

Grant project summary

Project title: Watonwan River Watershed Priority Management Zone Strategy
Organization (Grantee): Greater Blue Earth River Basin Alliance
Project start date: 6/9/2014 Project end date: 6/30/2017 Report submittal date: 7/26/2017
Grantee contact name: Kay Gross Title: Administrative Coordinator
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Basin (Red, Minnesota, St. Croix, etc.)
/Watershed & 8 digit HUC:: Minnesota River Basin/Watonwan 07020010 County: Blue Earth, Brown, Cottonwood, Jackson, Martin, Watonwan

Project type (check one):

- Clean Water Partnership
 Total Maximum Daily Load (TMDL)/Watershed Restoration or Protection Strategy (WRAPS) Development
 319 Implementation
 319 Demonstration, Education, Research
 TMDL/WRAPS Implementation

Grant funding

Final grant amount: \$58,638.00 Final total project costs: \$44,194.63
Matching funds: Final cash: \$0.00 Final in-kind: \$0.00 Final Loan: \$N/A
MPCA project manager: Paul Davis

For TMDL/WRAPS development or TMDL/WRAPS implementation projects only

Impaired reach name(s): N/A
AUID or DNR Lake ID(s): N/A
Listed pollutant(s): N/A
303(d) List scheduled start date: N/A Scheduled completion date: N/A
AUID = Assessment Unit ID
DNR = Minnesota Department of Natural Resources

Executive summary of project (300 words or less)

This summary will help us prepare the Watershed Achievements Report to the Environmental Protection Agency. (Include any specific project history, purpose, and timeline.)

Problem (one paragraph)

The Watonwan River Watershed has several streams, rivers, and lakes that are still impaired. In addition to the technical analyses, the State of Minnesota's "Watershed Approach" requires a process to encourage watershed citizens to take an active role in decisions that affect water quality. The purpose of this project was to identify community/landowner opportunities, obstacles, and opinions on land management and water quality in the Watonwan River Watershed.

Waterbody improved (one paragraph)

The Watonwan River Watershed drains approximately 559,000 acres across six counties in South Central Minnesota. The watershed is primarily rural with a population of 27,387 and includes the major communities of St. James, Madelia, Mountain Lake, and Truman. The watershed has 1,206 farms and agriculture is the predominate land use making up 86% of the land area. Water resources in the watershed include the main stem of the Watonwan River, North Fork Watonwan River, South Fork Watonwan River, Butterfield Creek, St. James Creek, Perch Creek, Lake Hanska, St. James Lake, Long Lake, Mountain Lake, and Bingham Lake.

Project highlights (one paragraph)

Interviews were conducted with a range of landowners and community members across the watershed, including conservation professionals. Participants were asked questions about the community, farming, water resources, and conservation practices. Interviews were analyzed and organized into thematic tables. Three major themes developed: barriers to BMP implementation, water resources, and community context. Information was packaged so that it could be presented to various groups via oral presentation. The results were presented at the U of M Water Resource Conference, the MPCA's Waters and Watersheds conference, GBERBA Technical and Policy Board meetings, and the MASWCD Annual Meeting.

Results (one paragraph)

To date, 29 interviews have been conducted. Four were women, four were associated with agricultural lending businesses, twelve were actively farming, two were associated with agronomy, and 2 were associated with natural resources. Many additional interactions with community members were conducted in conjunction with the Civic Engagement project led by MSU Water Resources Center.

Partnerships (Name all partners and indicate relationship to project)

Kim Musser, Water Resource Center – Minnesota State University, Mankato. Assisted with interview structure, analysis, and dissemination of results.

Mae Davenport and Amit Pradhananga, University of Minnesota. Assisted with interview analysis and theme table development.

Pictures

See attached slide presentation.

Body of main report

Section I – Work plan review

One change was made to the work plan during the grant period. A total of 80 hours (\$2,400.00) was moved from Objective 1, Task A, subtask 3 to Objective 1, Task B to meet the reporting needs of the project. This change was approved on July 20, 2016.

The work plan essentially involved 2 tasks: A) Develop and implement a process to identify community/landowner opportunities, obstacles, and opinions on land management and water quality and B) coordinate financial expenditures. Task A was further broken down into 3 subtasks which included 1) involvement in the Watonwan River Watershed Engagement Team, 2) specialized training on conducting strategic interviews, and 3) conduct, analyze, and report the results of strategic interviews.

The Watonwan River Watershed Engagement Team primarily consisted of Kim Musser from the Water Resources Center (WRC) at Minnesota State University-Mankato, Paul Davis, MPCA project manager, and Dustin Anderson, Greater Blue Earth River Basin Alliance (GBERBA) Watonwan Watershed Technician (WWT). Together, this team came up with a strategy to target individuals for personal interviews. Through several iterations, a list of interview questions was developed covering several topics including community, water resources, farming, and conservation practices. The Engagement Team met as necessary.

The Engagement team also worked to organize specialized training for Watonwan Watershed partners on conducting and analyzing strategic interviews. Mae Davenport and Amit Pradhananga of the University of Minnesota provided training opportunities on developing interview studies. Mae and Amit were also consulted by the Engagement Team on handling and organizing interview data.

Conducting and analyzing strategic face-to-face interviews comprised a majority of the time and effort associated with this grant. The Engagement Team identified some key areas to begin interviews, mainly the Lake Hanska region. A set of interview questions was developed with input from the Engagement Team as well as the GBERBA Technical Committee.

Under the guidance of Mae Davenport and Amit Pradhananga, a fairly strict interview process was laid out. The Watonwan Watershed Technician generated a script that was used to initiate interviews. If a community member agreed to do the interview, a date, time, and place were determined. The WWT conducted all of the interviews for this project.

Ensuring confidentiality was an important aspect of the face-to-face interviews. A consent form was developed that outlined the scope and purpose of the study, provided interviewees with contact information for more questions, and obtained interviewee consent to audio record conversations and/or quote them anonymously in future generated reports. Community members that were interviewed received a copy of this consent form. Furthermore, interview notes and recorded audio were assigned a random 4-digit code to that the community member's opinions were not able to be correlated with their personal identification.

After the consent form but before the interview began, willing participants were provided a topographic map of the Watonwan River Watershed and a watershed informational handout developed by the WRC. If consent to audio record was granted, the conversation was recorded with an Olympus® Digital Voice Recorder, Model # VN-722PC. Notes were also recorded by pen and paper by the WWT. The pre-determined list of interview questions were used as a general guide, meaning that it wasn't necessarily the intent of the WWT to have every interview question answered by the interviewee.

Interviews generally lasted approximately 1 hour, but were as short as 40 minutes and as long as 3 hours. The WWT had on hand several information handouts specific to programs offered by the Soil & Water Conservation District (SWCD) or Natural Resources Conservation Service (NRCS). Depending on the content of the interview and the interests of the community member, the WWT would provide targeted literature directly to the interviewee. If relevant literature was not readily available, the WWT would often mail the pertinent information after the interview.

Once the interview was concluded, the WWT would assign the particular interview a random 4-digit code between 1000 and 9999 generated from the website random.org. One hard copy key and one Microsoft Excel Spreadsheet key are the only two ways to connect the random 4-digit code and interviewee personally identifiable information. Once a random code was assigned, the audio was downloaded and a thank-you letter was compiled and mailed to the participant along with a copy of consent form and any targeted literature. In some instances, the downloaded audio was transcribed to a Microsoft Word document using a free transcription software program. This transcription software program allowed the WWT to manipulate the speed and playback of the audio to make transcription easier. While having the audio transcribed to text made analysis easier, the time commitment was too overbearing. It takes the WWT approximately 3 hours to accurately transcribe 1 hour of audio. However, consulting the audio file was convenient for more accurately capturing quotes and ideas.

Interview data (either transcribed Word documents or written notes) were coded for content and assembled into thematic tables by major themes. Three major themes emerged: 1) Barriers to BMP implementation, 2) Community Context, and 3) Water Resources. The WWT with assistance from the Engagement Team organized topics and subtopics within each theme table to better conceptualize key points of interest. Results from the analysis will be reported in Section 2 of this report.

Several challenges came up during this grant program. Small challenges included obtaining contact information for community members that were identified as possible interviews. Especially with the younger population, phone numbers and other contact information is not readily available. This often was a road block to interview initiation. Another challenge was transcribing audio data to text. While having the audio transcribed word for word into a text document was very helpful for interview analysis, it was very time consuming. It was deemed unrealistic for the WWT to conduct interviews and transcribe each of them to text, thus putting more pressure on the WWT to take more diligent notes during the interview. The ideal situation would be to have a note taker separate from the technician leading the interview. That way, the technician can be more engaged in the conversation and respond with better follow-up questions. Another possible solution is to employ a transcription service that could provide the audio in text form either physically or through voice recognition.

The biggest challenge to date is how to effectively and accurately reflect the range of thoughts and opinions in a usable form. Sorting through the interview data and packaging it in a way that has the most impact is a barrier the Engagement Team has yet to overcome. Although the grant period has ended, the Engagement Team is still tasked with packaging this information so that it can be used to inform local community members to local natural resource conservation professionals to legislatures and policy makers.

Section II – Grant Results

It is important to note that much of this work was conducted seamlessly with the Watonwan River Watershed Civic Engagement grant held by the WRC. Results of the face-to-face interviews will only be reported in this document.

A total of 29 face-to-face interviews were conducted. A majority of the interviewees were male (25), twelve were actively farming, two were agronomists working through a local cooperative, four worked for local banks in the agricultural lending division, and two were involved with local natural resource conservation organizations. No set sample size was determined. An adequate sample size was achieved when additional interviews were conducted that didn't add a significant amount of information to the study.

Products as a result of the interview data are still under development. However, a visual presentation using Microsoft PowerPoint was developed to facilitate oral presentations of preliminary findings. This visual presentation will be attached to the final report. Contained within this report are photos taken in the Watonwan River Watershed, as well as stock photos for visual effect. This presentation was used to present the findings to a wide range of people:

- Watershed residents
- County and Soil & Water Conservation District Staffs in GBERBA
- County Commissioners and SWCD Board Supervisors in GBERBA
- GBERBA partner agency personnel
- Attendees of the University of Minnesota Water Resources Conference
- Attendees of the Minnesota Association of Soil & Water Conservation Districts Annual Meeting
- Attendees of the MPCA Waters & Watersheds Annual Conference

The public participation in this study was very well received. People were very receptive to participation but scheduling interviews was difficult at times. During interviews, people were open and honest and gave their personal opinion on matters related to water quality, water resources, and land management. Several interview participants encouraged the WWT to disseminate the results to policy makers.

While a lot of information has been gathered and disseminated, the long-term results of this study will be determined by the continuing efforts of GBERBA and the WRC. The impending challenge is to package the information in a way that is efficient and informative to wide range of end-users, especially the authors of the Watonwan River Watershed WRAPS and forthcoming Watonwan River One Watershed One Plan.

Many lessons were learned from this project. The most important lesson learned is the time commitment required to carry-out a project of this scope. Designing the interview structure and the data handling procedures and protocols, carrying out interviews, data management, and data analysis are very time consuming. Some surveys and interviews can contain more quantitative data where parameters can be organized in a numerical fashion, but the results from this study contained wide-ranging qualitative data. The goal of the interviews wasn't to generate statistics but to document the wide range of views. For many topics, you find divergence in viewpoints. For example, when it comes to subsurface tile drainage:

“I think if we can filter water through the soil and let it escape through tiles that's pretty nice water. With tile we are putting cleaner, better water into the ecosystem then we did before.” (3855)

Versus

“There is nitrogen that is leaking into the lake. You're going to have that if you're going to be in the farming community because you're always going to lose some of it.” (4061)

In this example, we have conflicting viewpoints. On the flipside, there are topics with major convergence of opinions where a majority of interview responses are in agreement. For example, when it comes to groundwater, people are concerned about its long term condition:

“I guess really what worries me the most is that we'll end up polluting our groundwater. I do not want to have to ever have to pipe in rural water.” (2767)

“Running out of water or not having it makes you realize how dependent you are on it.” (6780)

“I’m kind of paranoid about making sure that for me and my wife and son that we have good water for drinking.” (4776)

Interpreting and organizing this data can be very complex. For example, when talking about barriers to BMP implementation, it goes well beyond simply learning to use new equipment or securing cost-share assistance. Local farming economics can be very complex and play a large role within a single producers operation, but also has a large impact on the community.

We anticipate that many different audiences will be interested in these results and will find it useful. First and foremost, local SWCD staffs will find this information useful because it provides a good look into the lives of their customers. Local natural resource professionals need to have a good grasp on the constraints and stresses of their customers to better understand how programs and program delivery can better help them. Moving up the chain, program administrators, such as MPCA and BWSR, will find this information particularly useful when retooling program guidelines. There was a lot of feedback about the benefits and barriers to different conservation practices and programs that help get them established. Furthermore, regional and state legislators will use this information to drive policy that can trickle down to program development.

Section III – Final Expenditures

See attached grant budget spreadsheet.