

TWO RIVERS WATERSHED DISTRICT

IN ROSEAU, KITTSOON, & MARSHALL COUNTIES



2012 ANNUAL REPORT

**410 South 5th Street, Suite 112, Kittson County Courthouse,
Hallock, MN 56728**

INTRODUCTION

The Board of Managers of the Two Rivers Watershed District would like to present this 2012 Annual Report. It contains information about the District's projects, programs, and initiatives through the year.

2012 was another year that presented challenges and issues with regard to water management. The year was characterized as very dry for most of the year. Data provided within this report shows that there was very little spring snow melt runoff, followed by lower than average rainfall during the rest of the year.

The District was able to focus on maintenance of ditch systems in 2012. Several of the ditches under the District's management were restored to their original grade and cross section, allowing for agricultural drainage. Some of these systems included Roseau County Ditch 4 and Branch B of Judicial Ditch 10. Several other systems were surveyed to determine the amounts of accumulated sediment.

As in the past, District activities for the coming year(s) will continue to focus on drainage, flood control, water quality, and surface water management in general. The District is governed by Minnesota Statutes chapters 103D (Watershed Law) and 103E (The Drainage Code).

The mission statement of the District is "to carry out all facets of the Minnesota Watershed Act as set forth in Minnesota Statute. It is the District's further mission to carry forth all activities and powers given under the Minnesota Drainage Code. In carrying out its mission, the District will encourage the wise use of the water natural resources within its boundaries and promote the general health and welfare of the citizens residing there".

The general purpose of the District is "to conserve the natural resources of the state by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources".

The District looks forward to another busy year in 2013 regarding projects, programs, and initiatives. We welcome input from all citizens and would encourage you to visit or contact the District office or any members of the Board of Managers with any questions or concerns that you may have.

2012 LIST OF MANAGERS

Roger Anderson, **President**
1561 110th Street
Drayton, ND 58225
(218) 455-6269
Term Expires: October, 2012

Jon Vold, **Secretary**
2418 310th Street
Hallock, MN 56728
(218) 843-2556
Term Expires: October 2012

Jim Kukowski, **Vice President**
17485 County Road 6
Strathcona, MN 56759
(218) 781-2478
Term Expires: October, 2014

O'Neil Larson
4207 180th St,
Halma, MN 56729
(218) 265-2613
Term Expires: October 2013

Richard Novacek
14225 260th St
Greenbush, MN 56726
(218) 782-2749
Term Expired: October, 2012

Paul Olsonawski
3762 285th Ave
Lancaster, MN 56735
(218) 762-1911
Term Expires: October 2013

Darrel Johnson, **Treasurer**
2224 190th Ave
Hallock, MN 56728
(218) 843-2496
Term Expires: October, 2014

Allen Brazier
20463 230th St
Greenbush, MN 56726
(218) 782-2456
*Appointed to replace Richard Novacek
October 31, 2012*

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
Cellular (218) 689-2023

Fax (218) 843-2020
Internet: www.rrwmb.org/html/watersheds.cfm?ID=7

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, flow monitoring, culvert inventory, survey work, 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 for 2012 was performed by Widseth, Smith, & Nolting – Crookston, Minnesota. Other 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 2012 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
Rodney Sikorski	Lancaster	Rural		Vern Langaas	Karlstad	Rural
Mike Jensen	Drayton	Township		Leon Olson	Lancaster	Kittson County
Mark Foldesi	Greenbush	Roseau Co		Todd Truedson	Kennedy	City
Holly Anderson	Kittson Co.	Kittson EM		Mike Docken	Hallock	City
Scott Klein	Hallock	Rural		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

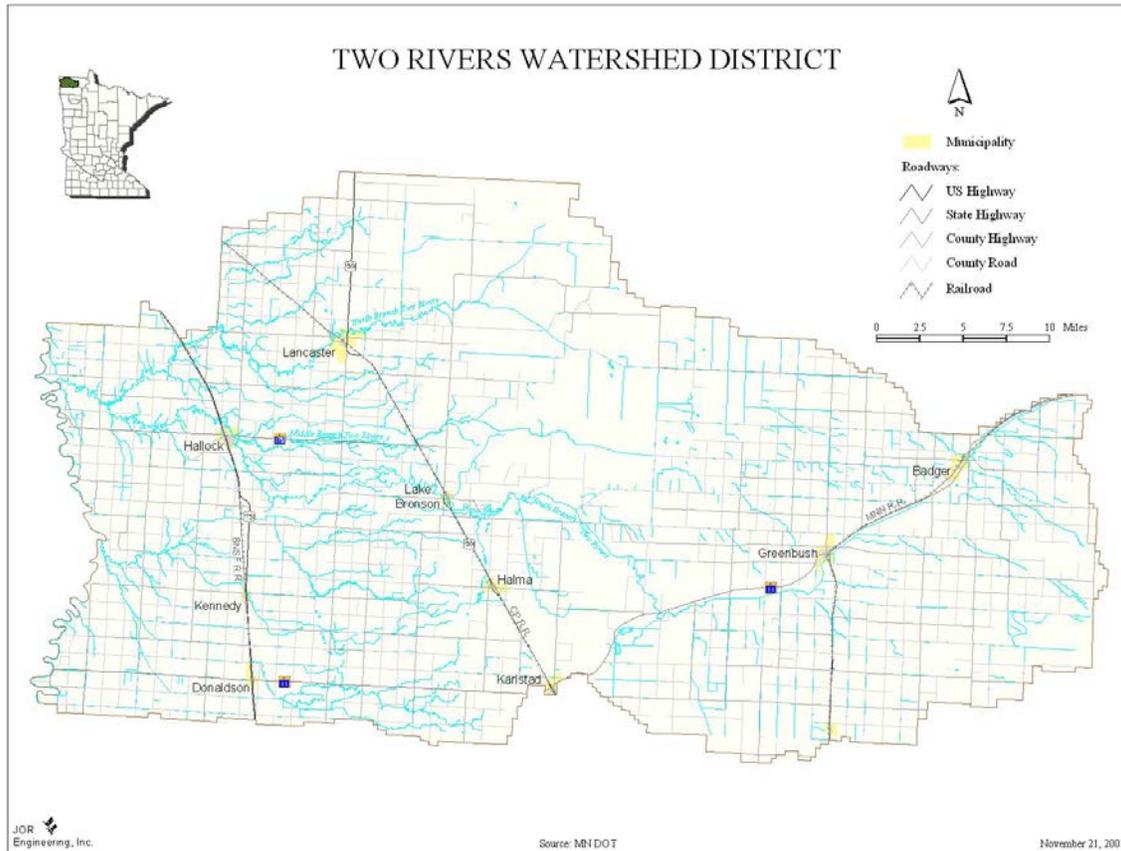
Technical Advisory Committee

Name	Location	Representing		Name	Location	Representing
Kelly Bengtson	Hallock	Kittson Hwy Dept		Brian Kettring	Roseau	Roseau Hwy Dept
Darren Carlson	Hallock	Kittson SWCD		Russ Reisz	Karlstad	TNC
Laurie Fairchild	Middle River	US Fish & Wildlife Srvc		Jim Schwab	Hallock	NRCS
Cary Hernandez	Detroit Lakes	MN Pollution Control Agency		Brian Dwight	Bemidji	BWSR
Dennis Topp	Baudette	DNR Fisheries		Randy Prachar	Middle River	DNR Wildlife
Garry Bennet	Thief River Falls	DNR Waters		Blake Carlson	Crookston	Widseth, Smith, & Nolting
Janine Lovold	Roseau	Roseau SWCD		Danni Halvorson	Viking	RRWMB

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 just west of the City of 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.



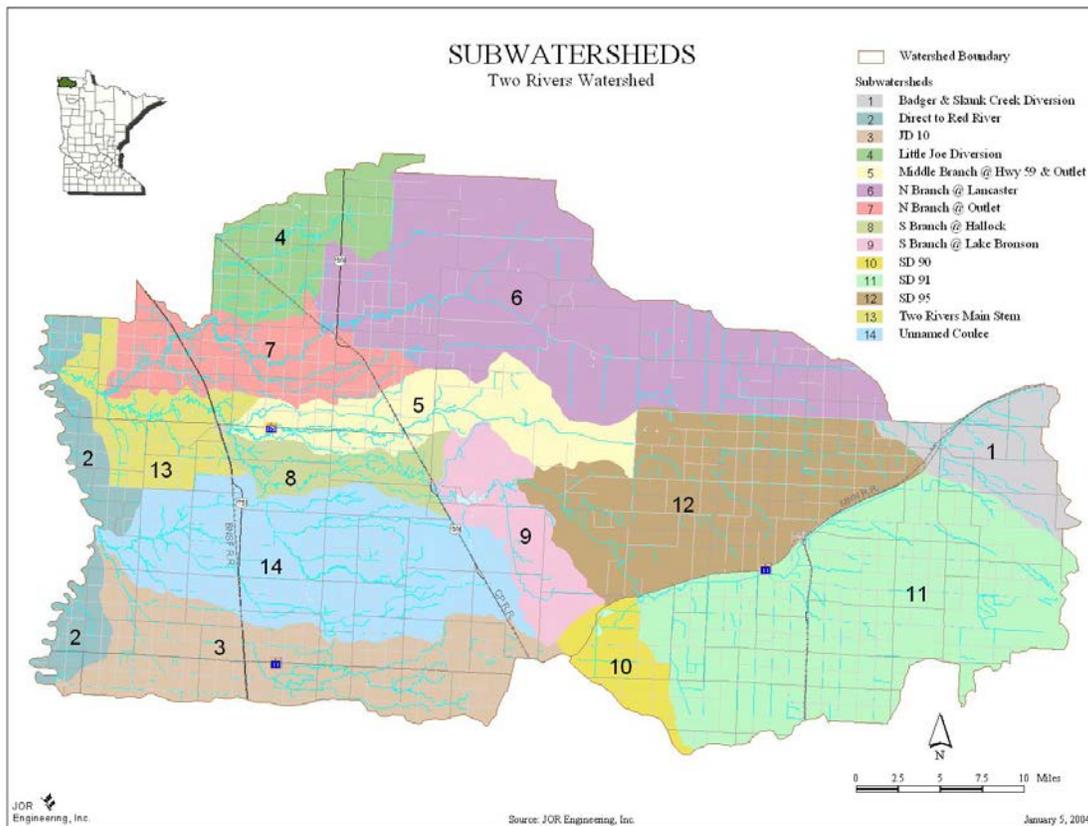
The Two Rivers actually consists of three branches – the North, Middle and South Branch. The South Branch arises southeast of Badger, Minnesota and flows in a westerly direction along the south side of Badger and through the cities of Greenbush, Lake Bronson, and Hallock. The Middle Branch drainage area 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
Nererson Impound Project	Flood Control Impoundment	Sections 27-28 Nererson Township, Roseau Co	1981; Board Initiated	Yearly Inspection & Maintenance
Nererson Modification Project	Flood Control Impoundment	Sections 33-34 Nererson 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	2011 - 2013	In permitting stage, construction to begin 2013

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

Big Swamp:

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 will be 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

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.

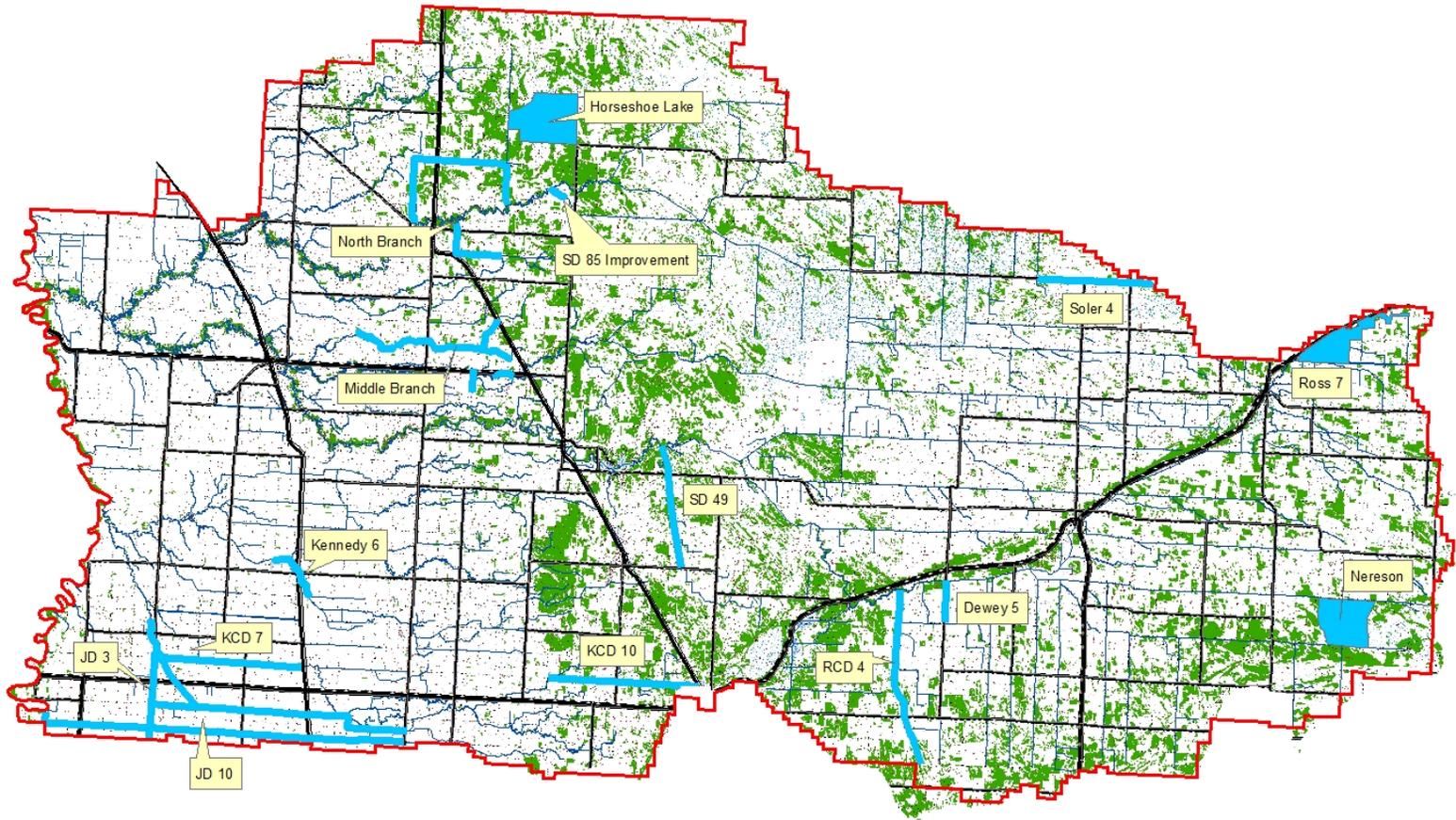
The table below lists both the ditch systems and the projects that the District administers.

Ditches	Length (Miles)	Township(s)	Fund Balance 12-31-12	2013 Levy
State Ditch #49	5.25	Norway; Kittson Co	\$ 16,870	\$ 5,000
State Ditch #85 Improvement	0.75	Poppleton; Kittson Co	\$ 1,062	\$ 6,000
Judicial Ditch #3	5.5	Teien; Kittson	\$ (18,588)	\$16,500
Judicial Ditch #10	31	Davis, Svea, Teien, Kittson County	\$ (42,050)	\$ 32,000
Kittson CD #7	6.5	Svea; Kittson Co	\$ (22,994)	\$ 15,000
Kittson CD #10	7.0	Deerwood; Kittson Co	\$ 7,673	\$ 3,000
Roseau CD #4	7.5	Lind, Dewey; Roseau Co	\$ 231	\$ 10,000
Springbrook / PL566	9.0	Springbrook Township, Kittson Co	Petition Project In Progress	Not Applicable
Projects				
Middle Branch	9.6	Hazelton, Thompson; Kittson Co.	\$ 3,014	\$ 10,000
North Branch	11.1	Granville, Hampden; Kittson Co.	\$ 8,769	\$ 10,000
Soler 4	5.0	Soler; Roseau County	\$ 20,928	\$ 0
Dewey 5	1.8	Dewey; Roseau County	\$ 1,601	drainage lien
Kennedy 6	1.5	Tegner, Skane; Kittson Co.	\$ (109,961)	drainage lien

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
 Ditch Systems and Flood Control Projects

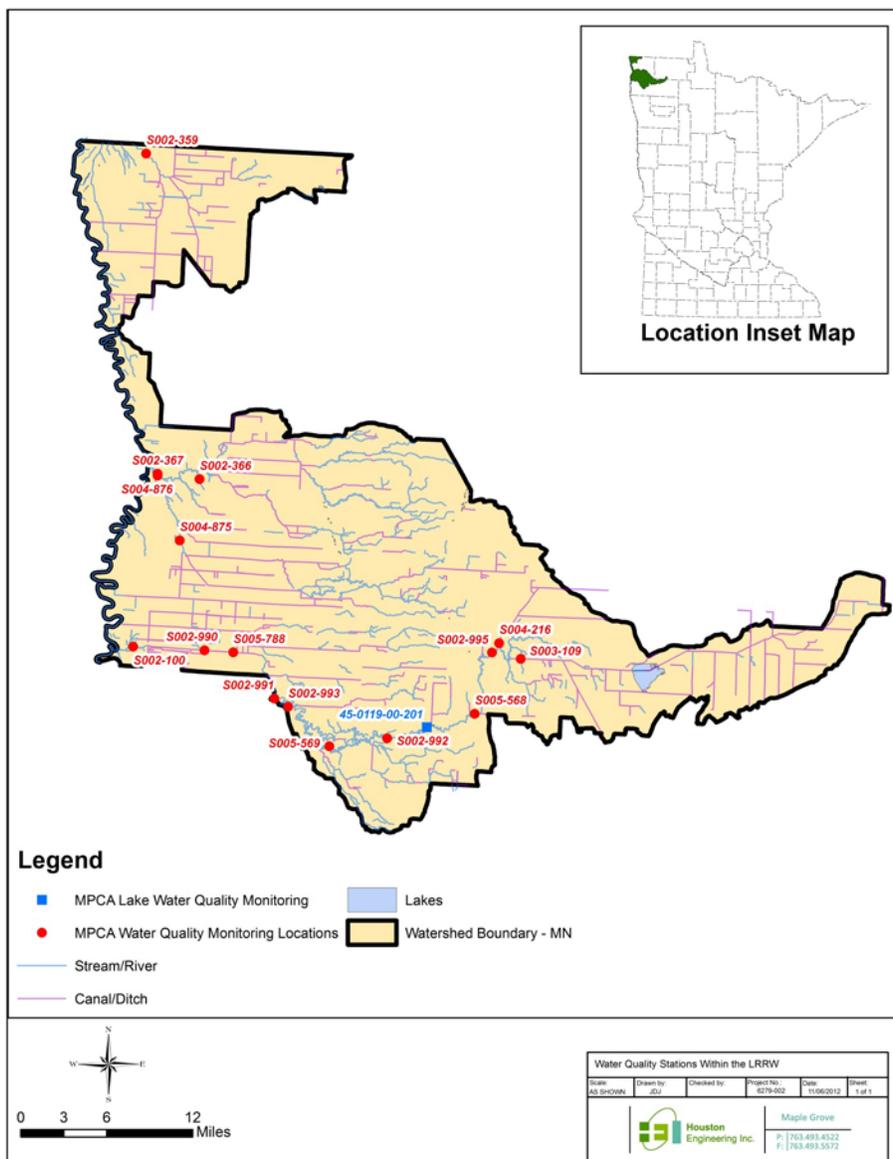


PROGRAM STATUS

WATER QUALITY

The District partnered with the Joe River Watershed District and the Middle Snake Tamarac Watershed District 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 receive 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.



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-eight permit applications were processed during 2012.

2012 DISTRICT ACTIVITIES

BOARD MEETINGS

Twelve regular monthly board meetings were held during the course of 2012, each on the first Wednesday of each month. The Annual Meeting was held on January 4, 2012. Three special meetings 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 2012 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 2012.

Excerpts From 2012 District Newsletter

2012 Projects Underway

By Dan Money

The 2012 construction season has begun, and the Two Rivers Watershed District can report excellent progress on several ditch maintenance projects. The District is the “ditch authority” for 61.7 miles of legal ditch under the Ditch Law – MN Statute 103E, and for another 30.2 miles of legal ditch under the Watershed Law – MN Statute 103D. As the ditch authority, the District is charged with inspecting, maintaining, and repairing any damages to these systems. Each year every mile of ditch is visually inspected for obstructions like beaver dams, sediment plugs, cattail, and brush. In addition, all ditches are on a rotating schedule to be surveyed at a minimum of once every 5 years. The inspections and surveys are used to prepare a maintenance plan for each ditch and to implement cleaning, spraying, or other activities. Below is a listing of the work to be completed in 2012:

- **Kittson County Ditch #10:** A survey of 6.5 miles was completed, and this showed that about 1 to 1.5 miles of ditch needs to be cleaned. This work was recently completed by Anderson Brothers Construction.
- **Judicial Ditch #10, Branch B:** A survey completed in 2010



revealed that most of the ditch has excess sediment. Due to a lack of funding in the ditch fund, the Board of Managers made the determination to complete at least 3 miles per year until the ditch is finished. Therefore, 3.5 miles was done in 2010, and another 3 miles was done in 2011, working from the outlet to the upstream end. Laudal Construction has been hired for 2012, and the work is in progress to complete 1.5 miles.

- **Roseau County Ditch #4:** 7.8 miles of ditch was surveyed in 2011, and the survey shows that a cleanout is needed for 4 miles. Reese Construction has been hired to complete this work later this summer.
- **Soler 4:** Reese Construction will be working to clean out 1 to 2 miles later this summer.
- **Surveys:** Several ditches will be surveyed this year, including the District's North Branch Project, Middle Branch Project, and State Ditch #85 Improvement. In all, 21.5 miles will be surveyed, and the information collected will be used to determine what, if any, maintenance activity will be needed in order to keep the ditch in working order.

Total Maximum Daily Load Watershed Study Kicks Off

By Dan Money

The Two Rivers Watershed District will be working with the Joe River Watershed District and the Middle, Snake, Tamarac Rivers Watershed District to undertake a watershed study over the next 4 years. A grant in the amount of \$180,000 has been received from the Minnesota Pollution Control Agency to study the Joe River, Tamarac River, and an unnamed coulee system that is located in southern Kittson County. The "Lower Red Watershed Restoration and Protection Project" will kickoff this summer.

This project is a requirement of the Federal Clean Water Act, and will be done in 2 phases. The first phase is to identify all of the water quality data that is available for the area and put together a 'watershed conditions report'. In addition, phase 1 objectives include 1) develop a description of existing watershed conditions, 2) develop and implement the watershed based water quality management plan and the watershed district's TMDL planning process, 3) perform additional monitoring that is needed to adequately assess the waterbody, 4) consult on additional monitoring within the watershed and incorporate results into the study. Progress reports on the study will be compiled twice per year. In addition, at least 3 public informational meetings will be held.

The assessment of the three streams will help to identify if any of them will be considered impaired according to Environmental Protection Agency and Minnesota Pollution Control Agency standards. If they are considered impaired, the study will take the next step in identifying why they are impaired and then identify strategies to fix the impairment. Significant federal funding is available along the way in order to complete the study and implement the strategies necessary to improve the water quality.

As this process moves forward, the Two Rivers, Joe River, and Middle Snake Tamarac Rivers Watershed Districts will be working to collect the data, compile the reports, and get the information out to anyone who is interested in the water quality of these streams. The first public meeting will be held either in the fall of 2012 or the spring of 2013. Additional information can be obtained from the Two

Rivers Watershed District, located in the Kittson County Courthouse, Hallock, MN.

Two Rivers Watershed District Receives Grant to Aid Landowners with Tile Drainage Water Management

By Dan Money

Landowners within the Two Rivers Watershed District who have already installed tile drainage or are looking to install new tile drainage systems now have an opportunity enhance these tile systems with what is known as “Conservation Drainage / Drainage Water Management”. The Two Rivers Watershed District has received a grant from the Minnesota Board of Water and Soil Resources in the amount of \$30,000 to plan and install conservation practices and strategies that have been developed to reduce the potential water quantity and quality impacts of subsurface tile drainage. This grant will be matched between 25% and 50% by the Two Rivers Watershed District making a maximum of \$60,000 available for this program. The grant portion of these funds comes from the Clean Water Land and Legacy Amendment.

Subsurface tile drainage is increasingly being installed in the area to improve field access for planting and harvesting and to increase crop productivity. At the field scale, tile drainage typically reduces surface runoff by increasing subsurface runoff, and increases total annual runoff volume by reducing water availability for evaporation, primarily during the spring and fall when crops are not growing. Conventional tile drainage can increase the loss of soluble crop nutrients from fields, such as nitrate nitrogen and soluble phosphorus, as well as increase the transport of herbicides, pesticides, and pathogens. Increased runoff volume can in turn increase downstream flooding and sediment transport.

Conservation practices and strategies have been developed and made available through the Natural Resources Conservation Service, MN Board of Water and Soil Resources, and the Two Rivers Watershed District to reduce water quantity and quality impacts of subsurface tile drainage, as well as surface drainage. This water management grant involves a suite of practices, including the following:

- Drainage Water Management Plan (NRCS CAP 130)
- Structure for Water Control (Practice 587)
- Drainage Water Management Operation (Practice 554)
- Denitrifying Bioreactor (Practice 747)
- Conservation Activity Plan (CAP 104 Nutrient Management Plan)
- Nutrient Management (Practice 590)
- Subsurface Drain Alternative Tile Inlet (Practice 606)

The intent of this funding is to assist with managing the water coming out of the tile systems by implementing the above named practices to reduce the potential water quality and quantity impacts to downstream areas. It is not intended to help with the installation of the tile itself. These practices will enhance tile systems and assist landowners by giving the operators an option to control and manage the outflows from these systems, which will provide for better crop productivity.

To learn more about this cost sharing program, contact the TRWD at 218-843-3333 or email Daniel.money@mn.nacdnet.net

Al Brazier Appointed to Watershed District Board of Managers

Al Brazier of Greenbush, MN has been appointed to the Board of Managers of the Two Rivers Watershed District. Brazier is from rural Greenbush, MN and he is one of two Managers on the Board from Roseau County. He will represent an area located within the District north of MN Highway 11 from the City of Badger to Greenbush to the Roseau and Kittson County line. This area consists of the upstream drainage areas of the North and Middle Branches of the Two Rivers and the State Ditch 72 and 95 systems. Brazier replaces Dick Novacek on the Board of Managers, who had served on the Board for the past nine years.

The Two Rivers Watershed District encompasses approximately 1,450 square miles in parts of Roseau, Kittson, and Marshall Counties. The Board is made up of 5 members appointed by the Kittson County Commission and 2 members appointed by the Roseau County Commission. The main focus of the TRWD is drainage, flood control, and water quality within the drainage area of the Two Rivers. The District has constructed 3 flood control impoundments, over 22 farmstead ring dikes, and manages over 92 miles of ditch systems. In addition, the district monitors snow fall and snow water content, measures stream flows, and measures numerous water quality parameters.

Construction to Begin On Springbrook PL-566 Project #10

By Dan Money

The Two Rivers Watershed District's latest flood control project is moving forward with plans for construction in 2013. The "Springbrook PL 566 Project



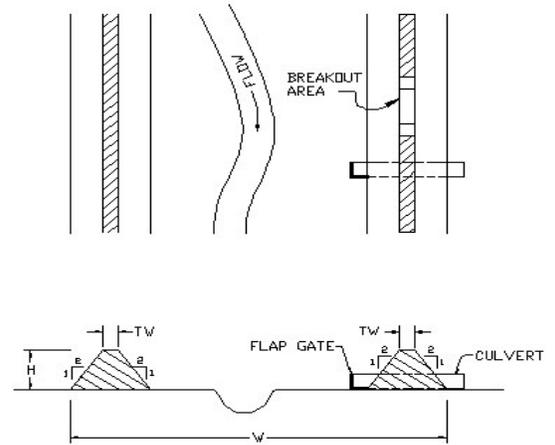
Springbrook PL 566 Project #10
NRCS - Two Rivers Watershed District - Kittson SWCD - Springbrook Township - City of Karlstad

#10" is being designed by the USDA Natural Resources Conservation Service, and consists several project components including the construction of setback levees along approximately 9 miles of an existing natural

watercourse, installation of side water inlets for local drainage, establishment of grass buffers, and streambank protection. The project is designed to prevent local flooding for up to what is known as the 10 year flood event. The project is located in Springbrook and Davis Townships in Kittson County, about ½ way between the Cities of Karlstad and Donaldson.

This project has been in the making dating back to 1998. Severe and repeated flooding began in 1993, and Federal disaster declarations were made in 1993, 1996, 1997, 1999, 2000, 2002, 2006, 2009, 2011. The Springbrook Coulee has a very large upstream drainage area, and is fed by a legal drainage ditch known as Kittson County Ditch #10. The water that comes to the Coulee is substantial enough that the existing coulee does not have the capacity to be able to carry the water, and consequently the water overtops the coulee banks at several locations and flows overland through ag fields often cutting new gullies 3 feet deep and over 10 feet wide. In addition, the floodwaters overtop several roadways, causing damages to public infrastructure.

This project when complete will be a cooperative effort between Federal, State, and Local governments and private landowners to create a project that will solve the primary goal of directly reducing flood damages to ag land and public infrastructure. In addition, the project will improve water quality and habitat by reducing sediment that enters the coulee, planting grass filter strips, protecting streambanks from erosion, and providing systematic ag drainage. The project will also provide wildlife habitat by establishing a large corridor of grass buffer along the waterway. The nearly \$2 million project is being jointly funded by the USDA – Natural Resources Conservation Service, State of Minnesota – Board of Water & Soil Resources and Department of Natural Resources, and the Two Rivers Watershed District. The project timeline is to secure permit approvals by February 2013, let bids for the project in February / March of 2013, and begin construction as soon as conditions permit in spring 2013. It is anticipated that the entire project can be substantially completed in 2013.



2011 Water Year Summary

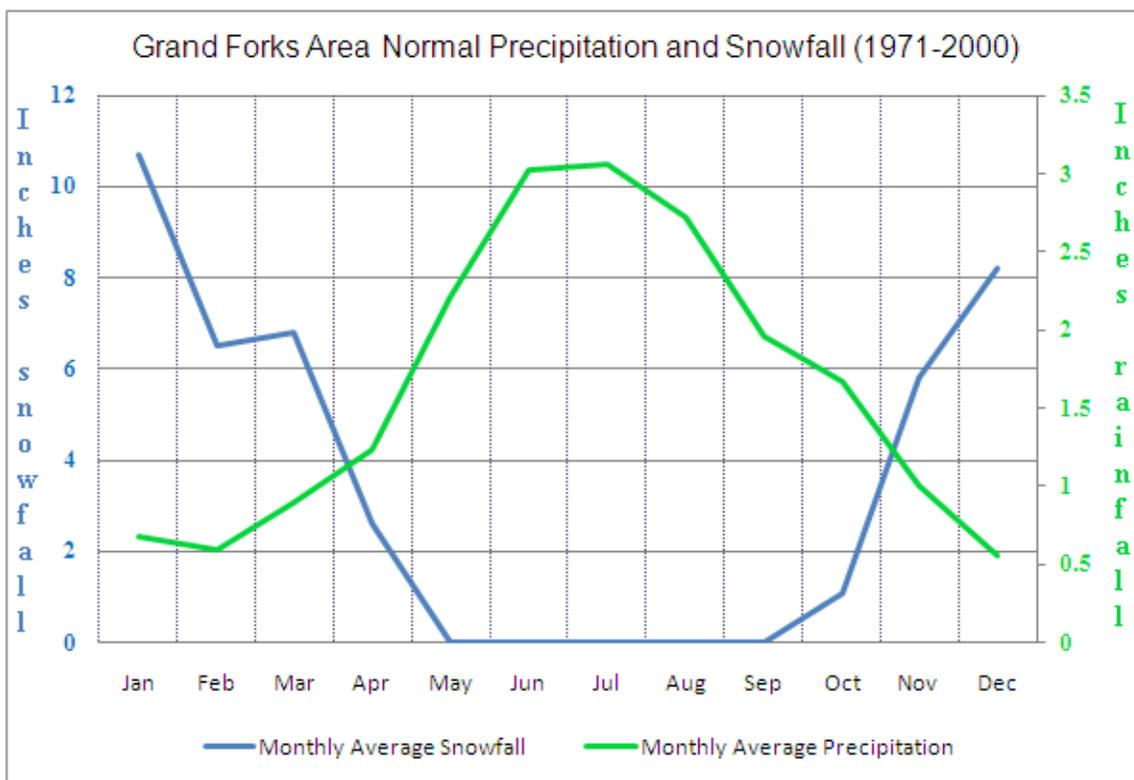
2012 PRECIPITATION

The year was characterized as being very dry with below normal rainfall and streamflows for most of the year. 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 2011 – Growing Season – Selected sites

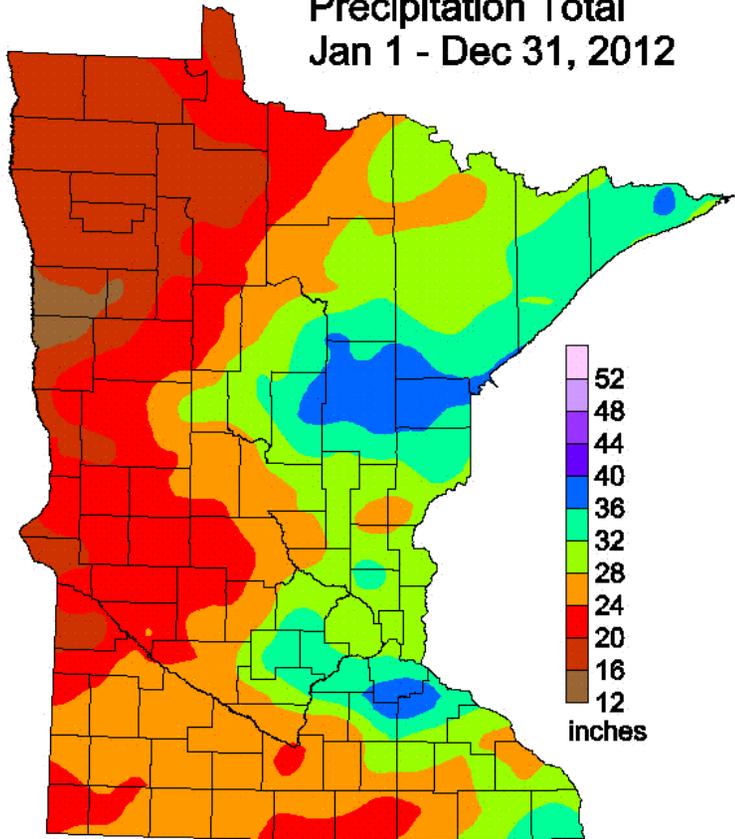
Township	April	May	June	July	Aug	Sept	Oct	Total
Springbrook	1.63		2.63	2.78	1.66	0.15	4.34	13.19
Percy	1.35	2.04	1.83	2.12	2.64			9.98
Granville	0.97	2.59	1.94	2.98	2.03	0.09	4.87	15.47
Tegner	1.59	1.48	1.94	3.06	1.69	0.18	3.89	13.83
Richardville	0.78	2.38	2.39	2.54	2.15	0.19	4.26	14.69
Hallock	0.85	1.61	1.57	2.4	1.84	0.06	4.35	12.68

Source – Kittson Soil & Water Conservation District



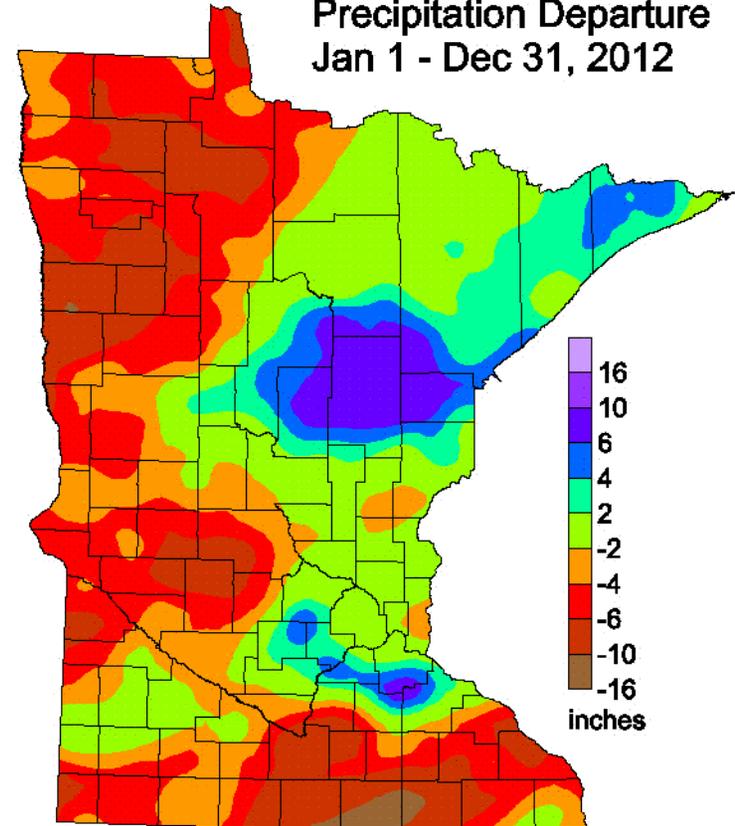
Source - National Weather Service: <http://www.crh.noaa.gov/fgf/climate/gfkf6.php>

Precipitation Total
Jan 1 - Dec 31, 2012



DNR State Climatology Office, April 5, 2013

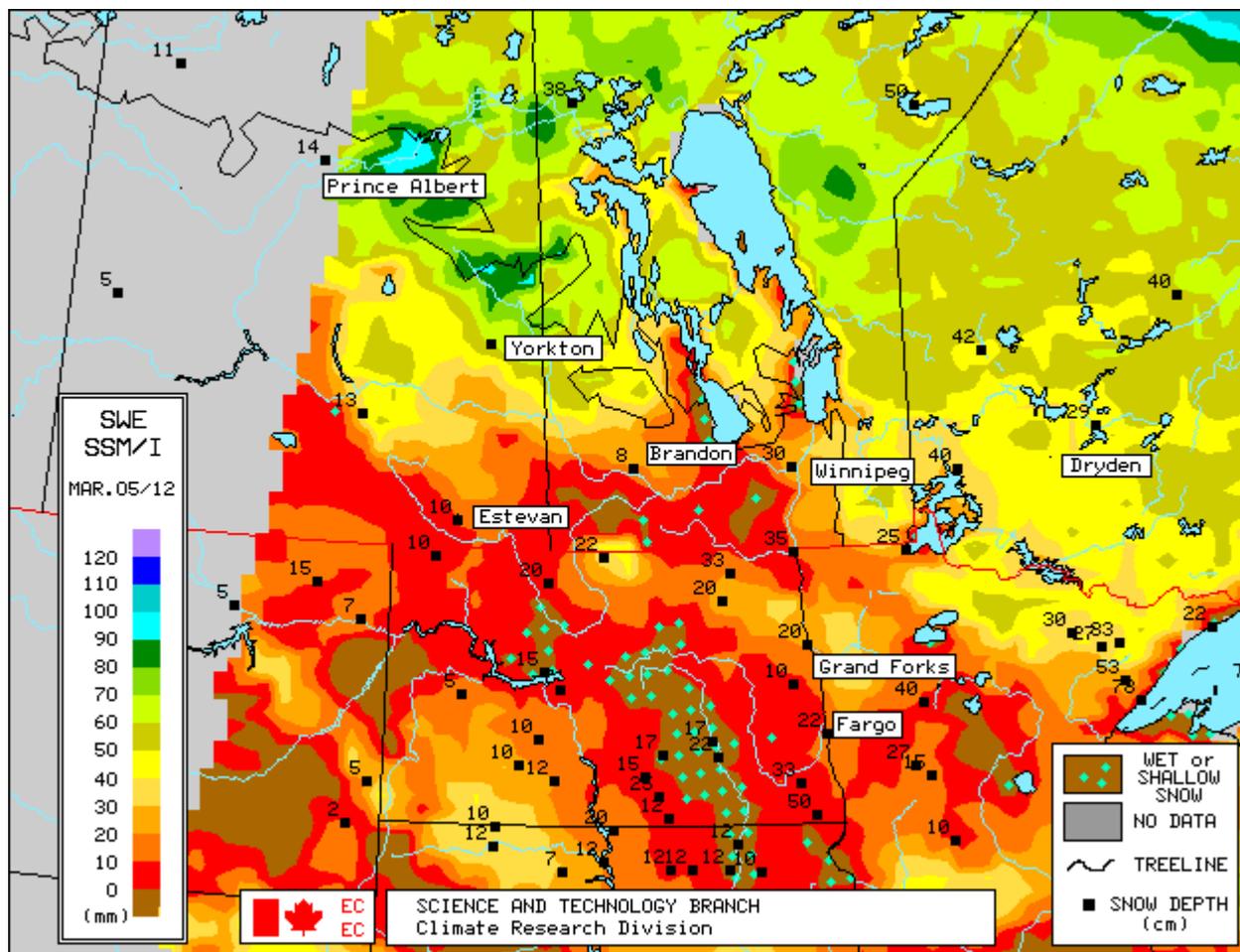
Precipitation Departure
Jan 1 - Dec 31, 2012



DNR State Climatology Office - April 5, 2013

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

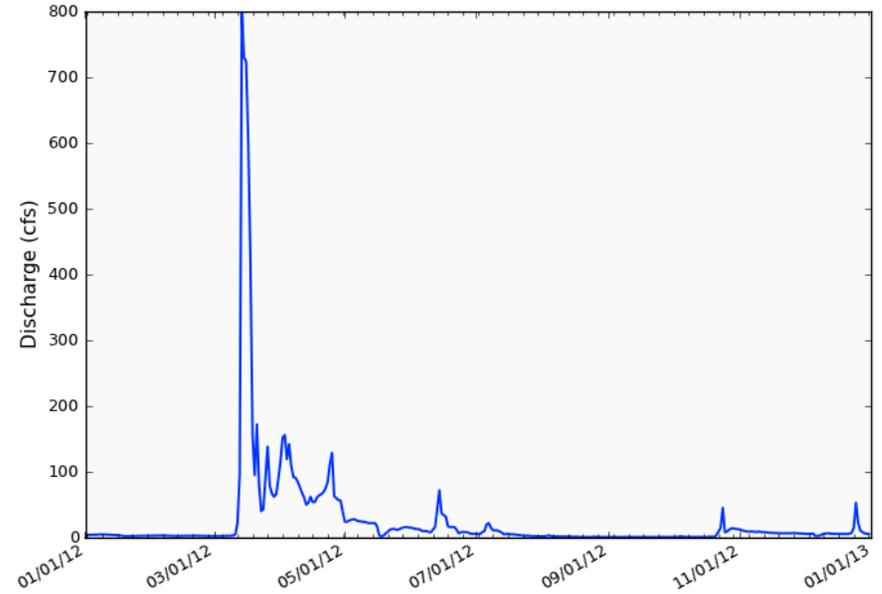
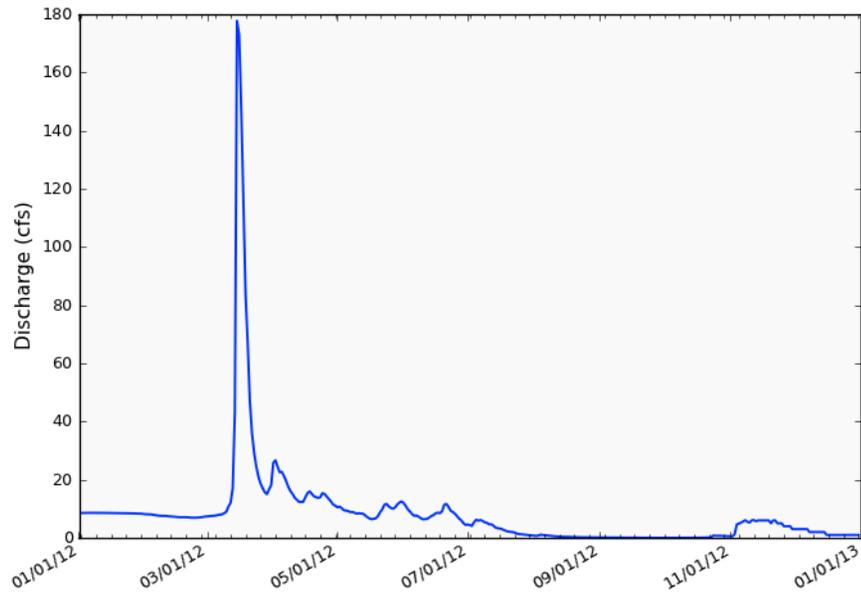
The District annually collects snow depths and snow water equivalents in order to help analyze snow melt and runoff for spring flooding. Due to a significant lack of snow, no data was collected by the District in 2012. The following map shows snow depths as of 3/7/12 in millimeters.



Source – International Water Institute

2012 STREAM FLOW

Stream flow and water levels throughout the year were lower than average. The following hydrographs depict streamflows within the Watershed District during 2012. Very little spring runoff occurred, and below average rainfall contributed to low stream flows. Up to 4 inches of rain was received in October which brought up stream levels somewhat and provided some needed recharge.



Top Right:

Stream Flows for South Branch Two Rivers at the City of Lake Bronson

Source: MN DNR http://www.dnr.state.mn.us/waters/csg/site_report.html?mode=getsitereport&site=70033001

Top Left

Stream Flows for the North Branch Two Rivers at Kittson County Road #4, near Northcote

Source: MN DNR http://www.dnr.state.mn.us/waters/csg/site_report.html?mode=getsitereport&site=70021001

OBJECTIVES FOR 2013

PROJECT ACTIVITY

Springbrook PL-566: The Springbrook Coulee is a watercourse that has undergone severe and repeated flooding. The watercourse is not adequate to handle the flows that enter it, which results in water breaking out of the channel and running overland, washing out fields, roads, and culverts.

The Natural Resources Conservation Service has done survey work and hydrologic modeling, and has come up with a plan consisting of set back dikes, side water inlets, and channel work to address the problems. These structural elements will establish an adequate channel, provide diking to prevent channel breakouts, and provide a grassed buffer and waterway to prevent erosion.

Project funding on the Federal level has been approved for this project, and the District has also secured state funding as well. Final design is complete, and permits have been approved for the construction. Bids will be let early on in 2012, a contractor will be hired, and construction will begin. The District hopes to see substantial construction of this project in 2012.

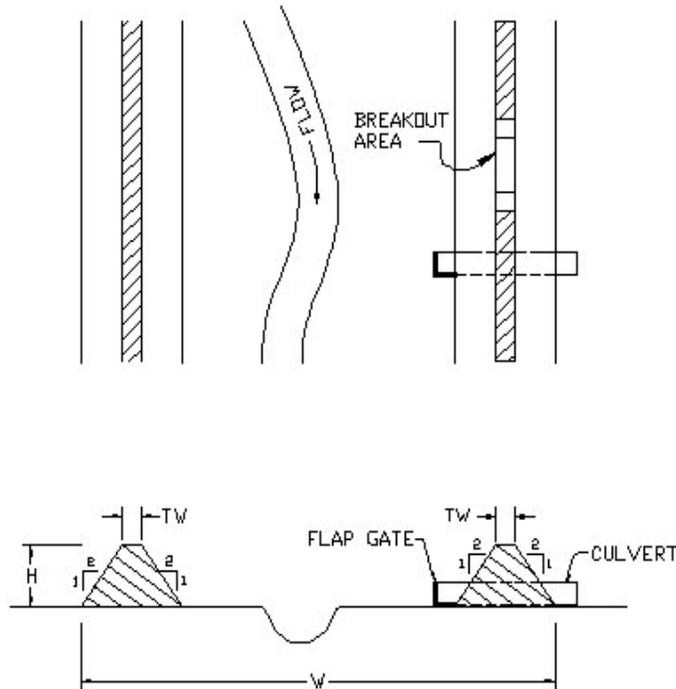


Springbrook PL 566 Project #10

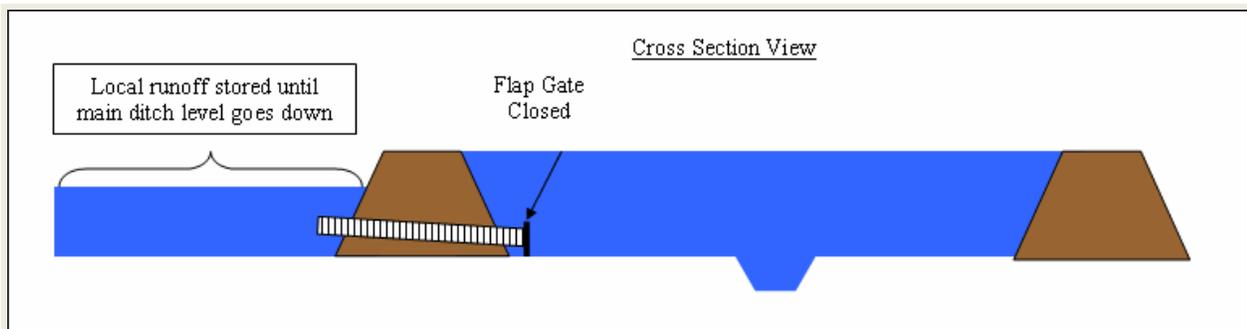
NRCS - Two Rivers Watershed District - Kittson SWCD - Springbrook Township - City of Karlstad



Diagrams showing general plan design for PL 566 project.



Set back dikes will be constructed at varying widths on either side of the existing channel. Side water inlets consisting of a culvert through the dike with a trap on the wet side will be installed to allow for field drainage into the project. Breakout areas will be installed at specified locations to allow water to overtop the dikes for flows that are greater than the 10 year event.



DITCHES

All District ditches will be inspected in 2013. Selected ditches 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. The table below will be followed as closely as practicable, at the Board of Managers discretion.

Two Rivers Watershed District		Ditch Maintenance Schedule						
Ditch	2010	2011	2012	2013	2014	2015	2016	
RCD 4	Survey Cleanout	Survey	inspection Cleanout	inspection	inspection	inspection	survey inspection	
KCD 7	Survey	inspection Cleanout ~ redetermine benefitted area	inspection	inspection	inspection	survey	inspection	
KCD 10	inspection	survey	inspection Cleanout 1 mi	inspection	inspection	inspection	survey inspection	
JD 3	inspection	survey Cleaned out	inspection	inspection	inspection	inspection	survey inspection	
JD 10 main	inspection	inspection	inspection	survey	inspection	inspection	inspection	
JD 10 Br B	Survey Cleanout	inspection cleanout	inspection cleanout	inspection cleanout	inspection cleanout	survey	inspection	
SD 49	inspection	survey	inspection	survey	inspection	inspection	inspection	
SD 85 imp	inspection	inspection	survey	inspection	inspection	inspection	survey	
Soler 4	inspection	survey	inspection cleanout	inspection	inspection	inspection	survey inspection	
Dewey 5 Imp	inspection establish grass buffer	inspection	inspection	survey	inspection	inspection	inspection	
Kennedy 6	inspection establish grass buffer	inspection	inspection	survey	inspection	inspection	inspection	
Middle Branch	inspection	inspection	survey	inspection veg control	inspection	inspection	survey inspection	
North Branch	inspection	inspection FEMA Repair	survey	inspection clean???	inspection	inspection	survey	
Pending survey info, cleanout to original grade & cross section may be needed.								
After inspections, action may be needed to repair sloughs, remove beavers, spray cattails, etc.								
denotes completed denotes not completed denotes work item for 2013								

IMPOUNDMENTS

The District is investigating the possibility of three impoundment sites that are located in very close proximity within the State Ditch #95 sub-watershed. These impoundments would have local flood control and drainage benefits to western Roseau County and eastern Kittson County, as well as contribute to the regional goal of 20% reduction of peak flows on the Red River. The projects are described below.

Quick – The TRWD had been looking at the area of sections 19 and 30 of Polonia Township, Roseau County off and on since 1991. This land became available in 2012 and the ‘Wetland Reserve Program’ became available through the USDA Natural Resources Conservation Service to help with a flood control impoundment. Plans are currently in the works regarding the design of this impoundment.

Klondike 1 – This site is located on land owned by the District in section 27 of Klondike Township, Kittson County. The District is preparing plans and will be looking into the feasibility of this project.

Klondike 2 – This site is located in sections 1, 2, 11, & 12 of Klondike Township, Kittson County, and is under the same status as the Klondike 1 site.

PROGRAM ACTIVITY

Stream Flow Monitoring: Stream flow and velocities will continue to be monitored and recorded for each of the 28 sites that have been developed. 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 River Watch program will be implemented with the Tri County school and the Kittson County 4-H groups. This hands on water quality program will also be expanded if cooperation is obtained from other interested schools.

The Lower Red TMDL – watershed study will proceed to year 2 in 2013. 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.

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.

Drainage Water Management Grant: Utilizing 50% funding from the MN Board of Water & Soil Resources, the District will pursue drainage water management initiatives for new tile systems. The goal of this project is reduce nitrogen and other pollutants from discharging out of tile systems.

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.

BUDGET

The District held a budget hearing in September 2012 to review, adopt, and approve an administrative budget for 2013. The approved budget is listed below. The TRWD levied taxes in the amount of \$212,000 for payable 2013.

Administrative Budget	2013 Proposed
Administrative	65,000
Auto Expense	3,000
Capital Outlay	15,000
Conferences & Meetings	8,000
Dues & Subscriptions	2,000
Engineering	25,000
Information & Education	1,000
Insurance	3,700
Manager's Per Diem & Expense	8,000
Office Supplies & Miscellaneous	1,000
Payroll Tax Expense	37,000
Postage & Delivery	750
Printing & Advertising	1,000
Professional & Legal	14,000
Rent	5,000
Telephone	1,400
Totals	209,850

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 Drees, Risky & Vallager, LTD. This audit covers the period of January 1, 2012 to December 31, 2012. A complete version of the audit is available upon request.