated by the District.

ADMINISTRATIVE ACTIVITIES

The District will continue to employ a full time District Administrator, who will be responsible to keep the meeting minutes, financial reports, permits, and all other paperwork of the District. In addition, the administrator will be required to organize and file all information regarding any programs, projects, or activities of the District. The Administrator will also perform field investigations, data collection, and other technical duties as determined by the Board of Managers.

The District will also continue employing a permanent, full time Technician. The position performs surveying, monitoring and inventory, data management, reporting, permit review, and other duties as dictated by the Administrator and the Board of Managers.

DITCHES

All District ditches will be inspected in 2016. Roseau County Ditch #4, Kittson County Ditch #10, State Ditch 85 Improvement, and Soler #4 will be surveyed. A maintenance schedule will be followed for each ditch, which will include cattail and brush spraying, beaver and beaver dam eradication, sediment removal, repair of any damages, and other activities as necessary.

BUDGET

The District held a budget hearing in September 2015 to review, adopt, and approve an administrative budget for 2016. The approved budget is listed below. The TRWD levied taxes in the amount of \$212,000 for payable 2016.

Administrative Budget	2015 Adopted	2016 Adopted
Administrative	75,000	70,000
Auto Expense	3,000	3,000
Capital Outlay	8,000	10,000
Conferences & Meetings	12,000	11,000
Dues & Subscriptions	2,500	2,500
Engineering	20,000	30,000
Information & Education	1,100	1,000
Insurance	4,500	2,250
Manager's Per Diem & Expense	16,000	12,500
Office Supplies & Miscellaneous	3,000	3,000
Payroll Tax Expense	32,000	30,000
Postage & Delivery	1,000	1,000
Printing & Advertising	1,000	1,000
Professional & Legal	15,000	20,000
Rent	11,500	11,000
Stream Gage	3,000	2,000
Telephone	1,400	1,400
	3,000	3,000
Totals	213,000	214,650

FINANCIAL SUMMARY

The following pages contain selected information from the annual audit for the Two Rivers Watershed District as supplied in accordance to state law by the certified public accounting firm of Brady Martz & Associates, P.C. This audit covers the period of January 1, 2015 to December 31, 2015. A complete version of the audit is available upon request.