

TWO RIVERS WATERSHED DISTRICT

IN ROSEAU, KITTSON, & MARSHALL COUNTIES



2018 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 2018 Annual Report. It contains information about the District's projects, programs, and initiatives through the year.

As a local unit of government, the Two Rivers Watershed District operates under Minnesota Statutes 103E – the drainage law – and 103D – the Watershed law. These statutes govern water management relative to lakes, rivers, streams, groundwater and other water related parameters. The District's water management focus is 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, two appointed by the Roseau County Commission and 5 appointed by the Kittson County Commission, each to serve a 3 year term. The District employs 2 full time staff to perform the duties of carrying out water management activities set forth in MN Statute 103D. It manages over 92 miles of legal ditch systems, operates and maintains 3 impoundments which store over 9,000 acre feet of flood water, and operates and maintains 6 other projects for drainage and flood control purposes. The District is also involved with water quality studies, flow monitoring, surveying, snow surveys, enforcement of the buffer law, and has adopted rules which require permits for construction of certain water related activities.

Several projects are in the planning stages, including the latest impoundment 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 40,000 acre feet of water.

For 2019 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.

2018 LIST OF MANAGERS

Darrel Johnson, **President**

2224 190th Ave
Hallock, MN 56728
(218) 843-2496
Member since 2010
Term Expires: October, 2020

Paul Olsonawski, **Treasurer**

3762 285th Ave
Lancaster, MN 56735
(218) 762-1911
Member since 2011
Term Expires: October, 2019

Gary Johnson

2416 250th Street
Hallock, MN 56728
(218) 843-3528
Member since 2015
Term Expires: October 2018

Roger Anderson

1561 110th Street
Drayton, ND 58225
(218) 455-6269
Member since 2000
Term Expires: October, 2018

Rick Sikorski

30825 110th Ave
Lancaster, MN 56735
(218) 782-2783
Member since 2018
Term Expires: October 2021
Replaces Allen Brazier

Daryl Klegstad, **Secretary**

4151 210th St,
Halma, MN 56729
(218) 265-2073
Member since 2013
Term Expires: October 2019

Allen Brazier, **Vice President**

20463 230th St
Greenbush, MN 56726
(218) 782-2456
Member since 2012
Term Expires: October 2018

Bruce Anderson

18960 170th Ave.
Greenbush, MN 56726
(218) 782-3147
Member since 2017
Term Expires: October, 2020

Joel Muir

2339 250th Ave
Hallock, MN 56728
(218) 843-2080
Member since 2018
Term Expires: October 2021
Replaces Gary Johnson

Office Staff

Matt Thompson
Head Technician
Matt.thompson@tworiverswd.com

Dan Money
District Administrator
dan.money@tworiverswd.com



Office Information:

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

Location: Lower Level, Kittson County Courthouse

Office Hours: 7:00 am – 5:00 pm, M-Th
8:00 am – 4:30 pm, 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 staff supervision / human resources, long range plans, coordinating meetings, financial management, project management, ditch inspections,

data practices compliance, water quality monitoring, data analysis, and performing investigations relating to District projects.

- *Head Technician:* The Technician is responsible for field work relative to District programs, ditches, projects, and inventories. This includes ditch survey work, stream flow monitoring, culvert inventory, reporting, processing permit applications & permit review, geographic information systems, data analysis, and other technical duties.

CONSULTANTS

Engineering services for 2018 were performed on a project specific basis by Widseth, Smith, & Nolting – Crookston, MN, 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 Brady Martz & Associates, P.C., 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. Citizen's Advisory Committee 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.

GOVERNANCE

The TRWD was established in October of 1957 and is made up of 7 board members including 2 from Roseau County and 5 from Kittson County. Board members are appointed to a 3 year term by their respective County Commission. The Board of Managers meets once per month to conduct the regular business of the District, and special meetings are occasionally held.

The TRWD established By-Laws and follows them accordingly for meetings and day to day activities. In addition, the Board prescribed their first 'Overall Plan' in 1958, which was the first overall plan of any watershed district in the state of Minnesota. This plan has been updated several times over the years, and was last extensively updated in 2004. The TRWD will be updating this plan in the next 1-2 years through the the new "One Watershed, One Plan" process dictated by the State of Minnesota. This will be a joint cooperative planning process between the Roseau SWCD, Kittson SWCD, Roseau County, Kittson County, and the TRWD. When completed, this plan will guide and direct the daily, monthly, and yearly operations of the District.

The District operates under Minnesota Statute, 103D, also known as the 'Watershed Law'. This statute gives watershed districts authority to work on flood

control, drainage, water quality, water supply, and other issues that affect water natural resources within rivers, lakes, streams and groundwater. Nine projects have been constructed and another is in the works to help with drainage and alleviate flooding. In addition, the District utilizes Minnesota Statute 103E (the Drainage Code) to maintain over 68 miles of legal drainage ditches.

The District is a member district of the Red River Watershed Management Board, which was established in 1976 by the MN Legislature. The RRWMB is made up of 7 watershed districts within the Minnesota side of the Red River basin. Its mission is to “institute, coordinate, and finance projects and programs to alleviate flooding and assure the beneficial use of water in the watershed of the Red River of the North and its tributaries”.

Since its inception, the Board of Managers have established numerous policies regarding various management issues. Many of these relate to permits issued under the *Rules of the Two Rivers Watershed District*, and others relate to general activities of the District. The District follows its stated policies whenever possible, and uses discretion when applying these policies.

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 2017 are listed below.

Citizen’s Advisory Committee

Name	Location	Representing		Name	Location	Representing
Keith Cummins	Karlstad	Rural		Luke Novacek	Greenbush	Rural
City Representative	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
Brenda Sather	Greenbush	City		Jim Rinde	Badger	City
Roger Green	Greenbush	Friends of LBSP				

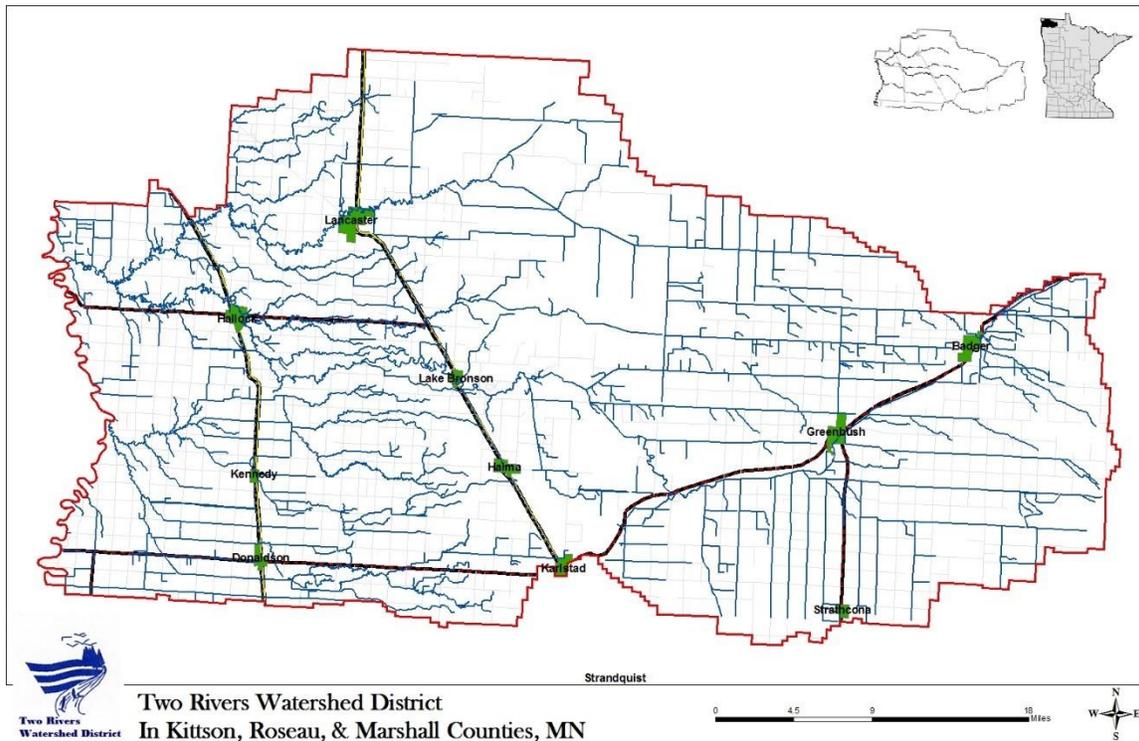
Technical Advisory Committee

Name	Location	Representing	Name	Location	Representing
Kelly Bengtson	Hallock	Kittson Hwy Dept	Brian Kettring	Roseau	Roseau Hwy Dept
Jamie Osowski	Hallock	Kittson SWCD	Jonathon Eerkes	Karlstad	TNC
Laurie Fairchild		USFWS	Jim Schwab	Hallock	NRCS
Danielle Kvasager	Detroit Lakes	MN Pollution Control Agency	Matt Fischer	Bemidji	BWSR
Dennis Topp	Baudette	DNR Fisheries	Kyle Arola	Middle River	DNR Wildlife
Stephanie Klamm	Thief River Falls	DNR Waters	Lane Nordin	Hallock	Kittson Co. Zoning
Janine Lovold	Roseau	Roseau SWCD	Danni Halvorson	Viking	International Water Institute
Scot Olson	Hallock	Kittson DEM	Nate Dalager	Thief River Falls	HDR Engineering
			Blake Carlson	Crookston	WSN Engineering

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 land area of the District encompasses 1,454 square miles. The boundary does not follow political boundaries, rather it follows drainage boundaries. 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.



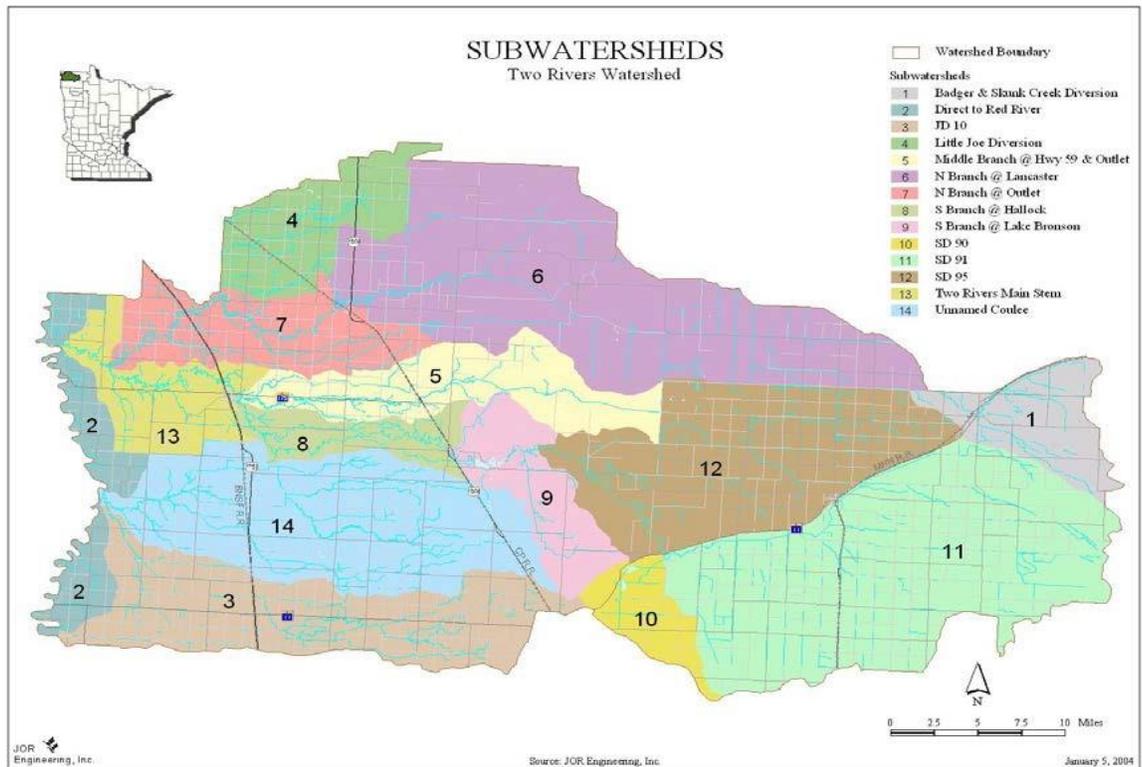
The Two Rivers actually consists of three branches – the North, Middle and South Branch. The South Branch arises southeast of Badger, Minnesota and flows in a westerly direction along the south side of Badger and through the cities of Greenbush, Lake Bronson, and Hallock. The Middle Branch drainage area 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, powder coating, and a vehicle track company. Also, a motor coach / bus assembly plant is located in Pembina, North Dakota, and a snowmobile / all terrain vehicle manufacturing company is located just east of the District boundary in Roseau, MN. Other major employers are healthcare centers in Greenbush, Karlstad & Hallock, several

school districts, and a county courthouse. Area population trends show a steady decline over the past 3 decades.



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	9.0 mile channel improvement	Thompson & Hazelton Townships, Kittson Co	1968; PL 566	Yearly Inspection & Maintenance
North Branch Project #2	11.8 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	2.6 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 Project #10	PL566 Set back dikes and Side water inlets along 8.65 miles of waterway	Springbrook Township sections 22,23,28,29,30; Davis Township sections 25,36	December 2013; Petition Project	Yearly Inspection & Maintenance

Polonia Clean Water Retention Project #12 (Quick) – The ‘Quick’ project was completed jointly 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 that was planned, engineered, and constructed by the NRCS through their ‘Wetland Reserve Program’. The purpose of the project is to restore wetlands, habitat, and provide flood control. Construction was completed in 2018, and the project restored a wetland – upland habitat complex on District owned land. In addition to habitat, the project will store approximately 1,100 acre feet of floodwaters in the state ditch #95 subwatershed.



North Branch drop structure – SD 84



North Branch Drop Structure – JD 31



Outlet Structure – Horseshoe Lake



North Branch Drop Structure



Soler 4 Ditch



Grade Stabilization – Springbrook #10



Ross #7 Impoundment



Wildlife Weier at Nereson Impoundment



Outlet Structure at Ross #7 Impoundment



Main Outlet Structure at Nereson Impoundment

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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Meandering Channel w/ set back levy – County Road #61, Springbrook Twp, Kittson County



FARMSTEAD RING DIKES

After the historic flood of 1997, the District participated in a cost share program with the State of Minnesota and the Red River Watershed Management Board to design and install farmstead ring dikes. The dikes were designed and engineered by the TRWD and installed by local contractors. The landowner generally paid 12.5% of the cost, the state paid 75%, and 12.5% was paid by the RRWMB/TRWD. Using this program, 25 farmstead ring dikes were built.



PROJECTS NOT CONSTRUCTED

The following table shows several projects that were initiated but were dropped for various reasons.

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
Juneberry Ridge	Impoundment	Klondike & Polonia Townships	Dropped 1990	Permitting/MCBS/Mediation
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:

During the wet years of the 1990's, a group of landowners came to the TRWD asking for help with severe and repeated flooding problems. The TRWD Board of Managers convened the 'Big Swamp Project Work Team' to study the problem and come up with solutions. From 2008 to 2012, the BSPWT met to identify the problem, discuss potential solutions, and come up with a range of alternatives.

From 2012-2015 the TRWD investigated the range of alternatives, and ultimately decided to move forward with a large scale impoundment. The impoundment was based upon the BSPWT recommendations and intended to accomplish significant flood damage reduction as well as achieving natural resource enhancements. The District purchased 12 square miles of land with the assistance of the Red River Watershed Management Board, and initiated the project.

Proceeding under MN Statute 103D, the TRWD appointed HDR Engineering to conduct the necessary survey work, soil borings, and other data collection needed to prepare an Engineer's Report. In addition, the TRWD was awarded cost share funding through the Natural Resources Conservation Service to prepare a Plan & Environmental Assessment for the proposed project.

The Engineer's Report was completed in accordance with MN Statute 103D, and a public hearing was held on November 1, 2017. The Board of Managers officially accepted the Engineer's Report and ordered the preparation of detailed plans and specifications. Work is proceeding with the NRCS Plan / EA. The District is proceeding with permitting, funding, and other project aspects.

The project is expected to be constructed over time in 5 phases, and when complete will be able to store up to 40,000 acre feet of floodwater, provide an adequate outlet for Lateral 1 of State Ditch 95, store a portion of the overflows that enter the TRWD from the Roseau River, address flooding on the Red River, will help to protect and enhance a prairie rich fen complex, and will have significant water quality benefits to all three branches of the Two Rivers.

DITCH SYSTEMS

In addition to the above projects, the District is the 'Ditch Authority' for several legal ditch systems (See map & table below). Minnesota Statute 103E, the Drainage Law, governs how the TRWD must inspect, operate, and maintain these ditches.

A number of other watercourse projects have been established under Minnesota Statute 103D, the Watershed Law, which also governs how the TRWD inspects, operates, and maintains each project.

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

Legal Ditches Statute 103E	Length (Miles)	Township(s); County	Fund Balance 12- 31-18	2019 Levy
State Ditch #49	5.25	Norway; Kittson Co	\$ 32,542	\$ 2,500
State Ditch #85 Improvement	0.75	Poppleton; Kittson Co	\$ 31,152	\$ 0
Judicial Ditch #3	5.5	Teien; Kittson Co	\$ 38,220	\$ 6,600
Judicial Ditch #10	31	Davis, Svea, Teien, Kittson Co	\$ 43,770	\$ 12,000
Kittson CD #7	6.5	Svea; Kittson Co	\$ 42,573	\$ 1,000

Kittson CD #10	7.0	Deerwood; Kittson Co	\$ 17,527	\$ 7,500
Roseau CD #4	7.5	Lind, Dewey; Roseau Co	\$ 13,862	\$ 15,000
Kittson CD #21		Hallock, Kittson Co	\$ 7,088	\$ 5,000
KCD Div 1 Impr.	2	Hallock, Kittson Co	\$ (122,842)	\$ 25,000
Watercourse Projects Statute 103D				
Middle Branch 1	9.6	Hazelton, Thompson; Kittson Co.	\$ 24,838	\$ 5,000
North Branch 2	11.1	Granville, Hampden; Kittson Co.	\$ 19,614	\$ 5,000
Nereson	Impoundment	Nereson; Roseau Co	N/A	N/A
Soler 4	5.0	Soler; Roseau Co	\$ 22,546	\$ 5,000
Dewey 5	1.8	Dewey; Roseau Co	\$ 18,153	\$ 10,000
Kennedy 6	1.5	Tegner, Skane; Kittson Co.	\$ (61,253)	drainage lien + \$ 10,000
Ross 7	impoundment	Ross; Roseau Co	\$ 53,582	N/A
Springbrook 10 / PL566	9.0	Springbrook & Davis Townships, Kittson Co	\$ (190,312)	Drainage lien + \$10,000

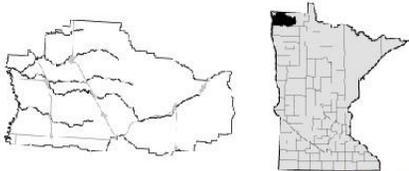
These systems are inspected annually and each system is surveyed a minimum of once every 5 years to assess any changes from erosion or sedimentation. In 2018 the systems surveyed were SD 49, Dewey 5, Kennedy 6, and KCD 21. For 2019 surveys are scheduled for KCD 7, JD 10 Br. B, SB 10, and the outlet of KCD 21.

Maintenance activities are undertaken if deemed necessary. These activities include beaver dam removal and beaver trapping, spraying of cattail and other nuisance vegetation, removal of silt and sediment, repair of sloughed side slopes or eroded culverts, and other items as needed. Detailed maintenance reports are kept and filed each year in the ditch file.

In 2018 slough repairs were completed on JD 10 branch B and on Kennedy #6. Sediment removal was done on the Middle Branch Project, and extensive cattail spraying was done on numerous systems. Kittson County Ditch 21 Diversion #1 was improved through a petition process, and Kittson County Ditch #21 was turned over to the TRWD by the Kittson County Commission.

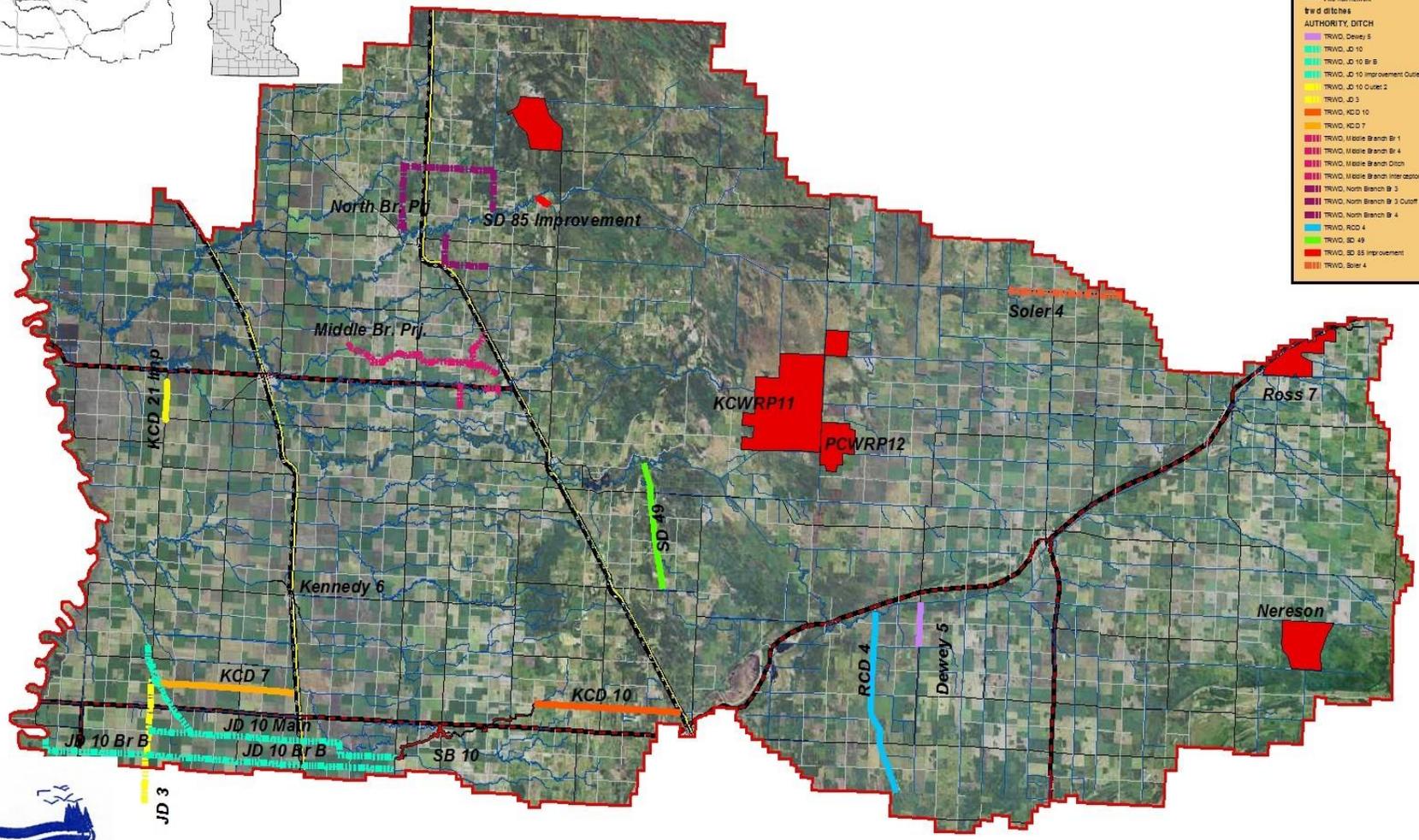
The District, as the ditch authority for these ditches, is also responsible for maintaining a ditch fund to pay for maintenance expenses. Each year the District assesses the needs of each ditch and a tax is levied against the “benefited area” of each ditch, if necessary and if the funding is needed.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



Legend

- Projects TRWD 2014
- Projects Constructed
- TRWD Main Network
- TRWD Ditches
- AUTHORITY DITCH
 - TRWD, Dewey 5
 - TRWD, JD 10
 - TRWD, JD 10 Br B
 - TRWD, JD 10 Improvement Outlet
 - TRWD, JD 10 Outlet 2
 - TRWD, JD 3
 - TRWD, KCD 10
 - TRWD, KCD 7
 - TRWD, Middle Branch Br 1
 - TRWD, Middle Branch Br 4
 - TRWD, Middle Branch Ditch
 - TRWD, Middle Branch Interceptor
 - TRWD, North Branch Br 3
 - TRWD, North Branch Br 3 Cutoff
 - TRWD, North Branch Br 4
 - TRWD, RCD 4
 - TRWD, SD 49
 - TRWD, SD 85 Improvement
 - TRWD, Soler 4



Two Rivers Watershed District
Projects and Ditches



PROGRAM STATUS

Watershed Restoration & Protection Strategies - “WRAPS”

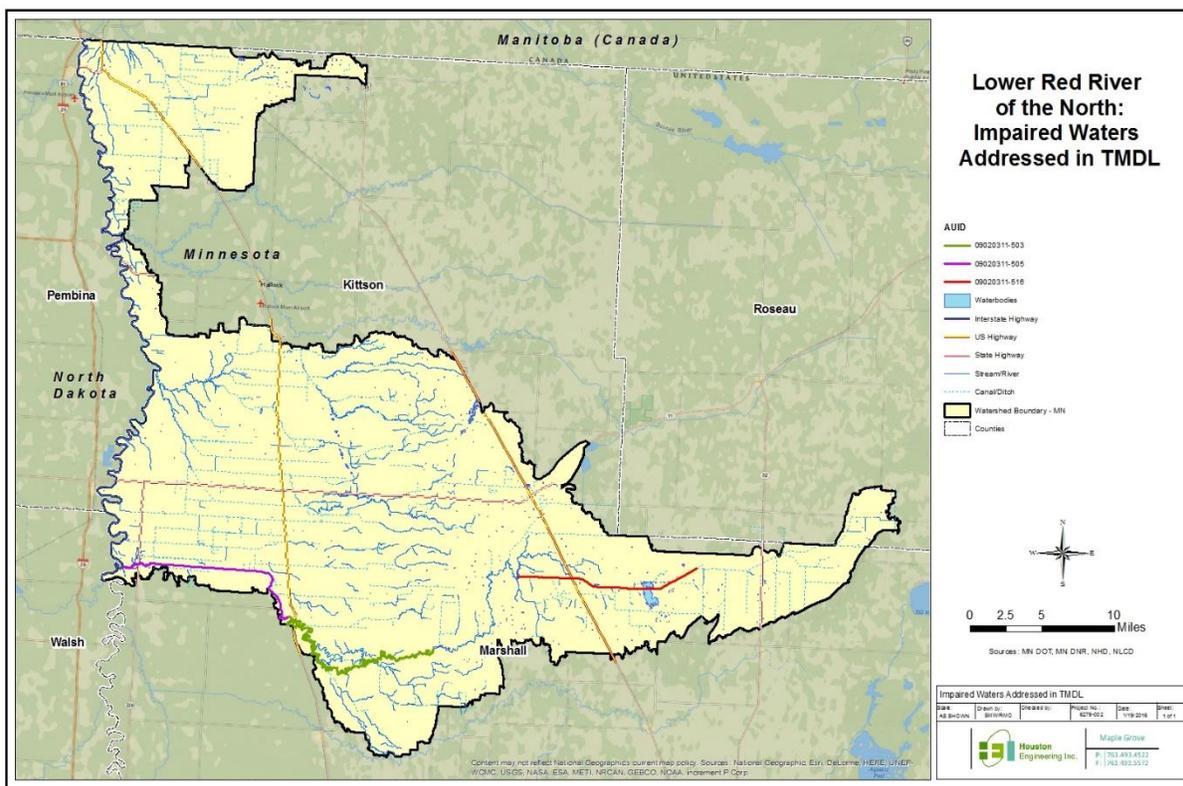
Lower Red River & Two Rivers WRAPS

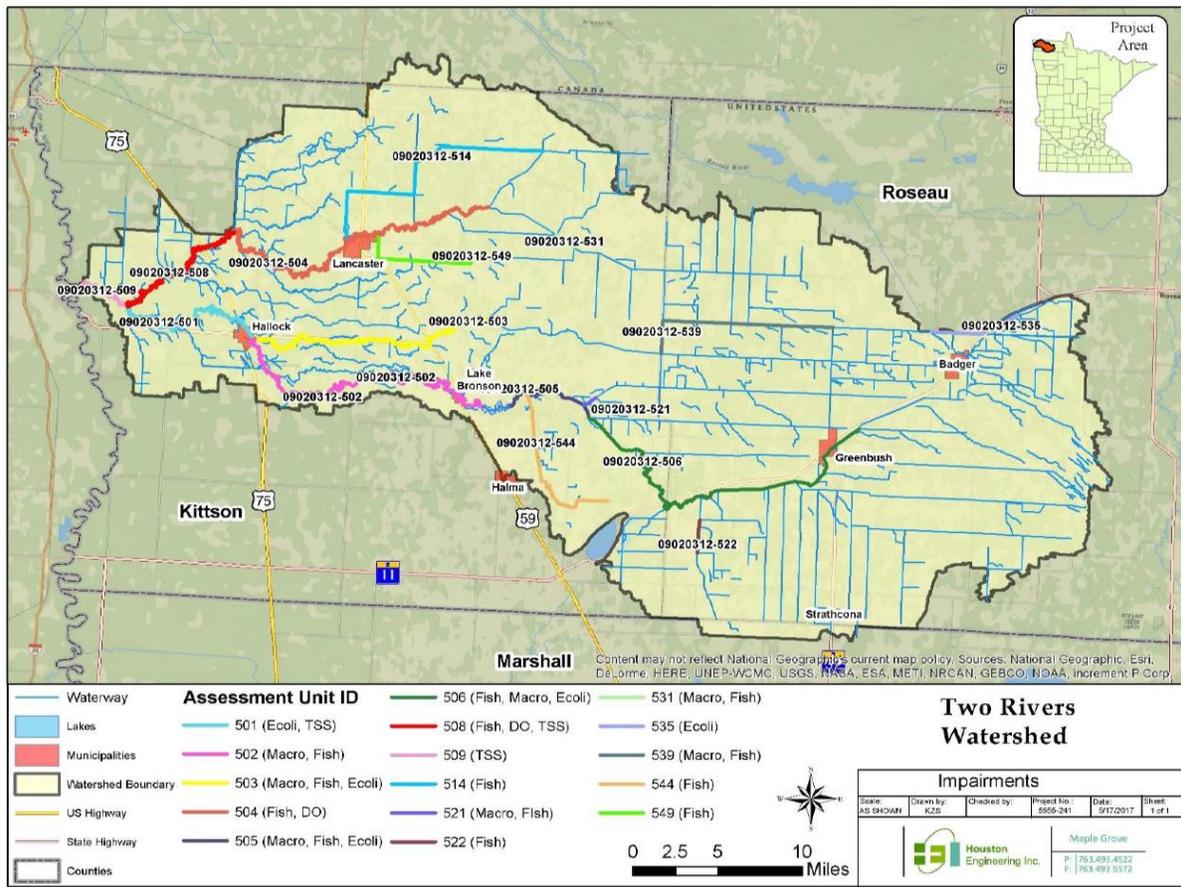
The “Lower Red River Watershed Restoration and Protection Strategy” (LRRWRAPS) project encompasses all of the Joe River, the Tamarac River, and an unnamed coulee within the Two Rivers Watershed District (see map below). The Two Rivers Watershed Restoration and Protection Strategy (TRWRAPS) contains the drainage area of the Two Rivers.

These projects were 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 was collected to get a full picture of the quality of the resource. The data was then analyzed to determine if any portions of the sub-watershed are impaired or polluted in any way. Once impairments are identified, further investigation and research was done to determine the source of impairment and how best to address the problems, if possible.

A series of reports and documents were produced from all of this work, including a ‘monitoring and assessment report’, ‘hydrology report’, ‘watershed restoration and protection strategy’, ‘stressor ID’, and ‘total maximum daily loads’. These reports were reviewed by the MN Pollution Control Agency and then submitted to the US Environmental Protection Agency for review and approval. Once the EPA approves, federal and state money is then made available to address the water quality impairments within the watershed.

All information at this point has been reviewed by the MPCA and has been submitted to the EPA. The District is currently waiting for their review and approval. Maps showing the study areas & water quality impairments are shown below.



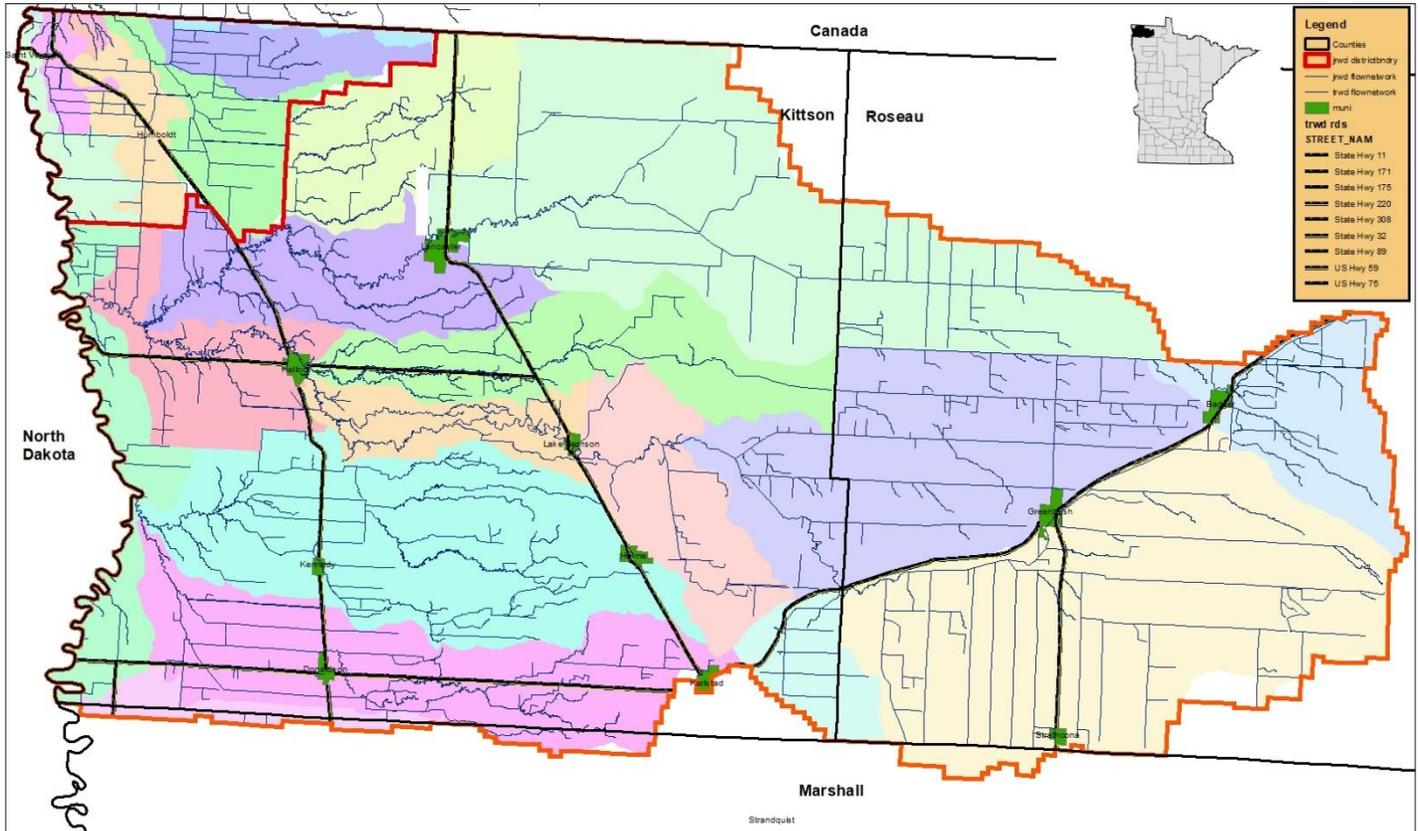


ONE WATERSHED, ONE PLAN

Watershed Districts are required to complete and update an “Overall Plan” once every 10 years. Counties and Soil & Water Conservation Districts are also required to regularly write and update local plans. Recently the State of Minnesota enacted legislation allowing the transition from Overall Plans to a new plan known as “One Watershed, One Plan” (1W1P). This new version of planning combines watershed district plans, County Soil & Water Conservation District plans, and County Comprehensive Local Water Plans into one plan that is based on drainage boundaries rather than political boundaries.

In 2018 the Two Rivers Watershed District, Roseau Soil & Water Conservation District, Kittson Soil & Water Conservation District, Roseau County, and Kittson County entered into an agreement to complete a 1W1P known as the “Two Rivers Plus 1W1P”. This new plan will take a look at water quality, water quantity, conservation of natural resources, and focus in on the topics of flooding, drainage, erosion and sedimentation, and other topics. It will contain statements of problems, outline goals and strategies, designate funding sources, and describe what will be done and by who to address each issue.

A Policy Committee, Citizen’s Advisory Committee, Technical Advisory Committee, and a Steering Team have all been organized and have begun to meet regarding the plan. A series of public meetings will be held in 2019 to provide more information and solicit feedback for the plan. More information can be obtained at: <https://www.tworiversplus1w1p.org/>



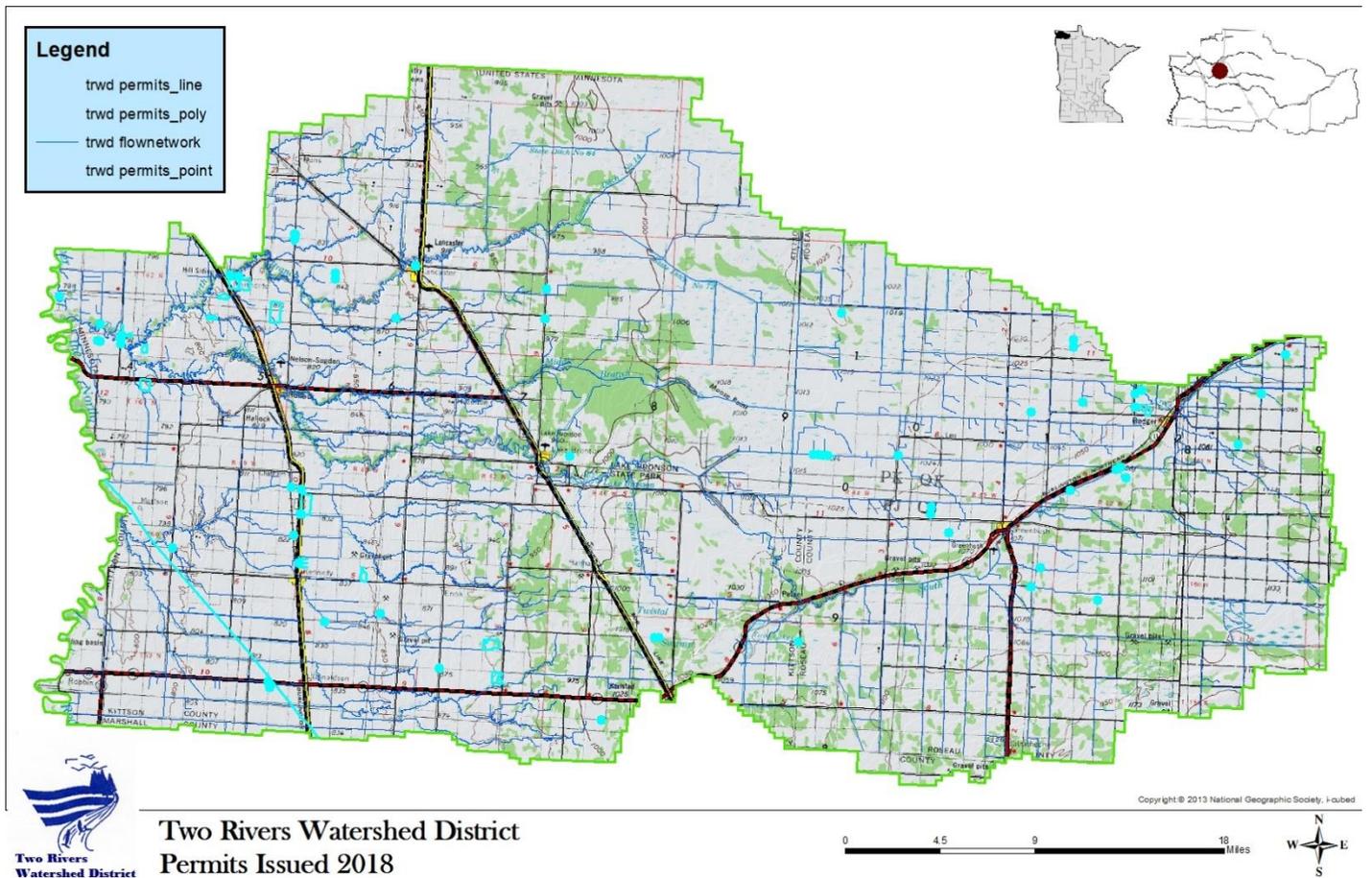
Two Rivers IWIP Planning Boundary
 Kittson & Roseau Counties; Kittson & Roseau SWCD's; Two Rivers Watershed District

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.



Eight-Five permits were issued during 2018.

2018 DISTRICT ACTIVITIES

BOARD MEETINGS

Twelve regular monthly board meetings were held during the course of 2018, each on the first Wednesday of each month. The Annual Meeting was held on January 3, 2018. One special meeting and one budget hearing of the Board were held during the year. Meeting minutes are available on the District’s website at www.tworiverswd.com.

NON-DISTRICT MEETINGS

The District Managers and District staff attended several non-District meetings during the course of 2018 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 Summer Tour and their 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

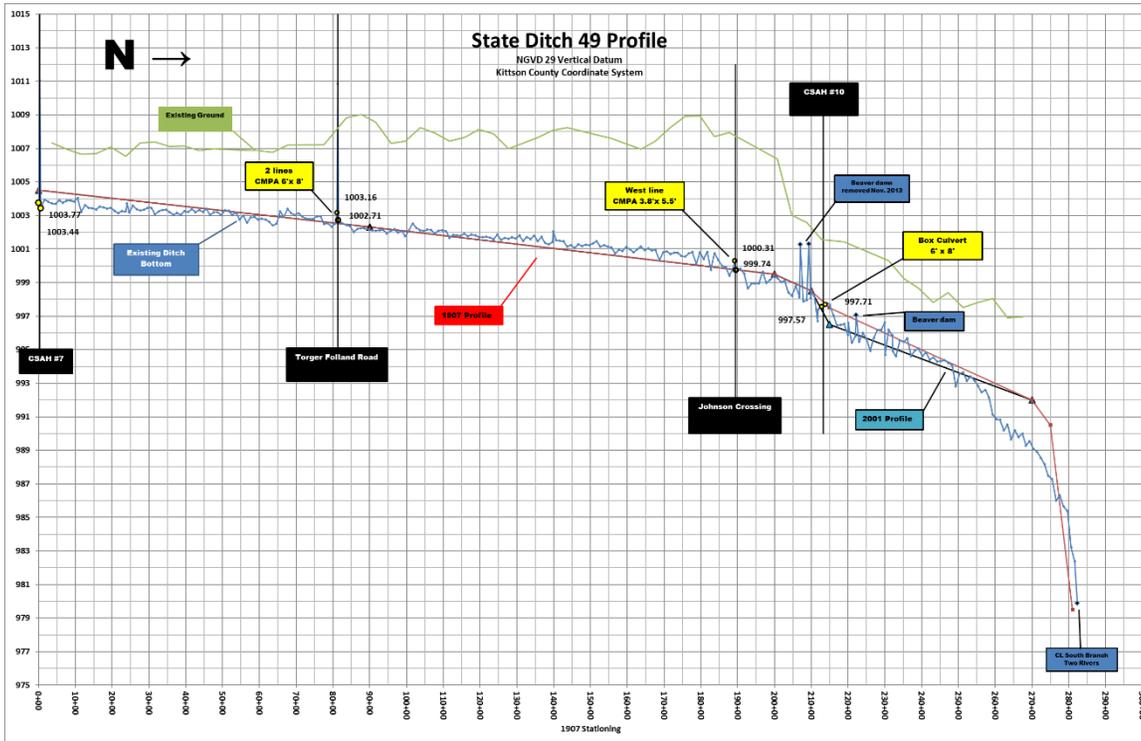
The District employed a full time District Administrator and a full time Technician during 2018.

Excerpts From 2018 District Newsletter

Ditching and Drainage Law in NW Minnesota

Drainage is one very important aspect for crop production in northwest Minnesota. It is well documented that too much standing water after a substantial rainfall for too long of a period will cause stress to crops and in severe cases will cause crop loss. Because of this, ditching can be an important tool to remove water off of cropland in a timely manner and convey it to an adequate coulee or river system (outlet). When designing and permitting ditches, the Two Rivers Watershed District advocates an “**adequate and equitable**” approach. This considers that ditches must be *adequately* sized to be able to drain cropland in a timely manner. However, drainage must also be *equitably* distributed so that flooding is not reduced in one area but consequently increased in others.

Ditches in our area can be classified into 3 categories – private ditches, road ditches, and legal ditches. Private ditches are self-explanatory. They are paid for and constructed by individuals or groups of individuals, and the long term maintenance is up to the individual. Road ditches often serve as outlets for field and private ditches. They are constructed and paid for by road authorities, however the maintenance & associated costs usually fall to private individuals. Legal ditches are governed by the Minnesota Drainage Law, MN Statute 103E, which has been around since the early 1900's. These must be petitioned by a group of landowners, and are designed, constructed and maintained either by a County or by a Watershed District. These legal ditches are identified with a name and number, such as “County Ditch #7, State Ditch #49, or Judicial Ditch #10.



Funding for maintenance is obtained by a tax that is levied annually upon the lands that are in the 'benefitted area' of the ditch. This in general can be described as all of the lands that drain to a ditch system, and was determined by appraisers at the time that the ditch was established. The Ditch authority determines the levy amount from year to year, based upon maintenance needs.

Questions regarding legal ditches can be directed to our office to the County boards of Kittson, Roseau, or Marshall County (depending on the location of the ditch). More information can also be found on our website, www.tworiverswd.com.

TRWD Welcomes New Board Member

Bruce Anderson from rural Greenbush was recently appointed by Roseau County to serve a 3 year term on the Board of Managers of the Two Rivers Watershed District. He officially began his term on November 1, 2017. He replaces Jim Kukowski, who served on the Board the past 14 years from November 1, 2003 through October 31, 2017.

The 7 member Board is made up of 5 members from Kittson County and 2 members from Roseau County, all appointed by their respective County Boards. Anderson will represent a roughly 300 square mile area of the Two Rivers Watershed District within Roseau County lying south of MN Highway 11. It includes the Cities of Greenbush, Badger, and Strathcona. Drainage systems in this area are State Ditch 90, State Ditch 91, Roseau County Ditch 4, Roseau County Ditch 5, and Roseau County Ditch 13. It also includes the Nereson Impoundment and the Ross #7 Impoundment.

The Two Rivers Watershed District is a local unit of government, and focuses on water issues relating to drainage, flood control, and water quality. It was established in October 1957, and was the second watershed district in the state to be organized.

The District would like to thank Jim Kukowski for his years of service on the Board, and welcomes Bruce Anderson.

Featured Project: Kittson County Ditch #21 Diversion 1 Improvement

This past summer, the Two Rivers Watershed District completed construction of a ditch project known as the Kittson County Ditch #21 Diversion 1 Improvement. This project re-graded and widened an existing ditch to provide better drainage and remove floodwater from ag lands more efficiently. The improved ditch now has a steeper grade to help achieve this goal.

The project is located four miles west of the City of Hallock, adjacent to Kittson County Road #34. The project followed the process dictated by MN Statute 103E, the 'Drainage Law' and the work was done by Kraulik Excavating from Karlstad.

Through this process a petition was filed by local landowners asking for the project. The petition stated the current ditch was

inadequate because flooding was occurring in 3 sections located in Hallock Township. Following MN statutes, an engineer was appointed by the District, and three Viewers were appointed to look at the lands draining to the ditch and assess ditch benefits to each parcel. A public hearing was held, the ditch was established, and the contractor constructed the project according to specifications.



The improved ditch now has a 10' bottom, .04% grade (improved from a .02% grade), 4:1 inslope, 3:1 backslope, 16.5' wide buffer, and several culverts were altered to provide greater flow capacity. The project will be paid for by taxes levied against the lands that are in the upstream drainage area and designated as benefitted by the project. Inspection, operation and maintenance is under the jurisdiction of the Two Rivers Watershed District.

The TRWD currently manages over 95 miles of drainage systems. All ditches are on an inspection and maintenance schedule whereby they are visually inspected annually and surveyed at least once every 5 years to determine if sediment has accumulated in the ditch. Maintenance activity such as mowing, spraying, removing beavers, brush management, or removing sediment, or repairing sloughs and other damage is performed on an as needed basis. Please contact the District office for more information on the District ditch survey inspection and maintenance program.

TRWD Welcomes New Board Members

Beginning in November 2018, the Board of Managers of the Two Rivers Watershed District will have two new faces at their monthly meetings. Rick Sikorski from rural Greenbush was recently appointed by Roseau County to serve a 3 year term on the Board of Managers and Joel Muir was appointed by the Kittson County Board of Managers also for a 3 year term. Roger Anderson, who has served on the Board since 2001, was re-appointed by the Kittson County Commission for a 3 year term.

Sikorski and Muir replace outgoing members Allen Brazier, who served six years from 2012-2018, and Gary Johnson, who served three years from 2015-2018. The 7 member Board is made up of 5 members from Kittson County and 2 members from Roseau County, all appointed by their respective County Boards.

Sikorski will serve the area of the District located in Roseau County generally north of MN State Highway 11 and west of the City of Badger. This area is approximately 210 square miles and contains the headwaters of both the North Branch and the Middle Branch Two Rivers, and the State Ditch 72 and State Ditch 95 systems.

Muir will sever the area of the District located in Kittson County east of U.S. Highway 75 between the Northcote to just south of Hallock and east to the county line. This area is approximately 250 square miles and contains the South and Middle Branches of the Two Rivers.

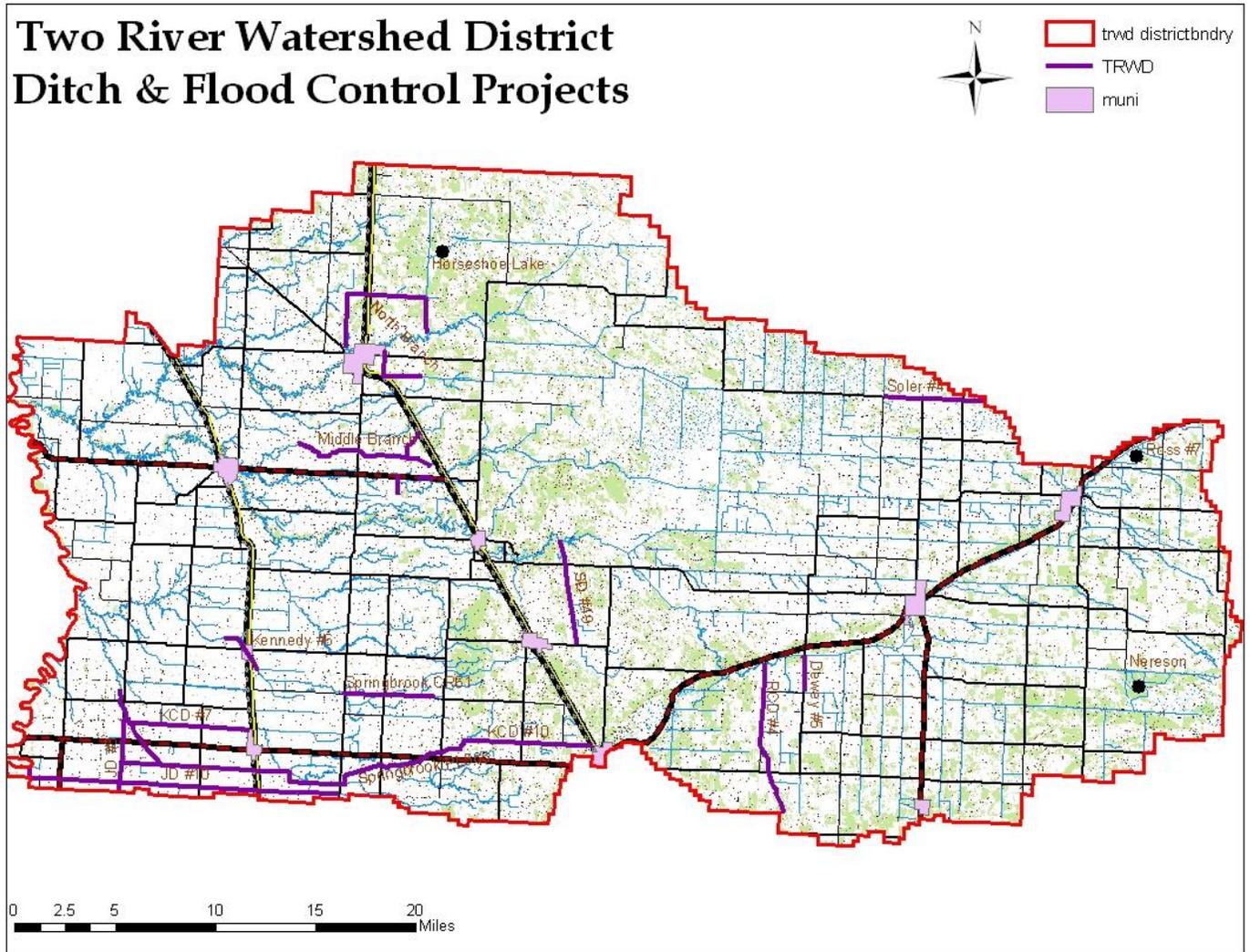
The Two Rivers Watershed District is a local unit of government established in October 1957 and was the second watershed district in the state to be organized. The TRWD focuses on water issues relating to drainage, flood control, and water quality and is known as a special district that is governed by MN Statute 103D, the "Watershed Law". Three flood control impoundments that can store over 9,200 acre feet of water have been constructed by the District and another is being planned to store an additional 40,000 acre feet. The District manages and maintains over 95 miles of legal drainage ditches providing agricultural drainage and flood control. Eight projects have been constructed to provide new drainage or improve existing systems. Twenty two farmstead ring dikes have been cost shared and constructed by the District providing flood protection. The District has undertaken water quality studies, culvert inventories, snow surveys, and monitors stream flows to provide data to decision makers.

The District would like to thank Allen Brazier and Gary Johnson for their years of service on the Board and welcomes Rick Sikorski and Joel Muir.

Ditch Maintenance Report: 2018 Was a Busy Year!

Once again the Two Rivers Watershed District had a busy year maintaining the drainage ditches and flood control projects under its jurisdiction.

Legal drainage systems are relied upon by landowners and others to provide timely drainage to remove excess water from cropland. This prevents crop damage and provides a level of flood control by preventing damages to public infrastructure like roads, bridges, and culverts. Common problems within ditches are beavers and beaver dams, excessive sediment due to both wind and water erosion, excessive cattail and vegetation growth, brush, and bank sloughing.



The TRWD maintains over 95 miles of legal drainage systems and waterways and operates three flood control impoundments. The Nereson, Ross #7, and Horseshoe (Skull) Lake flood control impoundments were inspected and maintained as needed. Operation of the flood control gates at these impoundments was not needed during the spring and summer of 2018. However, there were beavers and beaver dams removed in order to maintain proper operation of the impoundments.

Over 95 miles of ditches were inspected and maintenance was performed as needed. Cattail and brush was sprayed on the Dewey #5, Soler #4, Middle Branch Project, North Branch Project, JD #10, Roseau Co Ditch #4, and Kittson Co Ditch #10. Sloughing is a major problem, and repairs to sloughs was performed on Judicial Ditch #10, Kennedy #6, and Kittson Co Ditch #10. Cattail mowing was done on Kennedy #6 and where needed. Sediment removal was done with a backhoe on the Middle Branch Project.



The TRWD utilizes a ditch inspection and maintenance schedule to identify problems, plan for needed maintenance, and keep a record of maintenance activities on all ditches and projects. Each of the District's ditches are

visually inspected annually for evidence of damage or blockage, and they are surveyed at least once every 5 years in order to identify areas that need to be cleaned. Funding for maintenance activities is obtained from a ditch tax that is assessed against property that is benefitted by the ditch. Levies are set by the Board of Managers of the TRWD once per year and certified to the County Boards.

For more information on the District's maintenance program or any of the ditches or projects under the District's jurisdiction, please contact the District office.



The Red River Watershed Management Board Provides Regional Water Management Solutions

Many people may have heard of the Red River Watershed Management Board (RRWMB), but may not know who they are, what they do, or where they do what they do. The RRWMB is one of many organizations working on water management in the Red River Valley, and this adds to confusion. The RRWMB has taxing authority similar to a County, Township, or School District, but most people do not know what the taxes are used for. This article is intended to help identify the who, what, where, when, and why of the RRWMB!

The RRWMB is made up of 7 watershed districts on the Minnesota side of the Red River. These include the Joe River, Two Rivers, Roseau River, Middle Snake Tamarac Rivers, Red Lake River, Wild Rice River, and Bois de Sioux Watershed Districts. Each watershed district has one representative on the Board, which meets monthly. The RRWMB was formed by the MN Legislature in 1976 with the main purpose of reducing flooding on the Red River and its tributaries.

The mission of the RRWMB is to institute, coordinate, and finance projects and programs to alleviate flooding and assure the beneficial use of water in the watershed of the Red River of the North and its tributaries.

The principal objective of the RRWMB is to assist member watershed districts with the implementation of water related projects and programs. The purpose of these is the reduction of local and mainstem flood damages and to enhance environmental and water resource management. To qualify for funding, projects and programs must be of benefit to the whole Red River Basin.

Supporting Objectives

- Coordination – provide leadership for water management
- Financial Support – fund initiatives that encourage consideration of mainstem Red River benefits and enhance environmental and water resources.
- Basin Planning – Assist local, state, regional, national and international efforts through coordination and assistance with implementation.
- Water Quantity – Alleviate flood damages, maintain low flow conditions for the aquatic environment and water supply.
- Water Quality – Assistance for studies, programs, initiatives and projects to improve water quality.
- Erosion & Sedimentation – Assistance for studies, programs, and initiatives to reduce soil erosion and sedimentation.
- Education – development of educational programs related to water & natural resource management concerns.
- Research – Assistance for basic and applied research related to natural resource management within the Red River Basin.

- Public Information – inform the public of water management activities and concerns.
- Conflict Resolution – Work toward resolution of conflicts regarding water management.
- Policies / Rules / Regulations – Comply with policies and regulations of other governmental entities.

Flood control is high on the list of projects. The RRWMB has provided funding for over 40 impoundment projects in the Red River Basin. These projects provide nearly 200,000 acre feet of storage (one acre foot is the area covered by one acre to a depth of one foot – this equals 325,829 gallons of water). These projects contain significant flood control, and at the same time they provide significant environmental benefits by restoring wetlands, providing water quality benefits, and providing wildlife habitat. Funding for projects is from a tax levy collected through member watershed districts. One half of the levy is utilized locally for local projects, and one half is sent to the RRWMB for regional projects.

The RRWMB not only is a funding source, but it is a resource for research and information. It has sponsored and provided information for many studies that are of value. These include surface water drainage and ditching, tile drainage and ditching, Lidar data collection and dissemination, permitting issues, hydrologic and hydraulic studies, and water quality data collection.

Many partnerships have been forged since 1976, and the RRRMB closely works with the Red River Basin Commission, the Red River Retention Authority, the North Dakota Joint Water Resources Board, and others. These all are toward the common goals of flooding, drainage, and water management. An annual conference is sponsored by the RRWMB each spring to coordinate and share information.

In short, the RRWMB is dedicated to providing leadership, guidance, and solutions for managing water in the Red River Basin. For more information, please stop by your local watershed district office, read the insert to this newsletter, or go to WWW.RRWMB.ORG

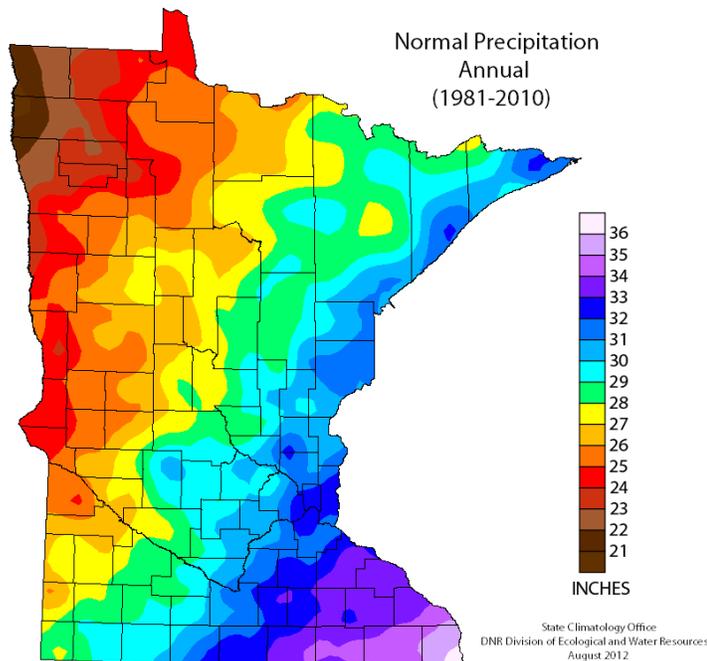
2018 Water Year Summary

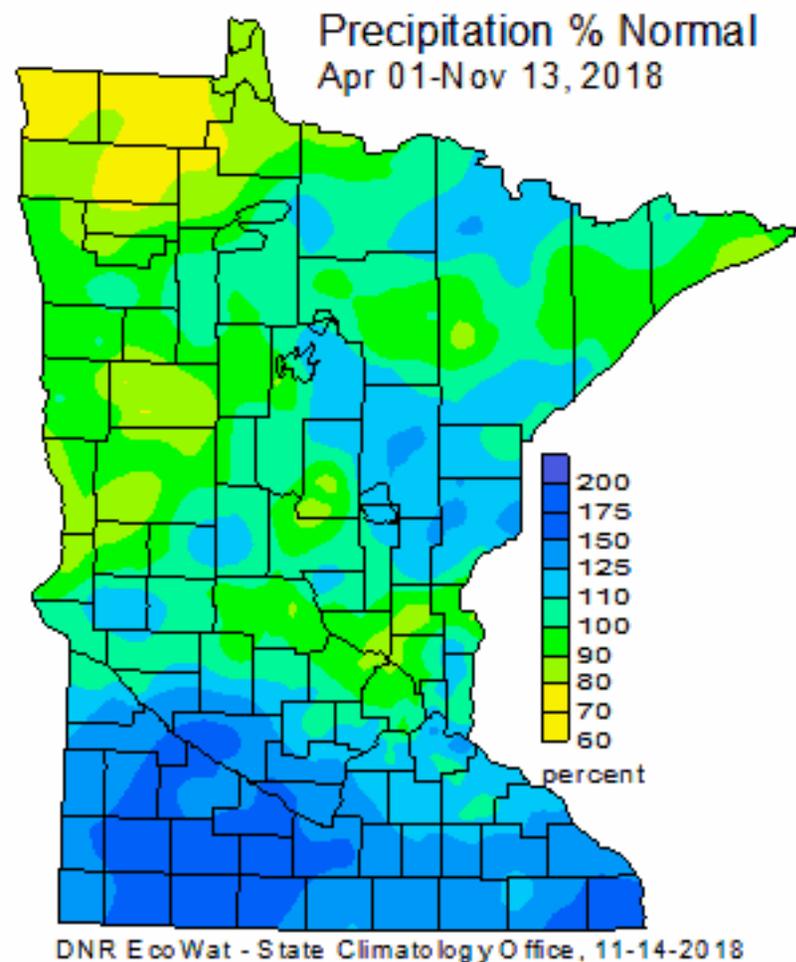
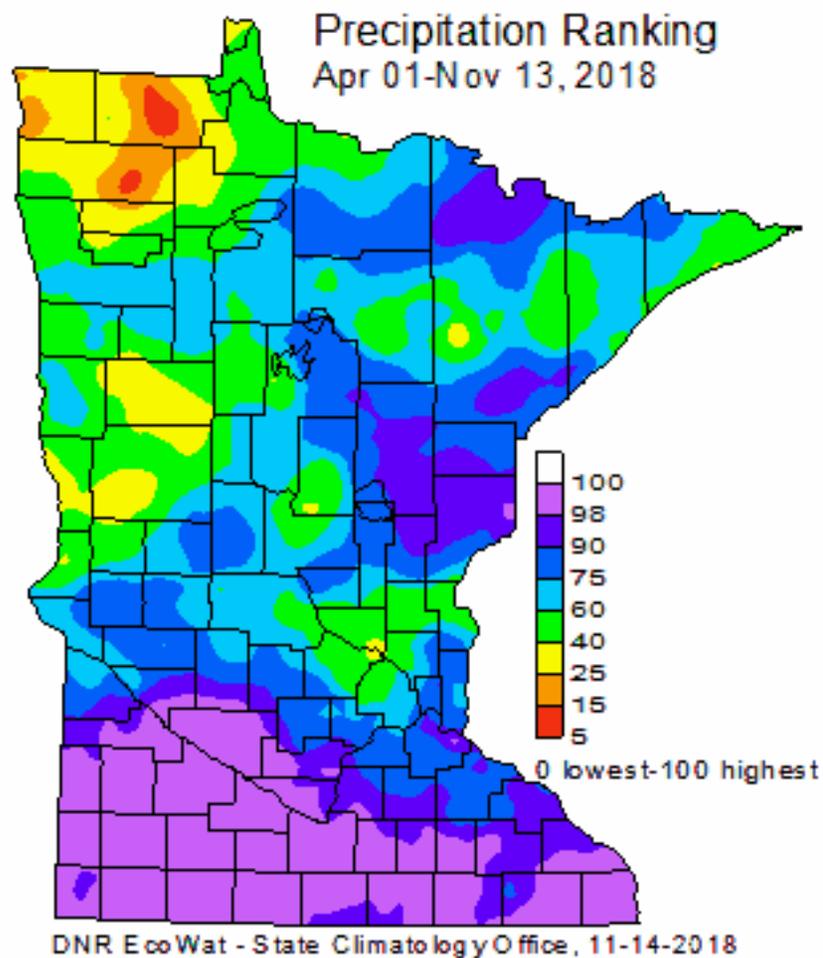
2018 PRECIPITATION

The year was characterized as having below average moisture in the the watershed district. Yearly average precipitation was about 4.5 inches below normal in the Two Rivers Watershed District. The following maps, tables, and associated graphics show the rainfall, stream flows, and departures from normal.

mon	year	Lk Bro	Hallock	Greenbush	Lancaster
Jan	2018	.43	.33	NA	.38
Feb	2018	.30	.24	NA	.26
Mar	2018	.98	.97	NA	.69
Apr	2018	.18	.17	NA	.23
May	2018	1.70	3.01	2.75	2.93
Jun	2018	4.59	3.39	4.00	4.34
Jul	2018	1.28	1.78	2.65	1.92
Aug	2018	1.04	1.50	1.60	1.17
Sep	2018	2.57	1.95	5.45	2.89
Oct	2018	3.21	2.31	3.40	2.46
Nov	2018	.48	.26	NA	.46
Dec	2018	.59	.61	NA	.66
Total		17.35	16.52	19.85*	18.39

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

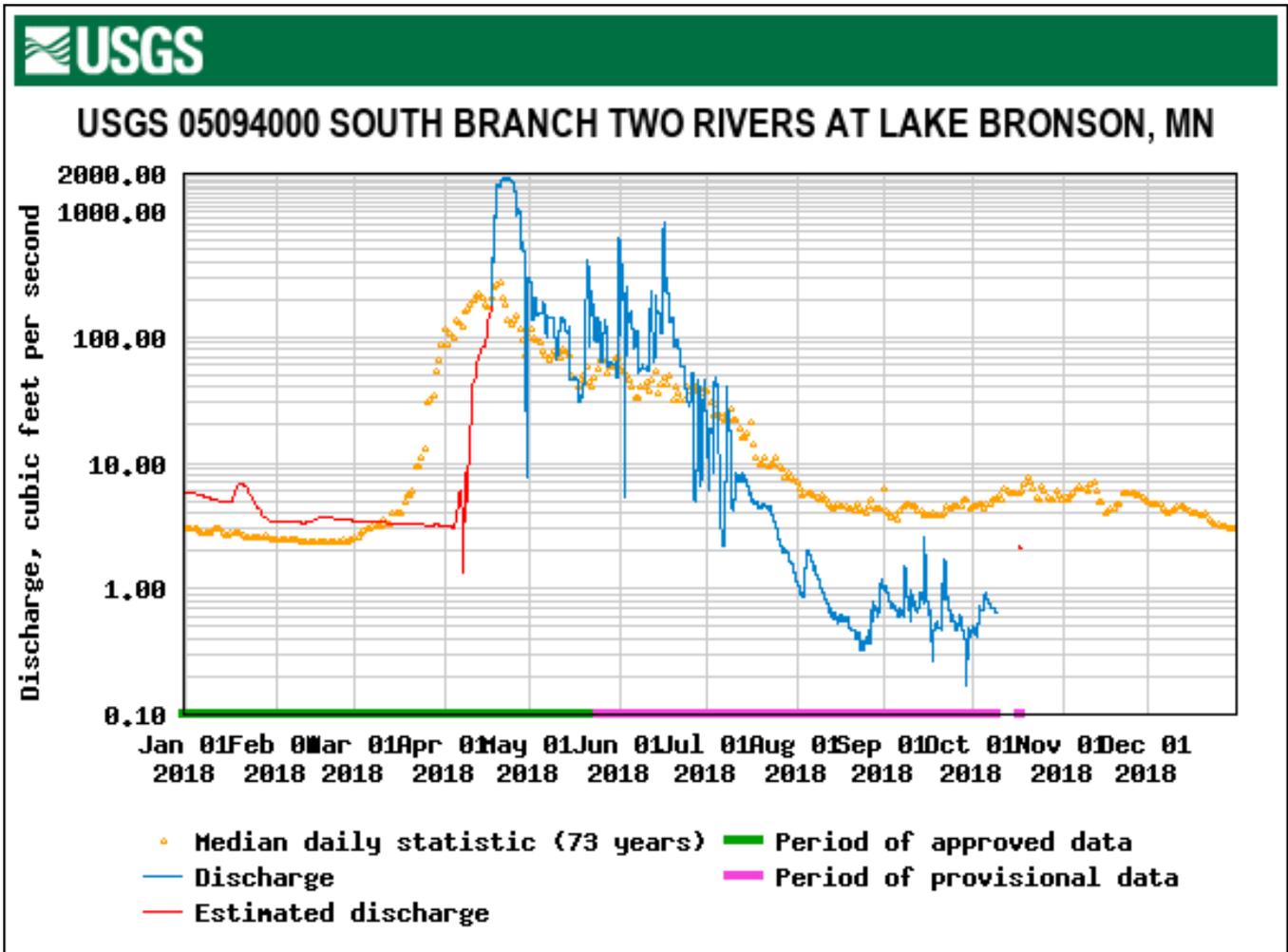




Source - Minnesota Climatology Working Group: <http://climate.umn.edu/>

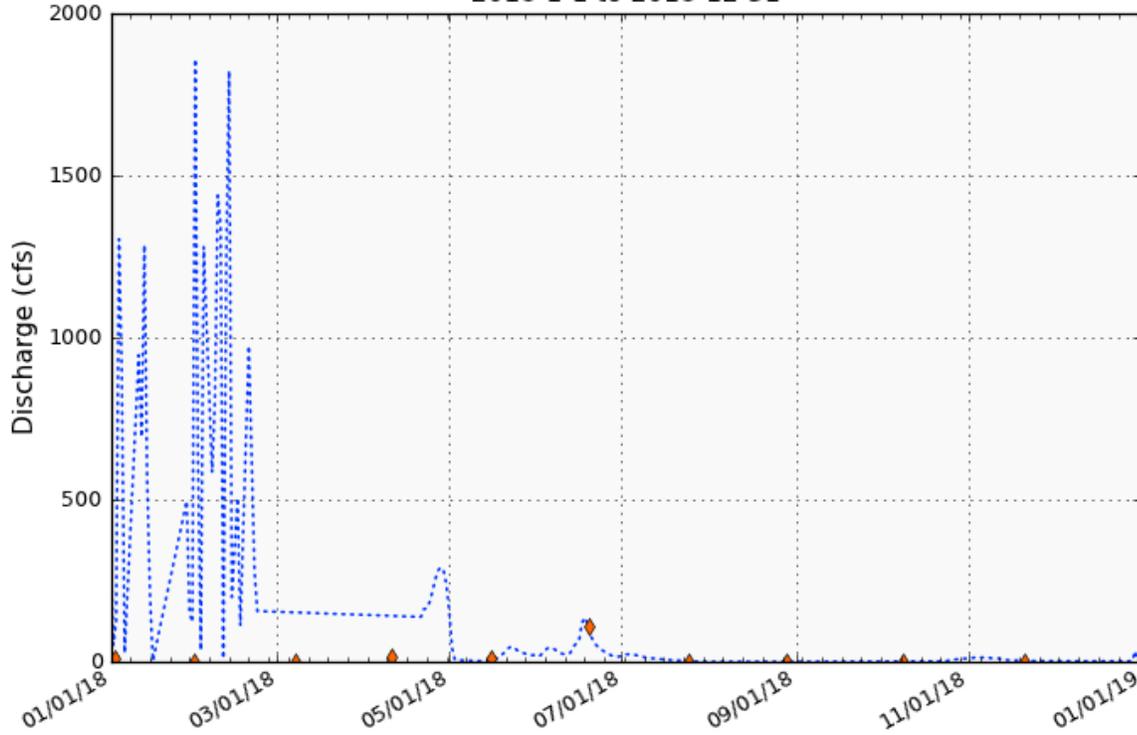
2018 STREAM FLOW

Stream flow and water levels throughout the year were varied by location. The following hydrographs depict streamflows within the Watershed District during 2018. Rainfall in May sustained flows into June, but lack of rainfall led to very low flows (below long term averages) in the summer and fall.



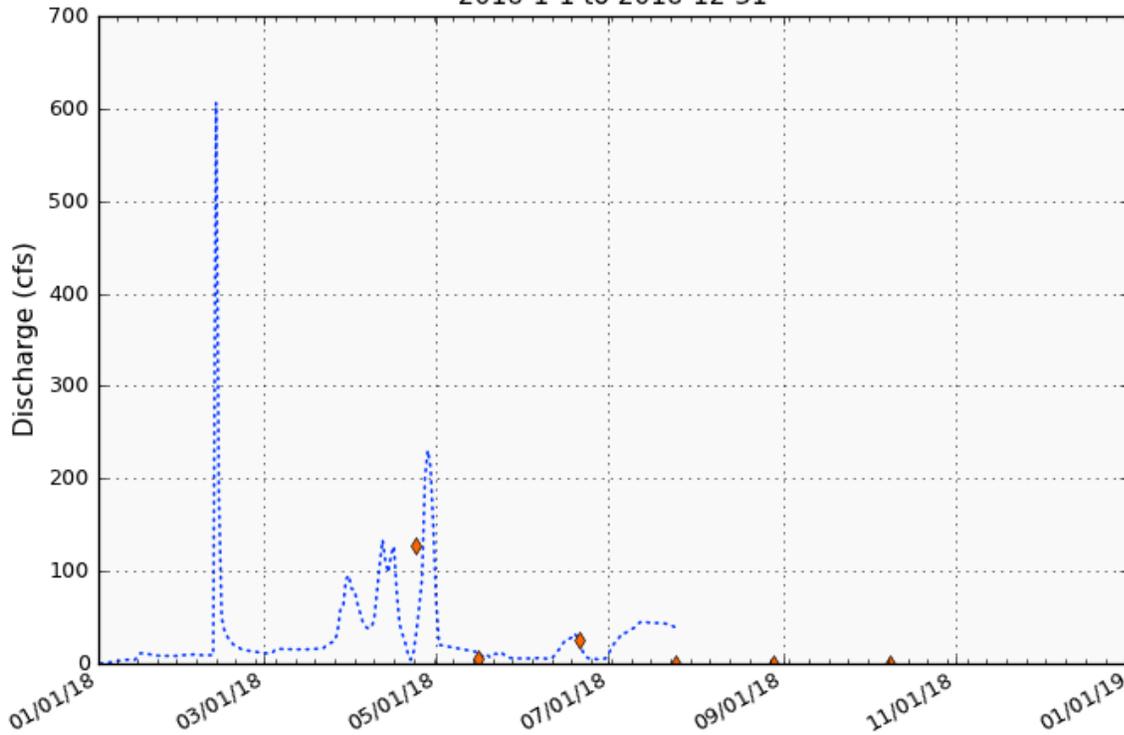
2018 Stream Flows in Cubic Feet Per Second for South Branch Two Rivers at the City of Lake Bronson
Source: US Geological Survey

North Branch Two Rivers nr Northcote, CR65 (70020002)
2018-1-1 to 2018-12-31



2018 Stream flow discharge 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

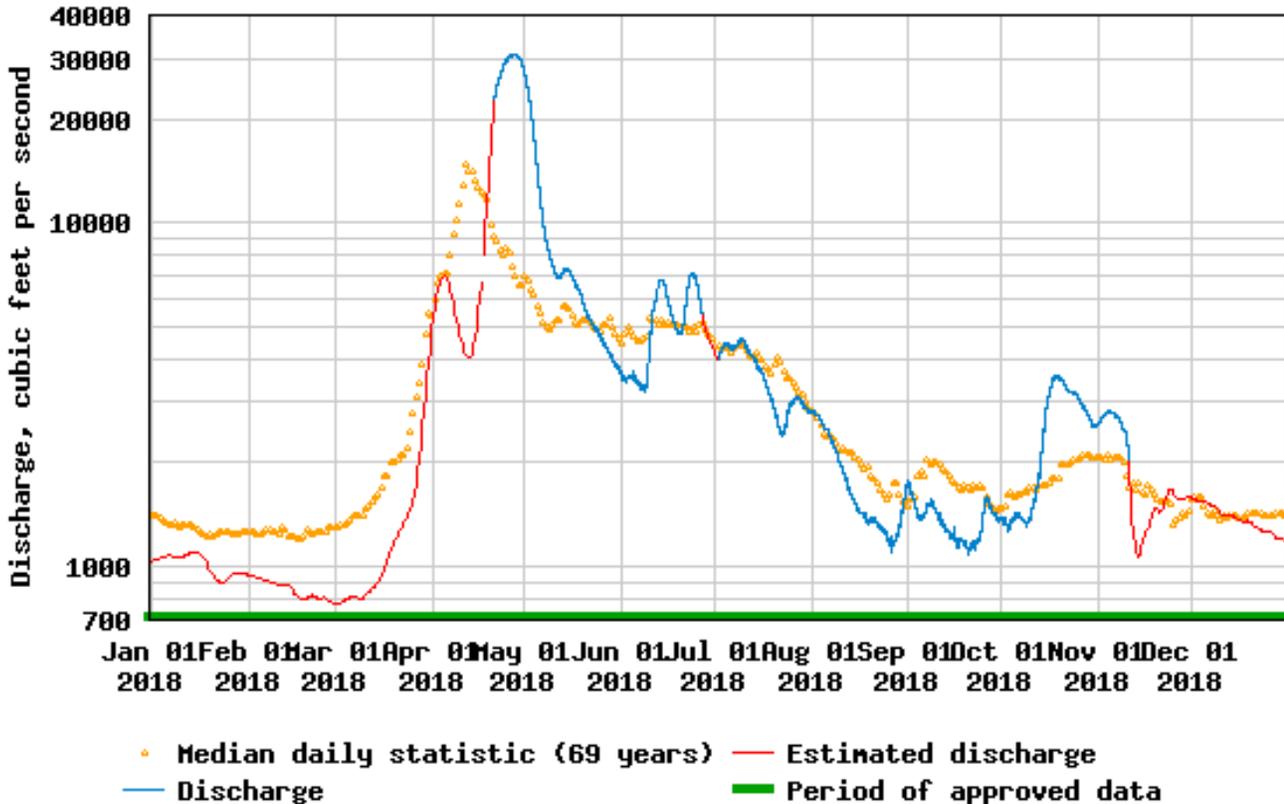
Kittson CD27 nr Kennedy, CSAH1 (69014001)
2018-1-1 to 2018-12-31



2018 Stream flow discharge 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



USGS 05092000 RED RIVER OF THE NORTH AT DRAYTON, ND



2018 Stream flow discharge for the Red River at Drayton ND. Source: US Geological Survey

OBJECTIVES FOR 2018

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.

Kittson County Ditch #21 Redetermination of Benefits - This ditch was turned over to the Board of Managers by Kittson County. The recent KCD 21 diversion 1 improvement project updated the benefitted area for that project only, and a need was identified to also update the main ditch. This process was initiated in 2018, and the Viewers that were hired for the job plan to complete process during 2019.

IMPOUNDMENTS

Klondike Clean Water Retention Project #11 – The District in 2019 will continue working on a federal environmental analysis through the PL 566 program, drawing detailed engineering plans, permitting and environmental concerns, obtaining right of way, and funding issues. Tentatively it is hoped that this phase can be completed in one year and phase one construction could be undertaken in 2 to 3 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:

No water quality monitoring is planned for 2019.

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.

Education: The District will continue to support and participate in activities for students, specifically the Envirothon and River Watch. These are outdoor, hands on, real world water quality and environmental experiences for high school students.

ADMINISTRATIVE ACTIVITIES

The District will continue to employ a full time District Administrator, who will be responsible to keep the meeting minutes, financial reports, ditch inspection reports, 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 supervise employees, perform field investigations, data collection, and other technical & administrative duties as determined by the Board of Managers. The Administrator will represent the District at local, regional and state meetings with government agencies, legislators, and the public.

The District will also continue employing a permanent, full time Technician. The position performs surveying, monitoring and inventory, operation of impoundments, 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 2019. KCD #7, JD 10 Branch B, and Springbrook #10 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.

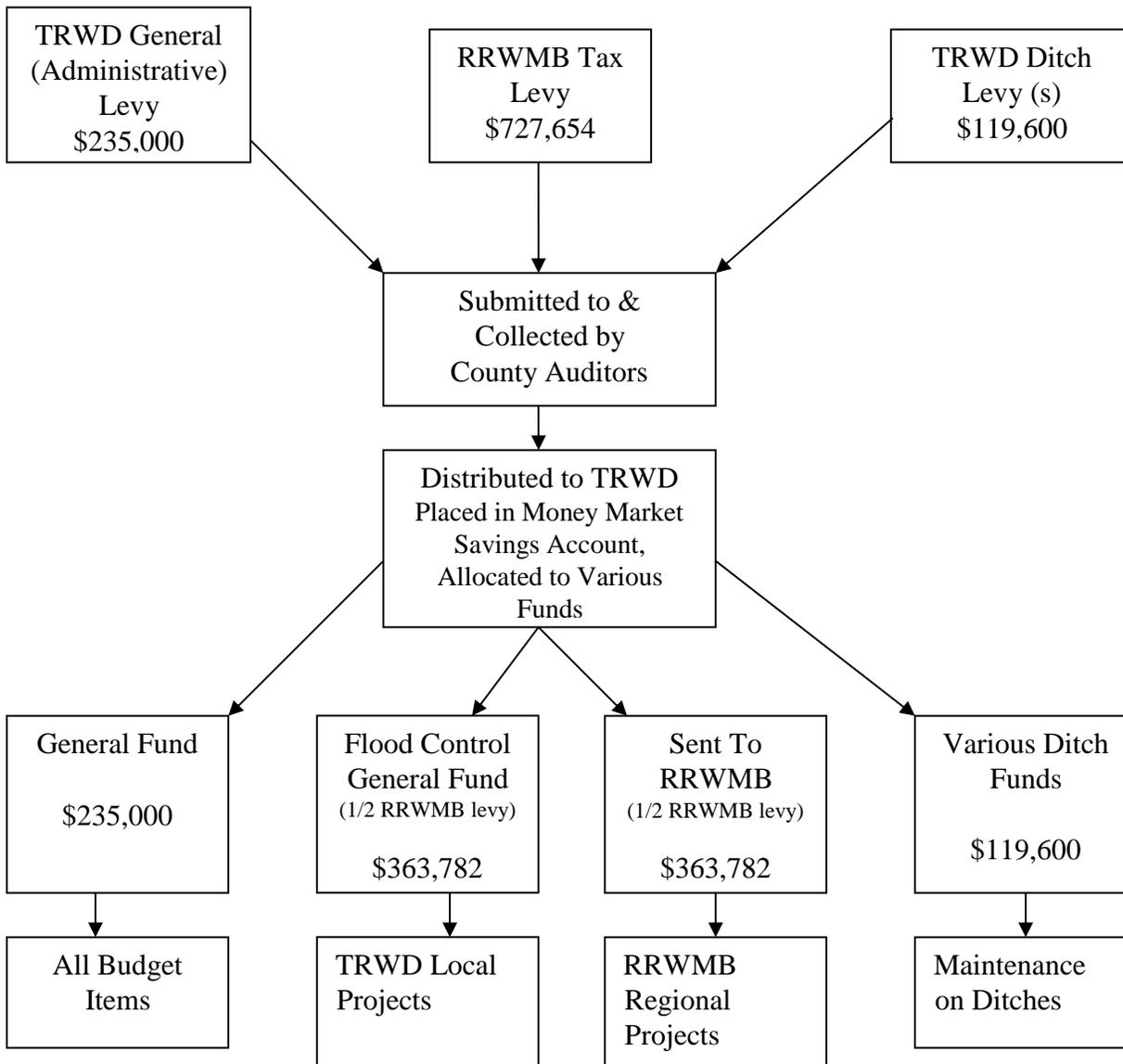
BUDGET

The District held a budget hearing in September 2018 to review, adopt, and approve an administrative budget for 2019. The approved budget is listed below. The TRWD levied taxes in the amount of \$240,000 for payable 2018, and levied \$235,000 for payable 2019. In addition, the TRWD is a member of the Red River Watershed Management Board. The RRWMB also sets an annual levy, and for 2019 their tax levy for the area within the Two Rivers Watershed District is \$727,654, of which ½ goes to the RRWMB for regional flood control projects, and ½ is kept by the TRWD for local flood control projects.

Administrative Budget	2019 Adopted
Administrative	94,564
Auto Expense	3,000
Capital Outlay	10,000
Conferences & Meetings	10,000
Dues & Subscriptions	4,000
Engineering	15,000
Information & Education	3,000
Insurance	4,700
Manager's Per Diem & Expense	16,000

Office Supplies & Miscellaneous	2,000
Payroll Expense	35,000
Postage & Delivery	1,000
Printing & Advertising	1,000
Professional & Legal	17,000
Rent	11,500
Stream Gage	3,000
Telephone	2,000
Water Quality	1,000
Totals	233,764

The following diagram shows how the tax levies are collected for 2019 and where they are distributed.



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, 2018 to December 31, 2018. A complete version of the audit is available upon request.