

April 7, 2020

Red River Basin River Watch Annual Report 2019

Red River Basin River Watch partners with K-12 and community education staff, resource management professionals, higher education institutions and other non-profits to provide direct hands-on, field-based experiential watershed science opportunities for students and citizens that enhance watershed understanding and awareness.

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Program Overview

More than Water Quality Monitoring - Since 1995, the Red River Basin River Watch (RW) program has evolved to include a wide variety of hands-on, field-based, science learning opportunities for area youth to enhance watershed understanding and awareness for tomorrow's decision-makers. Schools throughout the Red River of the North Basin participate annually in a variety of unique, innovative and effective watershed engagement opportunities suited to their school, community, and watershed needs.

Water Quality Monitoring: Collect and record conditions at local rivers and streams using state-of-the-art scientific methods and equipment.

Funding Source = RRWMB and local partners.

Biological Monitoring: Macroinvertebrate monitoring provides additional insights on watershed and ecosystem health.

Funding Source = RRWMB + Clean Water Legacy.

River Explorers: Guided kayak excursions on local rivers to observe and document watershed conditions.

Funding Source = RRWMB + Clean Water Legacy.

Annual Teacher Training: provides access to resources and experts in current watershed issues.

Funding Source = RRWMB + Clean Water Legacy.

River Watch Forum: Annual event challenging students to learn and share about emerging local watershed issues.

Funding Source = RRWMB + Clean Water Legacy.

Real-Time Monitoring: Students build, deploy and maintain real-time water quality monitoring stations. Data analyzed and used to characterize stream water quality.

Funding Source = RRWMB + Clean Water Legacy.

River of Dreams: A cross-curriculum watershed education program tailored to elementary students. Participants learn watershed terminology and how their sub-watershed fits into the Red River Basin through the design and real-life launch of a 14" cedar canoe.

Funding Source = Clean Water Legacy.



Project Progress

This report fulfills the final reporting requirement for the 2018 - 2019 Clean Water Legacy funded River Watch Project from January 2019 through December 2019. The Red River Watershed Management Board is the project sponsor with lead coordination and project management provided by the International Water Institute (IWI). The following is broken down by work plan objective and provides a summary of progress towards meeting the identified outcomes within the 2018 – 2019 Clean Water Fund Work Plan included as *Appendix A*.

STUDENT ENGAGEMENT: Engage elementary students in River of Dreams (ROD) a hands-on education program focused on the valuable river resources of the Red River Basin. Provide integrated classroom and outdoor experiences that; build awareness of river ecosystems and watershed connections, increase student capacity to make informed decisions about their environment and instill a sense of place about the uniqueness of their local watershed—historic, economic, and ecological.

River of Dreams

In the spring semester of the 2018-2019 school year, the ROD program was continued in the Minnesota portion of the Red River Basin. In total, 17 schools participated, comprising of 30 classrooms and 513 students. Classroom materials, including local sub-watershed maps, Red River Basin maps, writing and design templates were updated for each school. Miniature cedar canoes were acquired and assigned unique tracking numbers in the preparation process for each student. Each teacher read the book “Paddle-to-the-Sea” aloud to their class prior to an IWI staff classroom visit. The in class visit and a suite of activities served to explain watershed concepts introduced in the book, while also connecting these concepts to the local watershed.

Pre- and post-program quizzes were administered to track improvements in understanding of watershed terminology before and after the visit, with an average score improvement of 26% for 2019 – an 8% increase from 2018. Each school was joined again by IWI staff in the spring of 2019 to launch trackable canoes for a journey down the local river. The progress of the canoes can be tracked online at riverofdreams.org. A video with several elementary student interviews was produced and can be [found here](#). Selected examples of classroom activities and photos highlighting the overall program in 2019 are included in *Appendix B*.

RED RIVER EXPLORERS PADDLING PROGRAM: Increase awareness and knowledge of local land use and watershed connections through a Red River Explorers Paddling Program to allow RW teams and community members to “water-truth” streams in the Red River Basin, documenting local watershed conditions.

Red River Explorers

River Explorers activities were limited in 2019 due to unsafe (high) river levels during the prime paddling months (June, July, August) followed by continued high levels into the fall and the early onset of cold weather. The river trips that did happen were part of other programming opportunities and our ongoing partnership with Wilderness Inquiry (WI). Five (5) paddle outings occurred; 2 individual school kayak trips, 2 multiple school canoe trips with WI and 1 group kayak trip at an area summer camp. A total of 350 participants including 323 students and 27 adults paddled in 2019. A summary of events including participants, miles paddled and four (4) individual trip reports are included in *Appendix C*.

Watershed Connections

Four macroinvertebrate sampling kits, three stream tables and two ground water models have been made available to the River Watch schools for classroom use. IWI staff assist the schools in their use when requested. Resources and information relating to the watershed connections pieces are available for use by participating schools. Four (4) newsletters were published and distributed in 2019. River Rendezvous editions can be viewed on the IWI website [here](#).

STEM ASSISTANCE: Assist in provision of Science, Technology, Engineering and Math (STEM) education and engagement opportunities through watershed science.

Training Sessions and Fall Kick Offs

Three (3) regional fall kick-off events were held across the basin in October 2019. River Watch teams were introduced to the River Watch Forum 2020 Team Challenge and received training. Activities at each kick-off event included training sessions for students and teachers covering macroinvertebrate sampling, water quality sampling, continuous monitoring stations, data handling, web interfaces and the 2020 River Watch Forum assignment. One-hundred thirty-one (131) MN students and fourteen (14) teachers attended these events. Information related to the 2019 kick-off events is [online](#) and included in *Appendix D*.

River Watch Forum

The 2019 River Watch Forum was held February 27, 2019 with 250 attendees. The Forum theme, *Building Your Future*, was chosen to inspire students about the possibilities of the years to come. All of the activities and opportunities in River Watch relate to water or rivers, but the skills that students gain from our year-round program can be transferred into many career paths. Team resources, forum materials and video submissions can be found [here](#) and the 2019 Forum agenda is included in *Appendix D*.

Keynote speaker, [Natalie Warren](#) paddled from Minneapolis to Hudson Bay in 2011 and has worked hard to build her future ever since that adventure. She started a non-profit, studies economics relating to river recreation, writes for Canoe and Kayak magazine, and is writing a book about her Hudson Bay adventure. Natalie was the perfect fit for this year's theme and is a great example of someone who has worked hard to seamlessly connect their passion and career.

Teamwork was a major focus of other activities throughout the day. River Watch teams had to work together to complete River Watch Escape (our version of an escape room that consisted of clues hidden in 'a day in River Watch'). The hands-on breakout session was led by Laura Salmela and allowed students to get creative by painting a river scene on a small canvas. Each canvas was simply marked to determine where water was present; little did River Watch teams know that these 32 canvases fit together into a large art piece that had rivers flowing from one end to the other. This was a great example of how rivers and watersheds function--working together to paint the big picture. Highlights from the proceedings for the day were covered in our [spring 2019 newsletter](#).

Real-Time Continuous Data Collection

Due to high water in the spring of 2019, seven stations were deployed throughout the months of May – August, depending on stage of river. Stations were deployed in the Snake, Middle, Buffalo, Bois de Sioux, Clearwater, Roseau, and Wild Rice Watersheds.

Data can be viewed at monitormywatershed.org as well as via csv files backed up at each site. A site description was created for the use of the River Watch Team monitoring the sites and is included in *Appendix E*.

OVERSIGHT: Project Management and Reporting

This report was submitted to the MPCA project manager April 7, 2020. The report will also be submitted by April 15, 2020 to the Commissioners of Education and MPCA, along with the Legislative and Education Committees. Invoices have been submitted quarterly and below is a summary of the project budget covering January 2018 through March 2020.

Project Budget	MPCA Grant Funds Available	MPCA Grant Funds Previous Invoices	MPCA Grant Funds This Invoice	Total MPCA Funds Expended	Total Remaining Balance	% Budget Expended	% Scope Completed
Personnel							
Staff #1 32 hrs @ \$45/hr	\$56,970.00	\$55,530.00	\$1,440.00	\$56,970.00	\$0.00	100%	
Staff #2 55 hrs @ \$55/hr	\$71,005.00	\$66,797.50	\$4,207.50	\$71,005.00	\$0.00	100%	
Staff #3 58 hrs @ \$70/hr	\$80,850.00	\$76,790.00	\$4,060.00	\$80,850.00	\$0.00	100%	
Mileage	\$14,383.98	\$14,383.98	\$0.00	\$14,383.98	\$0.00	100%	
Equipment & Supplies	\$26,791.02	\$19,495.10	\$7,295.39	\$26,790.49	\$0.53	100%	
COLUMN TOTAL	\$250,000.00	\$232,996.58	\$17,002.89	\$249,999.47	\$0.53		100%

Program Evaluation

Twenty-two (22) educators that were involved with the River Watch program were provided an opportunity to give responses to a couple of program evaluation pieces. The first was to provide written responses to questions related to how River Watch programming is used and suggestions for improvement, the second was to complete an online survey. Seventeen (17) educators responded to the written directive and twenty-two (22) completed the online survey. A student written response evaluation piece of the 2018 summer camp and its activities was completed by eleven (11) students. Overall the educators are pleased with the program educational offerings and the students approved of the camp location, activities and educational content. Individual responses to the written surveys and a summary of the online survey are provided in *Appendix F*.



Summary

As a “headwaters state,” Minnesotans bear a unique responsibility as watershed stewards. For over 24 years, the Red River Basin River Watch Program (RW) has delivered innovative watershed education programming to schools and communities across the Red River of the North Basin. Education is the most effective tool to change attitudes and behaviors. RW offers a suite of classroom and outdoor activities designed to specifically address important MN water quality improvement initiatives, including:

- ✓ MN Clean Water Council Guiding Principle to “...change individual and institutional behaviors on the landscape to accelerate water quality outcomes.”
- ✓ Governor Dayton’s 25 by 25 report identified education as our greatest need and a top priority.

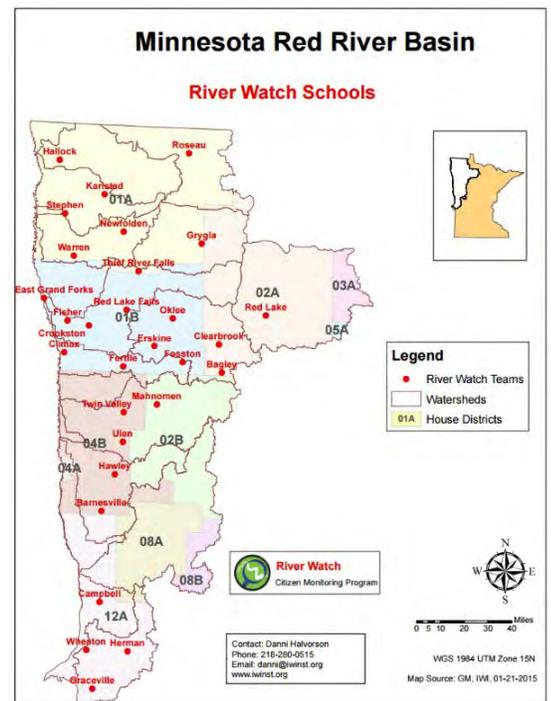
Support from the Red River Watershed Management Board and local watershed districts has built an effective and popular watershed education program across the Red River of the North Basin

Since program inception, RW teams from schools throughout the Red River Basin have collected data at 150 sites, totaling over 10,000 visits to rivers, streams, and agricultural ditches. RW data are used by the MN Pollution Control Agency to complement the state’s assessment of surface waters.

Clean Water funds enable the International Water Institute to build on this established and popular RW foundation by providing additional learning opportunities to protect and improve MN’s valuable water resources, including:

- ✓ Biological Monitoring
- ✓ River Explorers
- ✓ Teacher Training
- ✓ River Watch Forum
- ✓ River of Dreams

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Appendix A: 2018 – 2019 Clean Water Fund Work Plan

RED RIVER BASIN RIVER WATCH 2018 - 2019

Clean Water Fund Project Work Plan

Project Description: brief description/summary of proposed project

MN Legislative Clean Water Fund funding (\$250,000) to the Red River Watershed Management Board for the River Watch Program. River Watch (RW) enhances watershed understanding and awareness for tomorrow's decision-makers through direct hands-on, field-based experiential watershed science. Schools throughout the Red River of the North Basin participate in a variety of unique and innovative watershed engagement opportunities suited to their school, community, and watershed needs.

Project start date: January 1, 2018

Project end date: June 30, 2020

Non-point source pollution is the leading source of water quality impacts on rivers and lakes. In the Red River Valley, as elsewhere in Minnesota, citizen involvement is crucial to identifying and reducing problems from non-point source pollution. This project will build on the foundation of the existing Red River Basin River Watch program.

The River Watch monitoring and education program engages citizens through field-based applied science in their local watersheds. Working collaborations between Watershed Districts, local schools and River Watch staff support science, technology, engineering and math (STEM) skills development to expand student awareness and understanding of local watershed issues. River Watch teams engage in water quality monitoring, scientific research and education initiatives across the Red River Basin, extending the amount of data available for assessing our watershed health and contributing to improved awareness and involvement in watershed management.

The River Watch program will be delivered through an effective working partnership between local schools and communities; local, state, and federal agencies; and academic institutions throughout the Red River Basin (<http://www.iwinst.org/education>). The Red River Watershed Management Board (RRWMB) will be the project sponsor with lead coordination and project management provided by the International Water Institute.

Work Tasks in bold below followed by *measurable outcomes in italics* directly below task.

STUDENT ENGAGEMENT: Engage elementary students in River of Dreams (ROD) a hands-on education program focused on the valuable river resources of the Red River Basin. Provide integrated classroom and outdoor experiences that; build awareness of river ecosystems and watershed connections, increase student capacity to make informed decisions about their environment and instill a sense of place about the uniqueness of their local watershed—historic, economic, and ecological

Work tasks/Measureable outcomes:

Develop a standard process for implementing ROD activities in the Red River Basin.

- *Resources developed and/or adapted to connect local elementary students to their local watersheds. Completed May 2018.*
- *Training for education staff on use of new resources and presentation techniques for ROD activities. Completed June 2018.*

Secure participation and implement ROD activities in 26 elementary classrooms in the Red River Basin.

- *School contacts. Solicit classrooms to be involved. Identify lead teacher and determine the number of students to be involved. Completed November 2018 (13 classrooms) and November 2019 (13 classrooms).*
- *School classrooms sessions. Purchase, prepare and deliver classroom and field materials. Hold classrooms sessions to present materials and go over program expectations. Completed November 2018 (13 classrooms) and November 2019 (13 classrooms).*
- *Field sessions with ROD participants. Release of individual ROD canoes and review of watershed lessons learned by students. Completed November 2018 (13 sessions) and November 2019 (13 sessions).*
- *Teacher evaluation of implementation, problems, and highlights of ROD activities, as well as pre/post surveys of students. Completed December 2019. Results will be reported as part of Final Report due June 30, 2020.*

RED RIVER EXPLORERS PADDLING PROGRAM: Increase awareness and knowledge of local land use and watershed connections through a Red River Explorers Paddling Program to allow RW teams and community members to “water-truth” streams in the Red River Basin, documenting local watershed conditions.

Work tasks/Measureable outcomes:

Red River Explorers Paddling Program river route determinations to allow RW teams and community members to safely explore and document river conditions.

- *IWI paddling staff scout rivers at different water levels to assess safety and water levels needed for safe passage by RW student exploratory teams. Ongoing through 2019.*
- *Equipment and materials purchased for river trips and documenting field conditions. Completed July 2019.*

Lead 8 guided river ecology excursions in both 2018 and 2019 on various reaches of rivers in the Red River Basin.

- *Sixteen guided river ecology excursions in the Red River Basin, all utilizing GPS and mapping/photo documentation of baseline geomorphology and recreation conditions. Completed November 2019.*
- *Create and share information from river trips on IWI website via on-line map and multimedia reports. Reports may include the following; number of trip participants, river route and reaches covered, photo-documentation of river conditions, and a summary of observations by trip participants on river conditions and recreation suitability. Completed December 2019.*
- *Final Report to include river miles explored, number of participants and links to all of trip reports Completed June 30, 2020.*

Watershed Connections: Macroinvertebrates, Stream tables, groundwater models, and outreach.

- *Provide macroinvertebrate monitoring, stream and ground water resource materials and equipment for RW schools with assistance from IWI staff. Ongoing over contract period, completed January 2019.*
- *Evaluation (self-reported) of changes in knowledge, attitude and perceptions of local rivers after macroinvertebrate sampling, stream table and/or groundwater model exposure. To be completed January 2020 and included in Final Report due June 30, 2020.*
- *Produce and distribute a quarterly electronic newsletter that promotes watershed education and awareness in the Red River Basin. 8 newsletters developed over the contract period. Completed December 2019.*

STEM ASSISTANCE: Assist in provision of Science, Technology, Engineering and Math (STEM) education and engagement opportunities through watershed science.

Work tasks/Measureable outcomes:

Provide professional teacher development through watershed inquiry and education opportunities. Regional fall kick-off events, incorporating team building skills, local watershed project presentations and data interpretation will be held for RW teachers and youth leaders. Summer training sessions will be held for teachers and RW team captains to provide extended learning opportunities on watershed topics such as river ecology, watershed connections, and biological monitoring.

- *2-3 regional fall kick-off events in both 2018 and 2019; one summer teacher and one summer youth training session. Summary report will be provided to document participants at regional kick-off events, topics covered, and evaluation comments from participants. A summary report will also be provided for the summer trainings documenting participation, materials presented, and evaluation summary from participants. Completed December 2019.*

Utilize the annual River Watch Forum to provide exposure to relevant research topics and an opportunity to present findings from current research involvements. Provide opportunities for youth to engage in scientific research and outreach.

- *River Watch Forum presented in February 2018 and 2019 with keynote speaker and concurrent sessions focused on emerging watershed education and research. Poster displays, written reports and/or video presentations of assigned research topics, service learning projects and special investigations by RW teams in collaboration with watershed partners. Completed April 2019.*
- *Summary report written to document participating RW teams/schools and highlighting awards and watersheds represented in research, with links to posters. To be completed by June 30, 2018 and June 30, 2019 and included in Final Report due June 30, 2020.*

Expand stream monitoring activities to include real-time continuous data collection. Provide opportunities for youth to engage in the construction, deployment and data analysis of continuous monitoring stations.

- *Solicit RW teams to be involved. Identify deployment locations and purchase equipment to build 6 continuous monitoring stations. Completed June 2018.*
- *School classrooms sessions. Hold 6 classroom sessions to present materials and build monitoring stations. Completed December 2018.*
- *Field sessions to install monitoring stations. Deploy 6 stations, instruct on maintenance and data download. Completed June 2019.*
- *Teacher and student evaluation of implementation, problems, and highlights of continuous monitoring activities. Completed December 2019. Results will be reported as part of Final Report due June 30, 2020.*

OVERSIGHT: Project Management and Reporting

Work tasks/Measureable outcomes:

Track project grant-related expenditures. Compile and organize invoices, pay bills and submit for expense reimbursements in a timely manner.

- *Grant-related expenditures tracked, bills paid and expense reimbursements submitted at least quarterly.*

Track objectives and tasks to ensure outcomes are being met. Prepare and complete reports and results from the Red River Basin River Watch program as follows:

- *Interim report of project status and budget to MPCA by December 31, 2018.*
- *Interim report and initial evaluation to Commissioners of Education, MPCA and Legislative and Education Committees by February 15, 2019.*
- *Final report of project outcomes, budget, and final evaluation results by June 30, 2020 to all entities receiving February 15, 2019 report noted above.*

Appendix B: River Of Dreams Highlights



Watershed

- Purple outline, separated by ridgelines and elevation changes
- *The land sheds water in the form of runoff

Paddle-to-the-Sea

- Where did Paddle start his journey?
- What types of animals did Paddle see?
- What was the scariest moment for Paddle?
- Who was your favorite character to find Paddle? Why?
- How far does Paddle travel by the end?

Headwaters

- Top of the watershed; many headwaters in each watershed
- *Your head is the top of your body

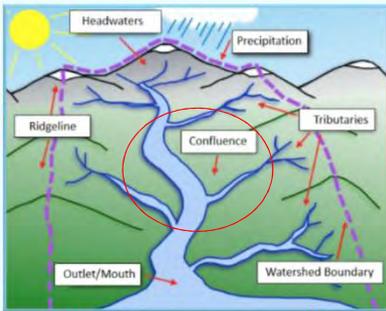
Paddle-to-the-Sea

- Key terms:
 - Watershed
 - Headwaters
 - Tributary
 - Confluence
 - Outlet
 - Mouth

Tributaries

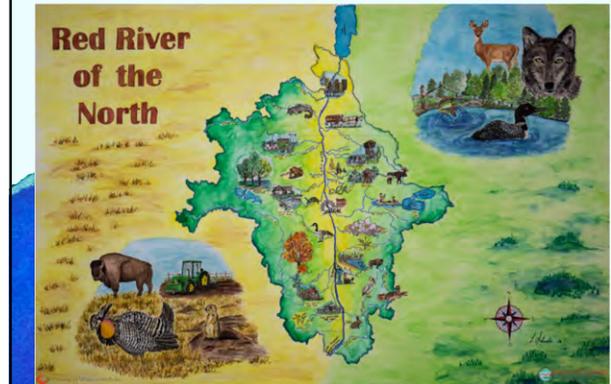
- Streams which flow to bigger streams and rivers
- * Tributaries contribute their water to another river

Confluence

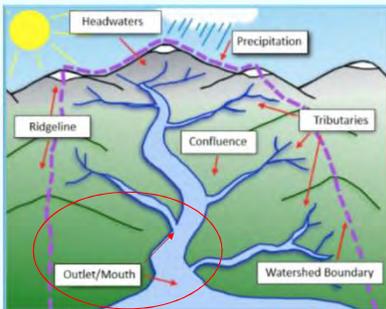


- Where two rivers join to become one
- * Many confluences in a watershed

The Red River Basin



Outlet/Mouth



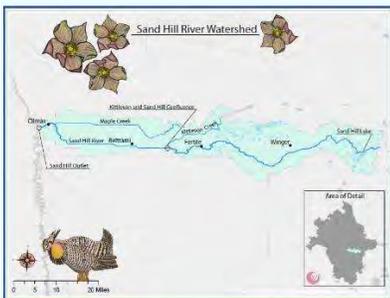
- Where a river ends/flows to a lake or river
- * Mouth = river ends at lake or ocean
- *Outlet = river ends at another river

The Red River Basin

- Your river is a **tributary** to the Red River of the North.
- You are part of multiple watersheds as we zoom out to a larger extent.
- Tributary watersheds combine to make a bigger watershed, known as the Red River Basin.
- The Red River flows *north* to Canada and its **mouth** is at Lake Winnipeg's southern end.



What is your watershed?



- What river runs closest to your school?
- Your **watershed** includes all the land which drains to this river.
- Where are the **headwaters** (beginning) and **outlet** (end)?
- Do any **tributary** rivers or creeks **confluence** with your river?
- Do you know any other towns located in the watershed?
- How long is your river?
- Let's take a look using Google Earth to answer these questions and more!

Lake Winnipeg and Beyond



Let's take a look at the Red River Basin in Google Earth!

- Water from the Red River and Lake Winnipeg reaches the sea at Hudson Bay after joining the Nelson River.
- Hudson Bay is part of the Atlantic Ocean, which connects to the Arctic Ocean, and all oceans are connected.
- Do you think your canoe can make it to Hudson Bay?
- What might it see there?

Tracking your Canoe



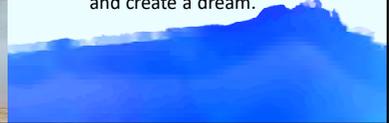
- The boy who made Paddle had no idea where he was during his journey to France.
- We are able to track your canoes when people find them!
- Not all canoes will be found, but some will, and you may be surprised how far they travel!



A Journey for your Canoe



- Where will your canoe go?
- What kinds of animals will it see?
- Will its journey be scary, exciting, or lonely?
- Think about these questions and more as you design your canoe and create a dream.



Where are they now?

2017 Hawley Canoe



Where are they now?

2018 Hawley Canoes



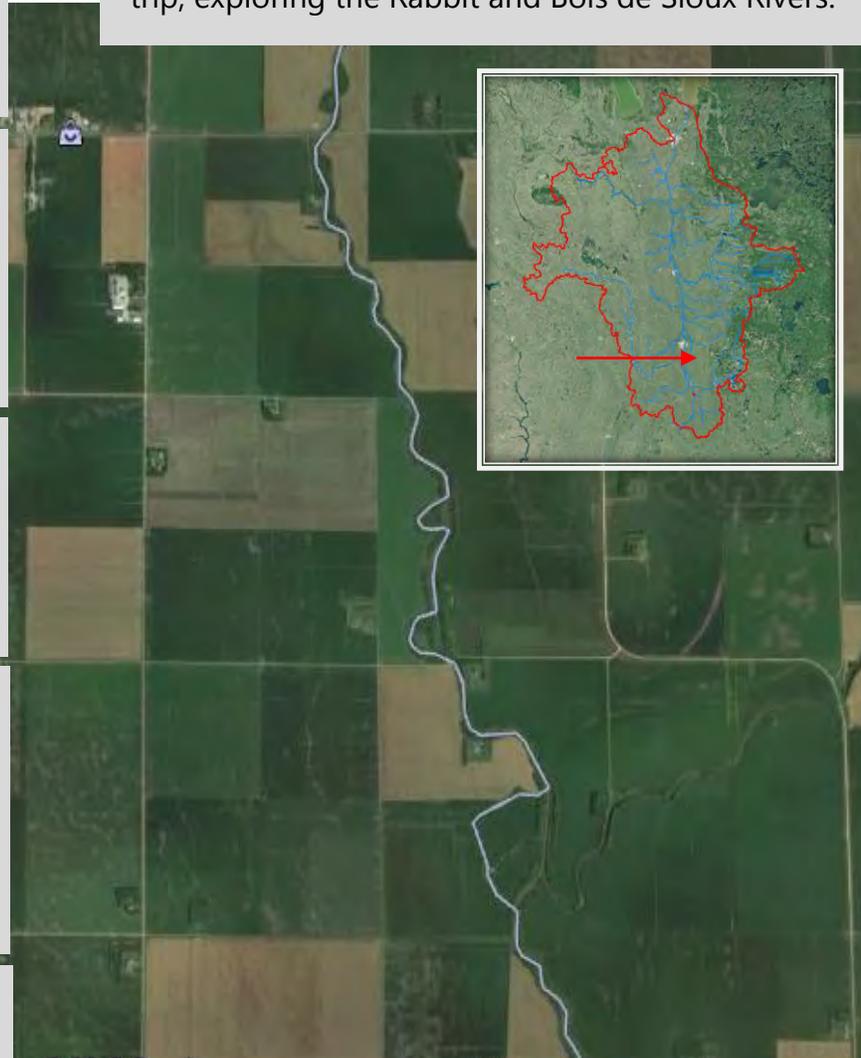
Appendix C: Red River Explorers Summary

2019 River Explorers Summary

<u>Date</u>	<u>Group Name</u>	<u># in group</u>	<u># staff/ other</u>	<u>Total</u>	<u>Water Body</u>	<u>Miles</u>	<u>Total Miles</u>
5/22/2019	Campbell-Tintah RW Team	12	2	14	Rabbit River	5.2	72.52
8/22/2019	Goodridge Summer Science Camp	12	3	15	Red Lake River	3.6	54
9/17/2019	TRF Area ROD Paddle	140	10	150	Red Lake River	1.0	150
9/18/2019	Crookston Area ROD Paddle	152	10	162	Red Lake River	1.0	162
10/4/2019	Herman-Norcross	7	2	9	Mustinka River	2.0	18
		323	27	350		12.78	456.52

Campbell-Tintah

On May 22nd, 2019, 11 students from the Campbell-Tintah River Watch Team participated in a paddling trip, exploring the Rabbit and Bois de Sioux Rivers.



Watershed Context:

The paddle trip started just west of Campbell, Mn on the lower Rabbit River. Within two miles of the launch site, the Rabbit River confluences with the Bois de Sioux, about three miles from where we ended the trip. The Rabbit River watershed collects water from 4 different counties and over 320 square miles.

Habitat and Wildlife:

The landscape around the rivers is primarily agricultural land, which makes it difficult for wildlife to live and survive. However, directly on the banks of the river is the riparian areas. These areas have ample vegetation and habitat for wildlife to call home. Invasive species were seen, along with ample trees and vegetation within the riparian areas.

Recreation:

Although the Rabbit and Bois de Sioux rivers are not managed for recreation, the students had a great time paddling them! They said how much different the water and habitat look compared to being on a bridge and sampling. It truly is a different experience!

Water:

During past paddling trips, we had to carry our kayaks over low areas because of the low stage. During this trip, we did not have to do that. The stage was high and it was consistently raining during the entire paddle trip. The water looked cloudy and we found a few canoes from our River of Dreams launches!

Trip Conclusions:

This trip was a great way to introduce students to paddling in their watershed. Though the water was high and the weather was wet and rainy, the students had a great time! They said they would recommend recreating on these rivers to anyone, no matter what the weather has in store for them!



River Explorers programming provides students the opportunity to:

- o Connect to their local rivers and lakes by paddling, strengthening a local sense of place
- o Document and share riverine conditions with resource managers and

River of Dreams Wilderness Inquiry

On September 19th, 2019, Wilderness Inquiry came to Crookston to paddle with 144 River of Dreams students in the Red Lake River near Central Park, while IWI led activities on land.

Watershed Context:

The Red Lake River begins in Beltrami county at Lower Red Lake. It flows west through Thief River Falls, Red Lake Falls, Crookston, Fisher, and finally makes its way into Grand Forks where it converges with the Red River of the North. The Red Lake River is in its own Red Lake River Watershed. We paddled a small area next to Central Park in Crookston.

Habitat and Wildlife:

The habitat we saw while paddling was human-influenced and didn't see a lot of wildlife. We saw a few birds and the students observed different plants along with ice scores on the trees in the park.

Recreation:

This river is perfect for paddling on during this time of year. We canoed with the Wilderness Inquiry, but kayaking would be great along this stretch of water! Bird watching and other outdoor activities would also be perfect with the park nearby.

Water:

The water was described as being cloudy for this time of year, and the stage was normal to slightly high. Erosion was observed along some of the banks and there were drains that could be seen emptying into the river.

Trip Conclusions:

Overall, the fourth graders had a blast learning to paddle! They couldn't wait to tell their parents and friends about what they had learned throughout the day!



River of Dreams Wilderness Inquiry Paddling: Thief River

168 3rd-5th grade River of Dreamers from around the Thief River Falls area had a day of canoeing at LaFave Park with Wilderness Inquiry and land activities with IWI staff!

Watershed Context:

LaFave park (yellow arrow) is located right on the confluence between the Red Lake River and Thief River. The Thief River watershed and the Red Lake River watershed both are part of the Red River Basin. Roughly 40% of the Thief River watershed is used for agricultural purposes while the Red Lake River watershed has approximately 67% of its land being used agriculturally.

Habitat and Wildlife:

The park that we used for paddling is in a populated area, which made it difficult to observe a lot of wildlife. However, the students observed birds and different types of plants and trees along the banks.

Recreation:

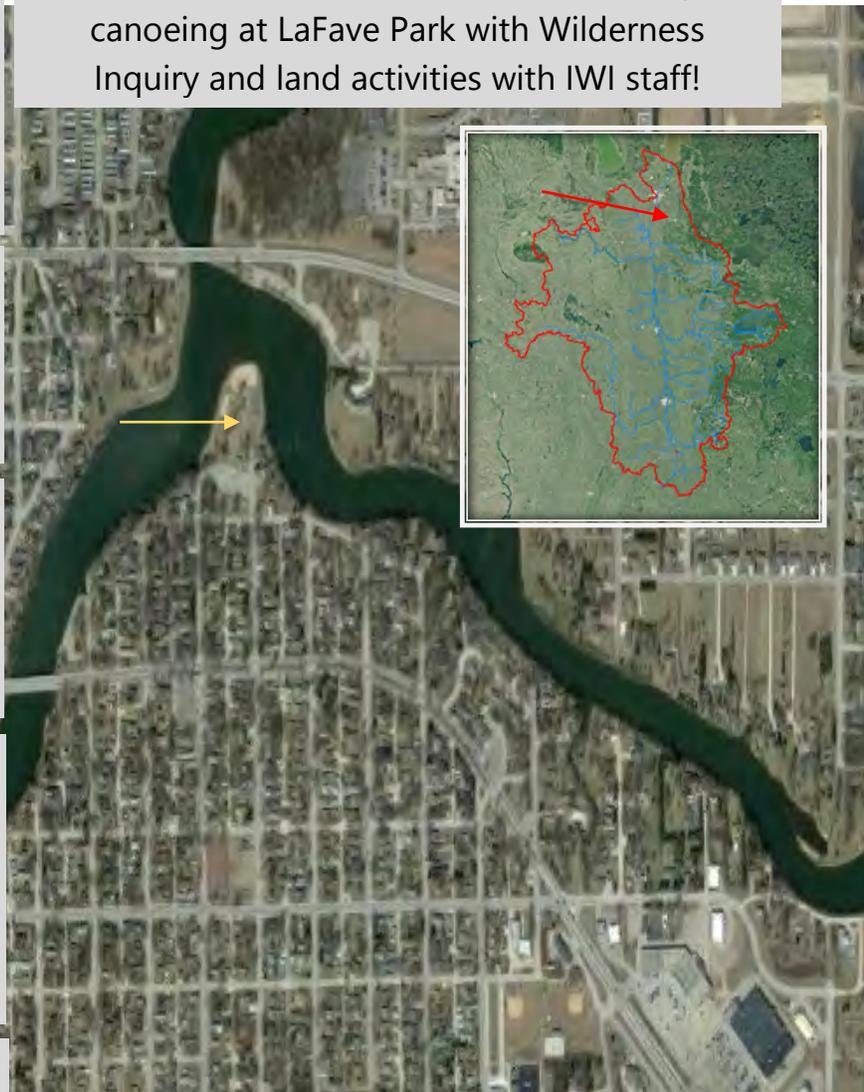
The types of recreation in this area are ample. There are campsites in LaFave park as well as picnic tables, grills, volleyball and basketball courts, and even a kayak launch dock. The canoeing we did was just a short trip but was highly rewarding for the students.

Water:

In mid-September, water levels were close to high. This watershed is primarily dominated by agriculture both upstream and downstream. Erosion was noticed in several spots along the banks, perhaps due to high water. The wind was strong during our paddling but the students enjoyed the day anyway!

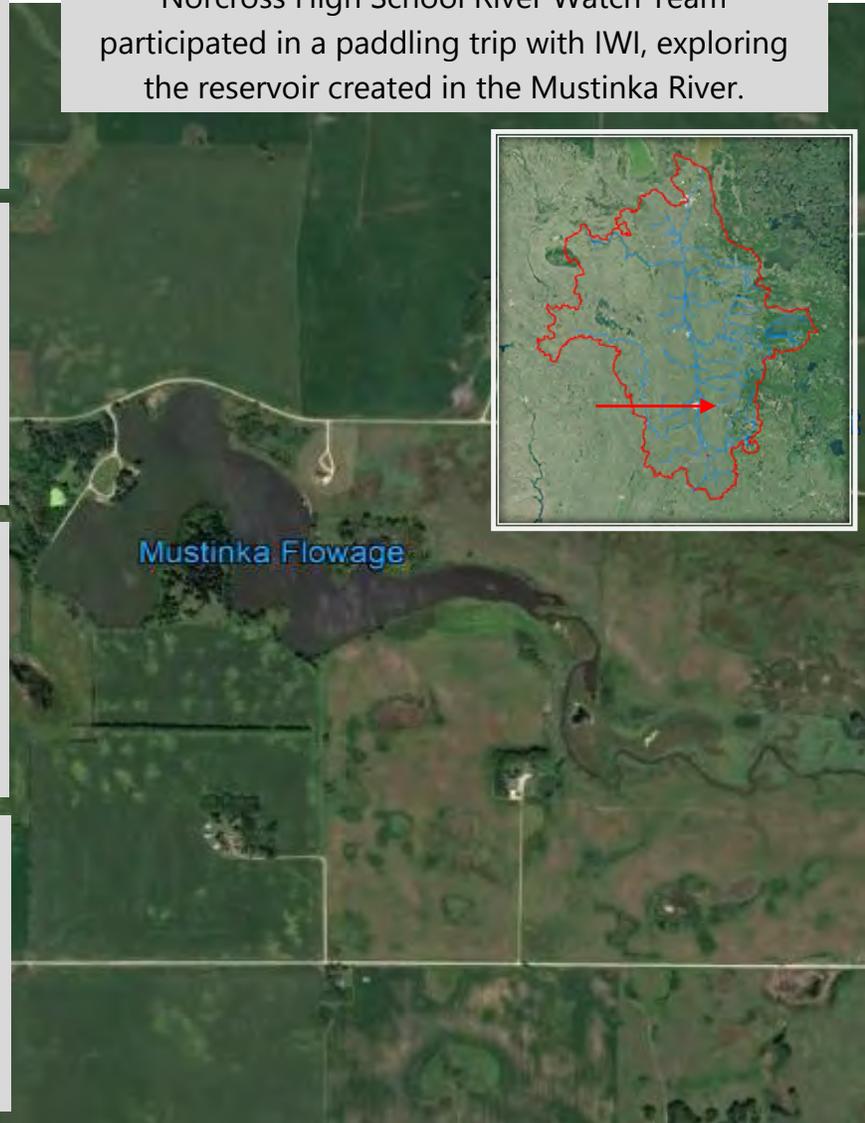
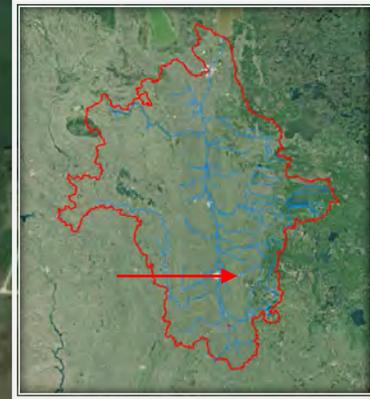
Trip Conclusions:

The River of Dreamers loved learning how to canoe! Wilderness Inquiry did a great job teaching the students how to be safe and cautious while still having a great time out on the water! It was a great day to get the students out of the classroom setting and learn new things outdoors!



Herman-Norcross

On October 4th, 2019, 6 students from the Herman-Norcross High School River Watch Team participated in a paddling trip with IWI, exploring the reservoir created in the Mustinka River.



Watershed Context:

The Mustinka River is a tributary to the Bois de Sioux River. The Mustinka River watershed encompasses nearly 910 square miles of the 1,970 square mile Bois de Sioux watershed. The Bois de Sioux and Ottertail rivers combine together to form the headwaters of the Red River.

Habitat and Wildlife:

The Mustinka River flows into and out of the reservoir that is controlled by the Pine Ridge dam, at the western edge of the reservoir. This dam inhibits the movement of fish within the reservoir, depleting the species diversity within the water body. However, some wildlife and aquatic species were still observed and the students noticed lily pads and reeds along the banks as well as trees.

Recreation:

The River Watch team mentioned that they had not really seen anyone using the water for recreation, but that by kayaking on this lake helped them get a better understanding of the ecosystem around them. They would recommend kayaking to anyone looking for something fun to do in the area.

Water:

The water at this time looked murky and muddy, which made seeing things below us difficult. The water level was normal for this time of year and was, of course, being controlled by the dam. The surrounding land is predominately agriculture, and we noticed a few culverts that were draining water into the reservoir.

Trip Conclusions:

Even though it was a cloudy and cool day out on the water, the team would definitely do it again soon!



River Explorers programming provides students the opportunity to:

- o Connect to their local rivers and lakes by paddling, strengthening a local sense of place
- o Document and share riverine conditions with resource managers and

Appendix D: Stem Assistance – Trainings, Workshops, River Watch Forum

2019 River Watch Fall Kickoff Schedule

October 08, 2019: Ralph Arena

Time	Staff	Activity
9:15		Check in begins - breakfast snacks available
9:30		Arrive By
9:45	Asher	RW Introductions, Info about program
10:15	Danielle	Break Out Session 1: River.Watch and Stroud Continuous Monitoring <ul style="list-style-type: none"> ● Stroud Basics - look at equipment and maintenance <ul style="list-style-type: none"> ● Data examples, live data ● River.Watch log ins ● River.Watch uses
10:15	Ashley/Taylor	Break Out Session 2: Macroinvertebrate Sampling Basics and Identification
10:15	Danni/Marcus	Break Out Session 3: Water Quality Sampling Equipment and Basics <ul style="list-style-type: none"> ● Safety Equipment ● Van Dorn, Secchi Tube, Sonde ● What are the parameters?
10:40		Rotate Breakout
11:05		Rotate Breakout
11:30		Lunch
12:10	Asher	Announcement to have River Watch Captains Selected and River.Watch Log in's created
12:15	Danielle /Asher	Assignment Overview
		Forum Example
		Worksheet w/team
1:00	Asher	Across the Basin
1:30		Depart



Stroud Stations and River.Watch

Cloud Stations

Continuous
Monitoring Stations
that take
measurements
every five minutes.

Parameters:

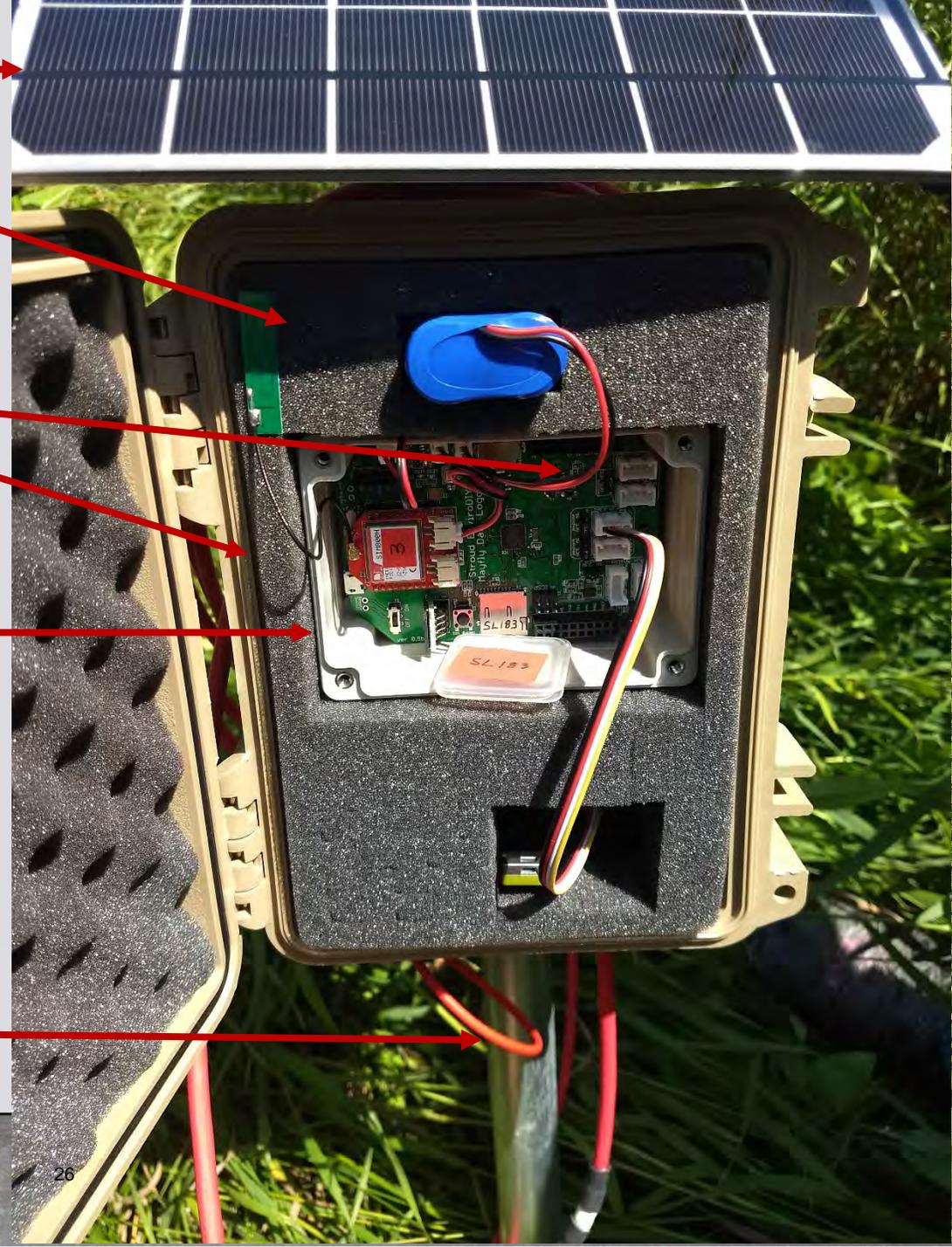
- Depth
- Temp
- Conductivity

Solar Panel
to charge
Battery

2G Card –
allows readings
to be viewed
live

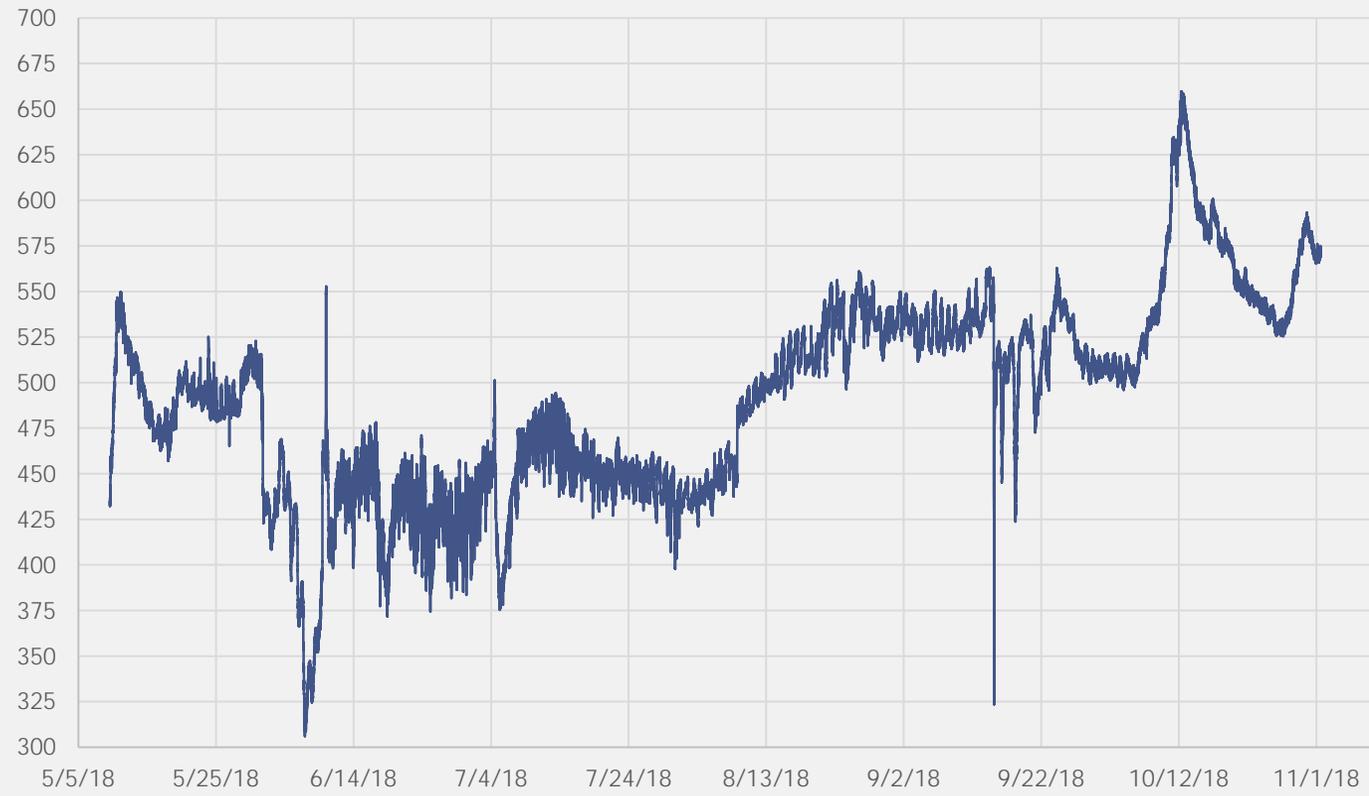
Micro SD
card to
back up
data

Cable
connected to
probe in river
channel.





2018 Wild Rice River Conductivity, dS/m





Barnesville,
[Whiskey Creek](#)
[Station](#)





river.watch is an online repository of citizen science and water quality data from the following project teams.



Red River River Watch

Data collected by River Watch schools in the Red River basin.



St. Louis River River Watch

The St. Louis River River Watch project is a youth-based water quality monitoring program for the St. Louis River and its tributaries in northeastern Minnes...



River Keepers

River Keepers is a non-profit organization established in 1990 to protect and preserve the integrity and natural environment of the Red River of the North in...



IWI Water Quality Monitoring



Snow Study



Sample Projects



2020 River Watch Forum Assignment
Celebrating 25 Years of River Watch
20/20: A clear vision for the Red River Basin

River Watch has been engaging students in watershed science and education since 1995. This program has grown to include water quality monitoring, macroinvertebrate identification, guided river recreation trips, and an annual project that is presented at the River Watch Forum.

Educating students and citizens about our water resources through a cross-curriculum approach allows our program to adopt new activities and technology as they become available.

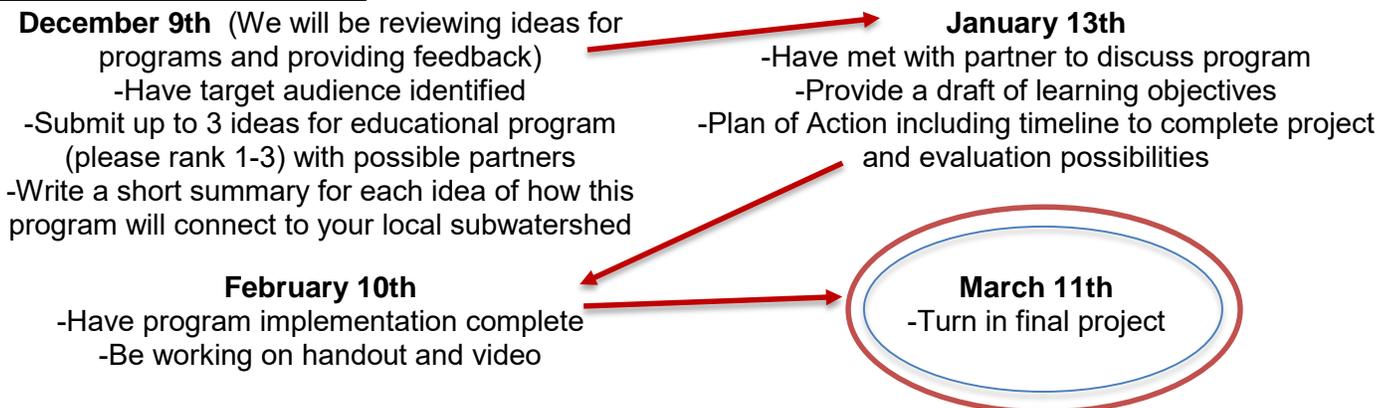
To complete our watershed education toolbox - we need your help! Grades K-3 and adults are currently not involved in our watershed education programming. It's up to you to develop an activity that engages a specified group (K, 1st, 2nd, 3rd Graders or Adults) in their subwatershed and the Red River Basin.

Be thoughtful, creative, and innovative—have fun!

- Choose an already identified educational gap in the topic area of watersheds (K, 1st, 2nd, 3rd Graders or Adults).
- Demonstrate need for program with your target audience
 - Hint: Is there currently any watershed education being done with your target audience?
- Create a list of objectives/outcomes that your program would achieve
- Build an educational program to meet those objectives
- Partner with a classroom teacher, community group, or other entity to conduct your educational program
- Evaluate the program and provide outcomes in video and handout.

- WHAT IS TURNED IN TO IWI/RIVER WATCH STAFF:
 - A video that includes:
 - Introduction to Red River Basin and specified subwatershed
 - Description of educational gap that you chose (K, 1st, 2nd, 3rd, or adult)
 - Educational program that you created
 - Desired Outcome of program
 - A portion of the actual presentation of said program
 - An evaluation of the program with outcomes
 - Handout or “Pitch” of program:
 - One page/flyer/brochure that summarizes the need for your program and the outcome of your program.
 - Hint: Think of what you would give to someone to convince them that your educational program should be utilized.

Project Completion Timeline:



You're Invited!

- Use doors 4-6 near Ballroom.
- Free General Parking

Contact Asher Kingery at 701-331-9259
or asher@iwinst.org

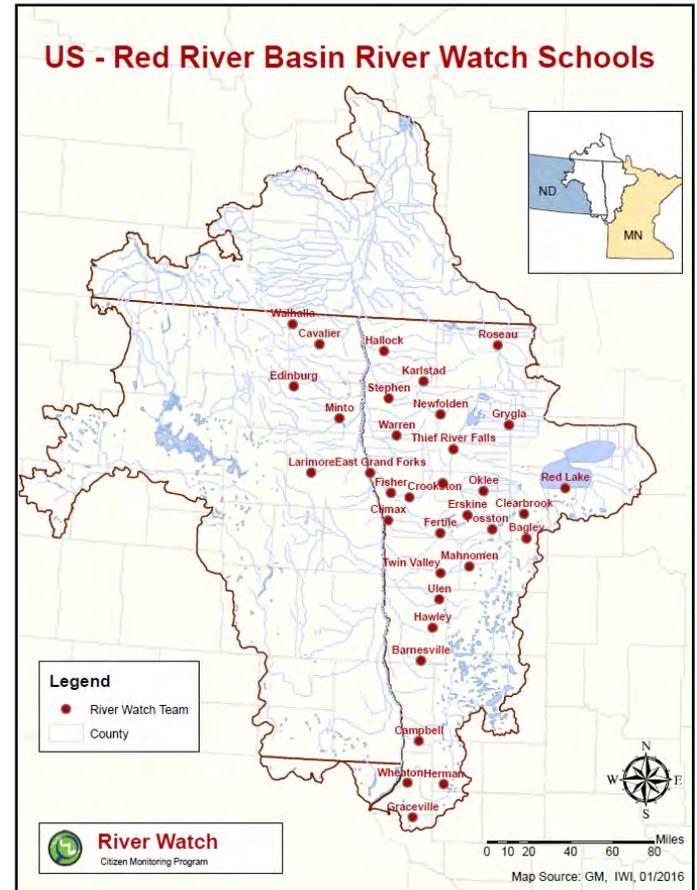
24th Annual River Watch Forum

Theme: Building Your Future

February 27, 2019

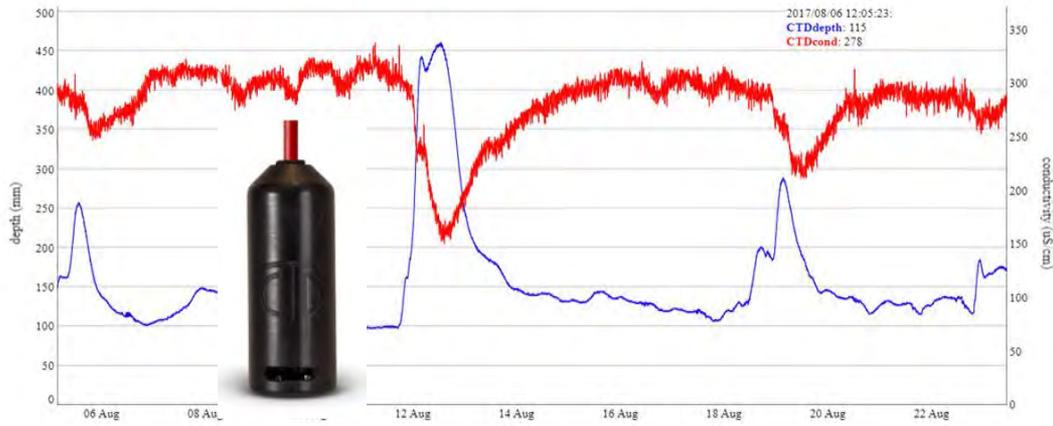
Alerus Center-Grand Forks, ND

- 8:30 Doors Open: Registration & Breakfast
- 9:30 Welcome & Opening Remarks
~~Keynote Address~~
- 9:40 Natalie Warren
-Adventurer, Author, PhD student, River Advocate
- 10:40 Announcements and Door Prizes
- 11:00 Group Rotations (40 minutes each)
-River Watch Team Challenge & Jeopardy Quiz
-College and Career Fair
-River Design
- 1:00 Lunch
- 1:35 Jeopardy
- 1:50 Highlights of 2018 and Plans for 2019
- 2:00 Awards and Recognition of Service
- 2:15 Adjourn



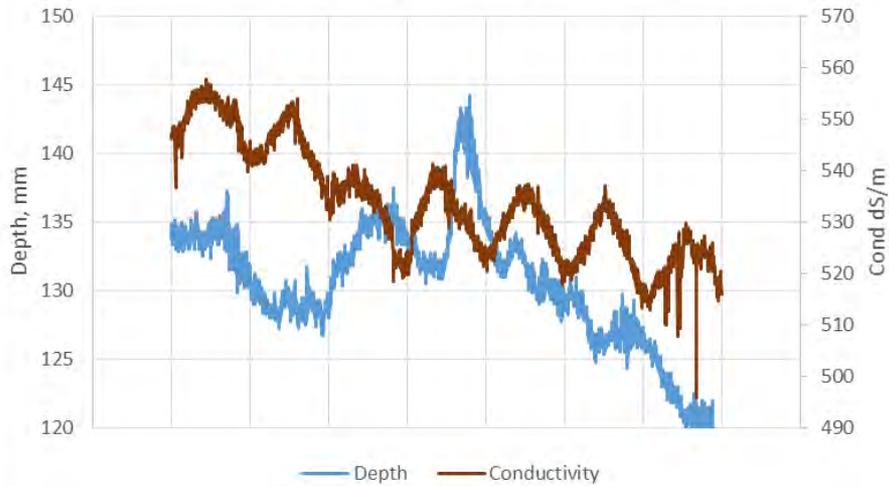
Appendix E: Real-Time Data Collection

Continuous Monitoring Station Information

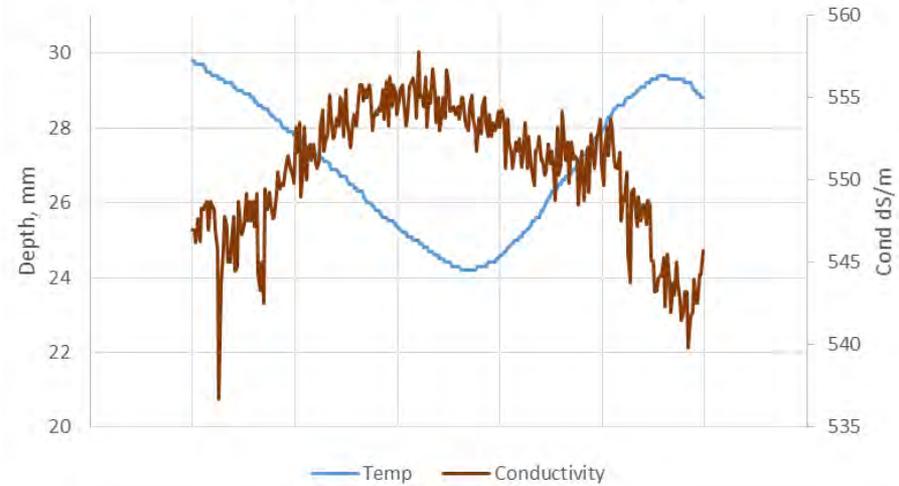


Continuous Monitoring Pilot Station Data

A Week of Depth and Conductivity

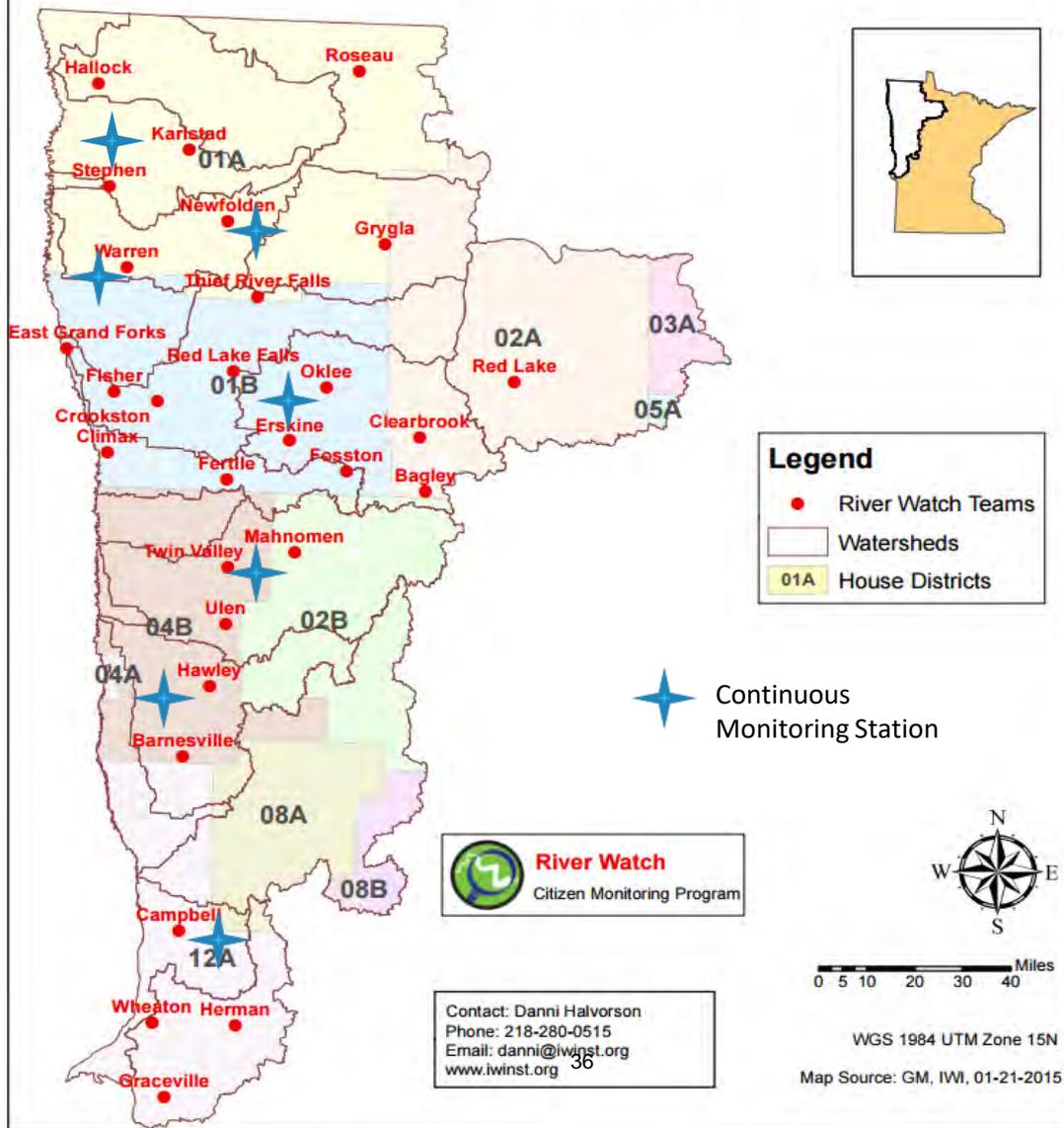


A Day of Depth and Conductivity)



Minnesota Red River Basin

River Watch Schools



Barnesville – Whiskey Creek Stroud Station

Where: 46.659821,-96.413526;
Whiskey Creek,
Barnesville

Year Installed: 2019

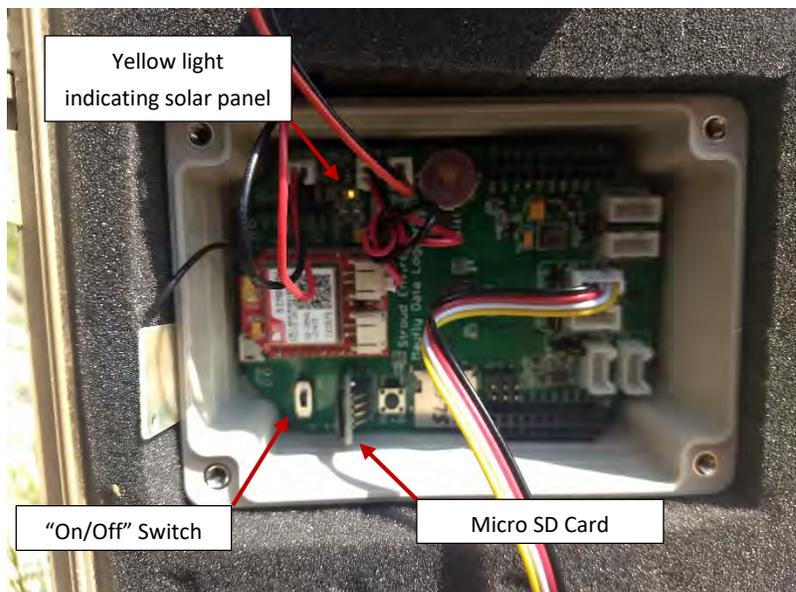
Maintained By: Barnesville
River Watch Team,
International Water Institute

Code: 713

Site Visit Steps:

- 1) Verify that the exterior of the Data Logger Box is intact
- 2) Open the box, verify that the light on the logger is on – yellow light indicates that the battery is receiving energy from solar panel
- 3) Remove the Micro SD card, place it in the converter, then into your computer and copy and paste the data – do not remove the data from the card!
- 4) Eject the card, return to data logger – card only fits properly one way, if you are unsure, switch the card back and forth until it is securely placed
- 5) Close the box and secure with pad-lock
- 6) Verify that cable was intact and secure
- 7) If possible, remove pin from rebar, pull pvc from water
- 8) Brush probe gently, make sure it is clean and no debris is on probe or rebar
- 9) Lower the pvc over the rebar, align the drill holes, replace the pin

***Do not turn off the data logger, verify that the “on” switch is placed in the correct situation



Appendix F: Program Evaluation

River Watch Teacher Input 2018

1. Is River Watch an extracurricular activity or part of your course curriculum at your school? Please Explain.

- ✓ Both – we have extracurricular club and we also do RW in Grade 10 science. (MB)
- ✓ Extracurricular, 12 students who do a lot of sampling during the school day.
- ✓ Extracurricular. We love getting out and studying science and teaching 4th and 7th grade students about Nature, water, etc.
- ✓ Extracurricular. Students apply to be a team member. Any student grades 9-12 are eligible.
- ✓ RW is strictly an EC activity. We are able to leave school to sample once a month.
- ✓ Extracurricular – I ask for volunteers from 10th – 12th Grade.
- ✓ Extracurricular as of now with students from grades 8 – 12. Would like to eventually create curriculum for an elective class with help from Science and Social fields.
- ✓ Extracurricular and Enviro Science class in spring.
- ✓ Extracurricular.
- ✓ RW is extracurricular. I tried to do as a class, but didn't pan out as expected.
- ✓ Extracurricular. We miss classes to do this activity. Students get .25 credit – p/f, Macroinvertebrate study as fabulous.
- ✓ It is a course curriculum. We meet daily for 25 mins. The students get 1 credit every two years.
- ✓ Part of the curriculum – Environmental Science Class.
- ✓ Extracurricular – essentially a “club” activity. Students in 7 -12 can join from mid-late 7th grade onward. It does supplement the curriculum through all science classes.
- ✓ Extracurricular now but would be happy to build it into an elective curriculum.
- ✓ This year it is part of our course curriculum but next year I plan to make it an extracurricular activity.
- ✓ Extracurricular, we currently have no room in our schedule to allow for this to be offered as course.

2. Please provide any suggestions related to IWI's watershed education program. For example, what needs do you have as a participant, are there any products (curriculum, guidance manual, etc.) that may be developed to better serve you.

- ✓ A manual which describes equipment and how to use it. For new students.
- ✓ We need a sonde unit so we can out and sample without Asher.
- ✓ IWI does a great job – cannot think of any suggestions.
- ✓ RW Ed database. A library for teachers to access watershed ED lessons.
- ✓ I would like Andy or someone to show my students GIS info and maps.
- ✓ It would be nice to have some basic watershed curriculum resources to teach kids before going out ... or also to teach elementary age kids = build for the future.
- ✓ Anything related to curriculum would be great.
- ✓ All my needs have been met.
- ✓ Provide a Calendar of events ... how many samples? When? Deadlines/events? Google calendar?
- ✓ More info for doing each project. Guidance manual would be good. Do not need curriculum, not a class for us.
- ✓ Testing supplies.
- ✓ A better curriculum that I can follow in the classroom between RW sampling days.
- ✓ Is there any information regarding fish planting available? Specifically MN requirements, costs, ways to determine likelihood of successful population establishment, etc..
- ✓ A curriculum manual would help our school get a class started. Andy did a great job of getting kids excited to participate. This is the first time motivating kids to come to Forum since I've been leading river watch (5 years).
- ✓ Develop a unit that ties directly to MN and ND State Standards for teachers to use in the classroom.

- ✓ As an extracurricular the program is a good fit.

3. Do you have any suggestions for the 2019 River Watch Forum assignment and assessment?

- ✓ Interview someone in the field and write a career report. (MB)
- ✓ Pick your own activity like we used to do.
- ✓ Assignment: Free Choice- expand on a previous project; Assessment: A more detailed rubric.
- ✓ Another community project or a history assignment of the community.
- ✓ I like Alerus as a location.
- ✓ I liked the poster element = to create something “physical” that can be displayed for all to see at the Forum and in our respective school. We enjoy doing videos! Having teams present to local service groups/civic groups was huge this year!
- ✓ It works better for us when more of the timeframe overlaps with Spring Semester.
- ✓ I enjoy the video submissions. I prefer that over making a poster.
- ✓ Lose the judging...This could open up ideas to more inquiry/interest based projects since they don't need to be judged based on same requirements.
- ✓ I liked the assignment this year.
- ✓ I like having school visits by staff members when the assignment is more in depth with data and technology.
- ✓ I like the Forum interviews better. If the kids aren't super “techy” it gives them a chance to share their passion and not be judged on creativity/ability to use iMovie.
- ✓ Bring back peer judging in some form.
- ✓ My students really liked video option rather than creating a poster.
- ✓ Commercial advertisement for River Watch and IWI. Mapping?
- ✓ Give more than one option; ideas “Your Impact on the Watershed – History of your Watershed”, “RW Education Activities you are Involved In?” “Point and nonpoint pollution in your watershed.
- ✓ Since we do this as an extracurricular this is the hardest part to implement with busy students. However, I believe this is a great part of River Watch.

4. As part of our 2018_19 River Watch Work Plan we will be holding 2-3 regional fall kick-off events in both 2018 and 2019; one summer teacher and one summer youth training session. Please provide any suggestions related to:

- **Kick-off event locations, content and timing**

- ✓ Beginning of Sept.
- ✓ September
- ✓ One North and One South like usual and later in the fall it was too early this year.
- ✓ As early in the school year as possible. GF/EGF works great for us.
- ✓ Same as last year TRF works well for SAC.
- ✓ Always impressed with Fall Kick-Off best way to start things off.
- ✓ TRF is handy and not the week of Labor Day – not 1st week of school.
- ✓ Last year was fine.
- ✓ One week later – it was hard to have a team so soon after school started.
- ✓ Having one of the locations like TRF or Crookston works well for us. Content has been good. I think it is better for the students having it earlier like we have done the past couple years.
- ✓ Worked well in EGF.
- ✓ FM has been working well for us.
- ✓ September in Moorhead.
- ✓ Fishing in River and or Lake in the Fall.
- ✓ Early Fall works well just try and avoid the 1st week of September.

- **Teacher training location, content and timing**

- ✓ Summer
- ✓ Crookston
- ✓ June (summer) – Crookston or Fargo
- ✓ June or July at UMC, watershed ed classroom use.
- ✓ UMC mid-June, GIS etc..
- ✓ Have plenty of notice and maybe more than one date/option.
- ✓ Sounds great!
- ✓ The basics of water quality, no overnights, workshop style.
- ✓ Cover the material that will be part of fall project.
- ✓ All three of these are good.
- ✓ Last I went was UMC – seemed to have good resources nearby.
- ✓ September in Moorhead.
- ✓ Summer, build monitoring station, how to use data in class.
- ✓ Anytime, any location, any content.

- **Youth training/summer camp location, content and timing**

- ✓ Bemidji – building team skills
- ✓ UMC?
- ✓ UMC mid-June. Actual kayaking, canoeing, monitoring- training.
- ✓ Have it between mid-June and late-July, great concept.
- ✓ Hmm, could be good.
- ✓ Basics of water quality, no overnights.
- ✓ Make sure you get info to us in a timely fashion so that the students can decide if they wish to participate. Raise awareness of the resources around us.
- ✓ I have not been able to attend this.
- ✓ Leadership/organization, connection of environmental studies to other topics/career areas. Avoid late summer – start of sports practices.
- ✓ Early Fall, job opportunities.
- ✓ Anytime, any location, any content.

Timestamp	How many years of River Watch experience do you have?	How does the River Watch program offerings help meet your educational teaching requirements?	Overall, how satisfied or dissatisfied are you with the River Watch program offerings?	Please rate the quality of the watershed science activities offered by River Watch?	Please rate the staff that assist you with your River Watch activities?
3/15/2017 10:39:23	3	4	4	4	5
3/15/2017 10:43:46	2	5	5	5	5
3/15/2017 10:45:09	6+	5	5	5	5
3/15/2017 10:54:53	2	4	5	3	5
3/15/2017 10:55:08	6+	4	5	5	5
3/15/2017 10:55:22	2	4	5	4	5
3/15/2017 10:55:27	4	4	5	5	5
3/15/2017 10:55:31	6+	4	4	5	5
3/15/2017 10:55:35	2	4	5	5	5
3/15/2017 10:55:40	6+	5	5	4	5
3/15/2017 10:55:40	6+	5	5	4	4
3/15/2017 10:55:41	1	4	4	4	5
3/15/2017 10:55:49	6+	3	4	4	4
3/15/2017 10:55:59	6+	4	4	4	5
3/15/2017 10:56:00	6+	5	5	5	5
3/15/2017 10:56:00	6+	5	5	5	5
3/15/2017 10:56:45	1	4	5	5	5
3/15/2017 10:56:50	6+	2	5	5	5
3/15/2017 10:57:20	6+	5	5	5	5
3/15/2017 10:57:38	6+	4	4	5	5
3/15/2017 10:57:58	6+	3	4	4	4
3/15/2017 10:58:31	<1	3	3	3	3
	Scale Key	1 not at all, 5 exceeds	1 dissatisfied, 5 very Satisfied	1 low quality, 5 high quality	1 poor, 5 excellent

Timestamp	In 2016-2017, which of the following River Watch program offerings have you participated in? (check all that apply)	How likely are you to continue utilizing the River Watch programs?	How likely is it that you would recommend River Watch to a colleague or neighboring school?	Which do you prefer as a requirement for the River Watch Forum assignment?
3/15/2017 10:39:23	Stream water quality monitoring, River Explorers, Fall Kick-Off, River of Dreams	5	5	Poster and Video Submission
3/15/2017 10:43:46	Stream water quality monitoring, River Explorers, Fall Kick-Off	5	5	Poster and Video Submission
3/15/2017 10:45:09	Stream water quality monitoring, Fall Kick-Off	5	5	Poster and Video Submission
3/15/2017 10:54:53	Stream water quality monitoring, River Explorers, Fall Kick-Off, River of Dreams	5	5	Poster and Video Submission
3/15/2017 10:55:08	Stream water quality monitoring, River Explorers, Fall Kick-Off	5	5	Poster and Video Submission
3/15/2017 10:55:22	Stream water quality monitoring, Fall Kick-Off	5	5	Poster and Forum Presentation
3/15/2017 10:55:27	Macroinvertebrate monitoring, Snow Study, Fall Kick-Off	5	5	Poster and Video Submission
3/15/2017 10:55:31	Stream water quality monitoring, River Explorers, River of Dreams	5	5	Poster and Video Submission
3/15/2017 10:55:35	Stream water quality monitoring, Fall Kick-Off	5	5	Poster and Video Submission
3/15/2017 10:55:40	Stream water quality monitoring, Fall Kick-Off	5	5	Poster and Forum Presentation
3/15/2017 10:55:40	Stream water quality monitoring, Macroinvertebrate monitoring, River Explorers, Snow Study	4	5	Poster and Forum Presentation
3/15/2017 10:55:41	Stream water quality monitoring, River Explorers, Fall Kick-Off	5	5	Poster and Video Submission
3/15/2017 10:55:49	Stream water quality monitoring	4	4	Poster and Video Submission
3/15/2017 10:55:59	Stream water quality monitoring, Fall Kick-Off, River of Dreams	5	4	Poster and Video Submission
3/15/2017 10:56:00	Stream water quality monitoring, Macroinvertebrate monitoring, River Explorers	5	5	Poster and Forum Presentation
3/15/2017 10:56:00	Stream water quality monitoring, Macroinvertebrate monitoring, River Explorers, Snow Study, Fall Kick-Off	5	5	Poster and Forum Presentation
3/15/2017 10:56:45	Stream water quality monitoring, River Explorers	5	5	Poster and Video Submission
3/15/2017 10:56:50	Stream water quality monitoring, Fall Kick-Off	5	5	Poster and Video Submission
3/15/2017 10:57:20	Stream water quality monitoring	5	5	Poster and Forum Presentation
3/15/2017 10:57:38	Stream water quality monitoring, Fall Kick-Off	4	4	Poster and Video Submission
3/15/2017 10:57:58	Stream water quality monitoring, Fall Kick-Off, River of Dreams	5	4	Poster and Forum Presentation
3/15/2017 10:58:31	Stream water quality monitoring, Macroinvertebrate monitoring	3	3	Poster and Video Submission
Scale Key		1 not likely, 5 extremely likely	1 not likely, 5 extremely likely	

Question	Student 1	Student 2	Student 3	Student 4	Student 5
Rate the following activities in terms of your level of enjoyment: [Team Builders]	Satisfactory	Not Fun	Fun!		Fun!
Rate the following activities in terms of your level of enjoyment: [Basin Basics]	Satisfactory	Fun!	Satisfactory		Satisfactory
Rate the following activities in terms of your level of enjoyment: [Macro Sampling]	Satisfactory	Fun!	Fun!		Fun!
Rate the following activities in terms of your level of enjoyment: [Kayak Trip]	Satisfactory	Fun!	Fun!		Fun!
Rate the following activities in terms of your level of enjoyment: [Leadership Compass]	Fun!	Satisfactory	Fun!		Fun!
Rate the following activities in terms of your level of enjoyment: [Tie-dye]	Fun!	Fun!	Fun!		Fun!
Rate the following activities in terms of your level of enjoyment: [River Watch Olympics]	Fun!	Fun!	Fun!		Fun!
Rate the following activities in terms of educational experiences: [Team Builders]	I learned a lot	I learned a little bit	I learned a little bit		I learned a little bit
Rate the following activities in terms of educational experiences: [Basin Basics]	I learned a little bit	I learned a lot	I learned a lot		I learned a little bit
Rate the following activities in terms of educational experiences: [Macro Sampling]	I learned a little bit	I learned a little bit	I learned a lot		I learned a little bit
Rate the following activities in terms of educational experiences: [Kayak Trip]	I learned a little bit	I learned a little bit	I did not learn anything		I learned a lot
Rate the following activities in terms of educational experiences: [Leadership Compass]	I learned a lot	I learned a little bit	I learned a lot		I learned a lot
Rate the following activities in terms of educational experiences: [Tie-dye]	I learned a little bit	I learned a little bit	I did not learn anything		I did not learn anything
Rate the following activities in terms of educational experiences: [River Watch Olympics]	I learned a little bit	I learned a little bit	I learned a lot		I learned a lot
What was your favorite camp activity?	Gonna have to pick kayak and smores!	Kayak trip	Vanilla Ice Jams and Olympics	Vanilla Ice Jams and Olympics	Kayak trip
What was your least favorite camp activity?	I just get tired of being outside sometimes.	Team builders	Macro sampling	Macro sampling	None
Rate your lodging, meals, and facilities at UMC:	Good	Good	Good		Good
Did you feel prepared for camp, based on what Andy or Asher communicated?	Yes	Yes	Yes		Kinda-sorta
Now that you have made it through, would you attend River Watch Camp again?	Yes	Yes	Yes		Yes

Question	Student 6	Student 7	Student 8	Student 9	Student 10	Student 11
Rate the following activities in terms of your level of enjoyment: [Team Builders]	Fun!	Fun!	Fun!	Fun!	Fun!	Fun!
Rate the following activities in terms of your level of enjoyment: [Basin Basics]	Satisfactory	Satisfactory	Not Fun	Satisfactory	Fun!	Satisfactory
Rate the following activities in terms of your level of enjoyment: [Macro Sampling]	Fun!	Satisfactory	Fun!	Satisfactory	Fun!	Satisfactory
Rate the following activities in terms of your level of enjoyment: [Kayak Trip]	Fun!	Fun!	Fun!	Fun!	Fun!	Fun!
Rate the following activities in terms of your level of enjoyment: [Leadership Compass]	Fun!	Satisfactory	Fun!	Satisfactory	Fun!	Satisfactory
Rate the following activities in terms of your level of enjoyment: [Tie-dye]	Fun!	Fun!	Fun!	Fun!	Fun!	Fun!
Rate the following activities in terms of your level of enjoyment: [River Watch Olympics]	Satisfactory	Satisfactory	Satisfactory	Fun!	Fun!	Satisfactory
Rate the following activities in terms of educational experiences: [Team Builders]	I learned a little bit	I did not learn anything	I learned a little bit	I learned a little bit	I learned a little bit	I did not learn anything
Rate the following activities in terms of educational experiences: [Basin Basics]	I learned a lot	I learned a lot	I learned a little bit	I learned a lot	I learned a lot	I learned a lot
Rate the following activities in terms of educational experiences: [Macro Sampling]	I learned a lot	I learned a little bit	I learned a lot	I learned a little bit	I learned a lot	I learned a little bit
Rate the following activities in terms of educational experiences: [Kayak Trip]	I learned a little bit	I learned a little bit	I learned a little bit	I learned a lot	I learned a little bit	I learned a little bit
Rate the following activities in terms of educational experiences: [Leadership Compass]	I learned a lot	I did not learn anything	I learned a lot	I learned a little bit	I learned a lot	I did not learn anything
Rate the following activities in terms of educational experiences: [Tie-dye]	I did not learn anything	I did not learn anything	I did not learn anything	I did not learn anything	I learned a little bit	I did not learn anything
Rate the following activities in terms of educational experiences: [River Watch Olympics]	I learned a little bit	I learned a little bit	I learned a lot	I learned a little bit	I learned a lot	I learned a little bit
What was your favorite camp activity?	Making smores!!	Kayaking and team builders	Tye dying or kiyaking	The kayak trip	Leadership Compass and Kayak Trip	Kayaking and team builders
What was your least favorite camp activity?		Leadership Compass	Basin basics	Nothing stands out	Basin Basics	Leadership Compass
Rate your lodging, meals, and facilities at UMC:	Good	Good	Good	Good	Good	Good
Did you feel prepared for camp, based on what Andy or Asher communicated?	Yes	Yes	Yes	Yes	Yes	Yes
Now that you have made it through, would you attend River Watch Camp again?	Yes	Yes	Yes	Yes	Yes	Yes