



Red River Basin River Watch~CWF
ATTACHMENT A
Project Work Plan

Section I: Work Plan

Grantee: Red River Watershed Management Board

Organization/Grantee: Red River Watershed Management Board

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Project

Project title: Red River Basin River Watch~CWF

Project start date: 10/09

Project end date: 06/30/2012

Grant amount: \$ 346,000

Project Description:

Clean Water Fund (H.F. 2123 Conference Committee Report)- Pollution Control Agency, \$150,000 the first year and \$196,000 the second year are for grants to the Red River Watershed Management Board to enhance and expand existing River Watch activities in the Red River of the North. The Red River Watershed Management Board shall provide a report that includes formal evaluation results from the River Watch program to the commissioners of education and the Pollution Control Agency and to the legislative natural resources finance and policy committees and K-12 finance and policy committees by February 15, 2011.

The goal of this project is to develop an effective transferable model to engage and educate watershed residents, stakeholders, and others to better understand and protect watershed ecosystems through environmental monitoring, training, and formal and informal education programs in their local watershed. The project will build on the foundation of the existing Red River Basin River Watch program by strengthening three main activity areas: 1) curriculum integration and teacher training, 2) youth leadership and civic engagement, and 3) applied research collaboration and watershed science skills building.

The River Watch monitoring and education program engages citizens through field-based applied watershed science and research activities in their local watersheds. River Watch incorporates watershed science as the integrating context for developing critical thinking and leadership skills while emphasizing citizen engagement and water resources management dialogue resulting in more informed decisions and actions which foster sustainable and vibrant communities.

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.internationalwaterinstitute.org/riverwatchmain.htm>). River Watch program partners will establish formal applied research connections with local academia and resource management professionals, expand monitoring efforts and locations, develop effective participant and instructor training programs, enhance public outreach and engagement, and work closely with a regional strategic leadership team to develop sound and effective River Watch watershed science, technology, engineering, and math (STEM) education curricula and training programs.

The Red River Watershed Management Board (RRWMB) will be the project sponsor with lead coordination and project management provided by the International Water Institute. The Strategic Leadership Team that has provided guidance throughout development of this project will continue to provide overall project oversight and be engaged in three working groups (youth leadership, curriculum, and research) as per their expertise and skills to address these three main project activity areas.

Below is a list of current members of the Red River Basin Strategic Leadership Team. The three working groups are subsets of the following group and may bring in additional teachers, administrators, students, faculty, resource managers or other partners depending on the topic of discussion at a particular meeting of their individual group.

Name	Organization/School/Capacity
Karen Thoreson	Climax-Shelly School – HS teacher
Jessica Hanson	Crookston School – HS teacher
Sheila Carlson	Barnesville HS RW advisor
Garry Kotts	Stephen-Argyle School – HS teacher
Mark Kroulick	Stephen-Argyle School – HS Principal
Jill Bakken	Bagley School – HS teacher
Ila LaChapelle	North Border-Walhalla School – HS teacher
Wayne Goeken	Red River Watershed Mgmt. Board
Mark Meister	Red River Watershed Mgmt. Board
Joe Courneya	UofM Ext 4-H Youth Leadership Spec.
Linda Kingery	UofM NWRSDP Exec. Director
Dr. Dan Svedarsky	UofM Crookston Faculty
Dr. David DeMuth	UofM Crookston Faculty
Chuck Fritz	International Water Institute
Grit May	International Water Institute
Bob Laidler	Oak Hammock Marsh – Exec. Director
Elizabeth Cakebread	Climax-Shelly – RW student
Elisabeth Vigness	Climax-Shelly – RW student
Elmer Penner	North Border-Walhalla – RW student
Mickelle Arens	North Border-Walhalla – RW student
Jim Blix	Red Lake Watershed District RW staff
Emily Malterud	Bagley HS – RW student
Janelle Dunn	Bagley HS – RW student
Dr. Andre DeLorme	Valley City State U (ND) Biology Prof.

Section II: Work Plan Objectives

OBJECTIVE 1: Coordinate project planning and sustainability for watershed science development efforts through the Strategic Leadership Team (SLT) and its affiliated partners and working groups.

Task A: Support opportunities for the SLT and partners to meet and/or gather, share, and refine information and resources to effectively advance project goals.

Task B: Convene a one day leadership development session and related pre and post session leadership development options for SLT members and other strategic partners.

Task C: Work with SLT to create working partnerships to build program sustainability.

Measurable Outcomes:

- Six meetings and between meeting communication/coordination of the SLT are planned throughout the project to report results and coordinate activities. Outcomes of these meetings and attendance roster will be reported online at the IWI website <http://www.internationalwaterinstitute.org/>.
- 20 members of SLT expected to participate in Leadership development session. Additional leadership training opportunities utilized will also be documented.
- Partnerships developed and resources leveraged to advance watershed science in the Red River Basin will be reported and quantified in project narrative reports identified in Objective 6.

Time frame: October 2009 through September 2011

Budget: \$42,876

OBJECTIVE 2: Develop strong student leadership for River Watch teams and community engagement activities.

Task A: Finalize structure of Youth Leadership Team (YLT), finalize work plan, and provide opportunities for the youth leadership team to meet and/or gather and share information and resources to effectively advance project goals.

Task B: Identify and implement youth leadership development strategies such as team captains for all RW teams, interaction with Students Teaching Attitudes of Respect (STAR) youth leadership program and one youth leadership camp in the summer of 2010.

Task C: Develop student to peer communication system(s) and activities to facilitate RW team building and connections between RW teams and watersheds.

Task D: Develop RW “team-to-team” connections within and between watersheds. RW team members visit other RW teams upstream or downstream of their sampling reach to understand watershed dynamics and connections. Additional support will be sought from WD, SWCD, and other partners to cover travel and related costs.

Task E: Identify and implement school and community engagement strategies such as RW teams giving presentations to school, community, and resource agency audiences. RW teams will also assist with the annual RW Forum, summer science camps for younger students and coordinate community river clean-up activities.

Measurable Outcomes:

- Eight meetings of the YLT and between meeting communication/coordination are planned throughout the project to report results and coordinate activities. Outcomes of these meetings and attendance roster will be reported online at the IWI website <http://www.internationalwaterinstitute.org/>.
- Team captains in place for all RW teams and report of information provided to RW teams and activities undertaken.
- Interaction with Northwest MN Foundation STAR youth leadership training program and training sessions at Concordia Language Village to share RW lessons and learn leadership skills. Engage in two retreats with at least six RW team members from 2-3 RW teams engaged in each retreat.

- Attendance by 30 high school RW students at 2010 Summer Youth Leadership Camp at UMC campus. Report on skills developed and further training done back in the home schools of camp participants from this “train the trainer” method.
- Social networking option in place for RW teams to better communicate. This may be via Facebook, NING, or the existing RW online data site.
- The number of RW team exchanges accomplished for visiting neighboring watersheds and partnership support of these activities. Expect at least one exchange within each major watershed in MN Red River Basin (9 exchanges) plus additional exchanges between watersheds as coordinated by RW Team Captains.
- Documented RW student involvement in giving community presentations, coordinating river cleanups, involvement in planning and implementing the annual RW Forum, summer science camps for younger students, etc. Hours will be documented and outcomes/impacts quantified and/or described.

Time frame: October 2009 through September 2011

Budget: \$74,205

OBJECTIVE 3: Integrate watershed science learning opportunities directly into school curricula—across subject areas and grade spans.

Task A: Develop applied watershed science education modules for teachers, students, and citizens in the Red River Basin.

Task B: Connect watershed science skills with academic standards across grade spans and subject areas. Primary emphasis during the initial two year project period will be on the high school level.

Task C: Develop teacher training options for watershed science education modules and related watershed science topics including one summer teacher training session.

Task D: Identify or develop training/internship options available for skills development in watershed science for pre-service teachers.

Task E: Develop a curriculum with watershed science components that provides Post Secondary Enrollment Option (PSEO)/dual credit options.

Task F: Provide ongoing opportunities for the curriculum/education work group to meet and/or gather and share information and resources to effectively advance project goals.

Measurable Outcomes:

- Applied watershed science education modules developed and made available to teachers in the RRBasin with considerations addressed for statewide applicability. Initial modules available by March 17, 2010 with additional modules developed by June 20, 2010.
- Summary developed of how watershed science skills fit with new MN Academic Science Standards that go into effect in 2011.
- 2010 summer workshop provided to 20 teachers to train in use of the developed applied science course.
- Training/internship options for watershed science skills building identified for pre-service teachers.
- Post Secondary Enrollment/dual credit option related to watershed science in place and available to all high school students in Red River Basin by August, 2010.
- Eight meetings of the Curriculum Committee and between meeting communication/coordination are planned throughout the project to report results and coordinate activities. Outcomes of these meetings and attendance roster will be reported online at the IWI website <http://www.internationalwaterinstitute.org/>.

Time frame: October 2009 through September 2011

Budget: \$81,822

OBJECTIVE 4: Contribute to understanding of watershed science by developing structure for effective watershed science applied research partnerships involving RW students as part of a multi-disciplinary team to address relevant local resource management issues.

- Task A: Establish working relationship with resource experts and watershed scientists to provide guidance in development of research projects and review of results.
- Task B: Implement two comprehensive collaborative watershed research projects addressing current watershed research needs.
- Task C: Develop online tools and tutorials to enable more thorough understanding and analysis of water quality and related data.
- Task D: Facilitate access to current scientific literature related to watershed topics using University e-library resources prompting local research appropriate to all RW schools.
- Task E: Provide ongoing opportunities for the applied research work group to meet and/or gather and share information and resources to effectively advance project goals.

Measurable Outcomes:

- Results of two comprehensive collaborative watershed research projects conducted in the Red River Basin will be presented to resource managers as contribution to advancing watershed knowledge in basin. Measures of success for these research projects will be developed and post-project evaluations completed to determine the success of meeting the research project goals
- Additional features and tutorials added to existing RW online website for ease of data analysis and understanding.
- RW online website feature added to provide access to scientific literature to facilitate broader involvement in small scale local watershed research projects.
- Eight meetings of the Research Committee and between meeting communication/coordination are planned throughout the project to report results and coordinate activities. Outcomes of these meetings and attendance roster will be reported online at the IWI website <http://www.internationalwaterinstitute.org/>.

Time frame: October 2009 through September 2011

Budget: \$69,274

OBJECTIVE 5: Thorough formative (How can program be improved) and summative(should program be continued? And at what level?) evaluation of project progress and effectiveness to guide ongoing project adjustments and future watershed science programs.

- Task A: Collect baseline, interim, and final data measuring knowledge, attitude, and interest related to watershed science, current conditions, issues, and management options of project participants.
- Task B: Conduct evaluation activities based on a utilization-focused evaluation approach throughout the project to identify what stakeholders want and need to determine the best course of treatment (action) for program improvement and long term sustainability.
- Task C: Assess attitude and interest of all participating students to go into STEM careers.
- Task D: Document teacher and student interest in dual high school/college credits, environmental and watershed science courses, participation in applied science coursework and research projects.

Measurable Outcomes:

- Interim and final reports of student and citizen awareness of watershed and science knowledge and interest and attitude and interest of students in STEM careers.
- Documented interest from teachers and students in dual high school/college credits and applied science coursework and research.
- Final report of effectiveness of project methods and recommendations for improvements for further program expansion.

Time frame: October 2009 through June 2012

Estimated budget: \$27,846

OBJECTIVE 6: Project Management and Reporting

Task A: Track project grant-related expenditures and matching funds including rent, office supplies, telephone and other project-related costs. Compile and organize invoices and pay bills.

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

- 9/30/2010 Interim report to MPCA
- 2/15/2011 Formal evaluation results to the:
 - Commissioners of Education and the Pollution Control Agency,
 - Legislative Natural Resources Finance and Policy Committees, and
 - K-12 Finance and Policy Committees
- 9/30/2011 Interim report to MPCA
- 6/30/2012 Final report including final evaluation results to entities identified for 2/15/2011 report above.

Measurable Outcomes:

- Interim report of project status and budget to MPCA by September 30, 2010 and September 30, 2011.
- Evaluation Results to Commissioners of Education, MPCA and Legislative and Education Committees by February 15, 2011.
- Final report of project outcomes, budget, and final evaluation results by June 30, 2012 to all entities receiving 2/15/2011 report noted above.
- Submit invoices to MPCA at least quarterly for expenses to be reimbursed.

Time Frame: October 2009 through June 2012

Budget: \$ 49,978