**PROJECT TITLE: Integrating Water Storage, Conservation Targeting and Citizen Involvement**

**I. PROJECT STATEMENT**

This project focuses on improving water quality and mitigating the impacts from hydrological modifications in the highly impaired Minnesota River Basin (MRB) by engaging community members, supporting broad-based partnerships and raising awareness and support for increased water storage and targeted conservation. Researchers have identified altered flow regime as a major stressor causing accelerated erosion in rivers and streams across the MRB in general and the Le Sueur River Watershed in particular. Numerous scientific studies point to surface water storage as a central pollution reduction strategy (WRAPS, CSSR, MOSM). Conservation partners, researchers, and the citizen-led Le Sueur River Watershed Network (lesueurriver.org), are working together to re**‐**create more storage, retention, and infiltration in the watershed in order to hold back water that is destabilizing these systems and contributing to water quality problems.

Statewide, there is a need to better target pollution reduction in these high**‐**loading agricultural watersheds. The Le Sueur River Watershed continues to be one of the leading contributors of pollutant loads in the Upper Mississippi River Basin. The 711,000 acre Le Sueur River watershed is a prolific source of total suspended solids and nutrients which affect downstream receiving waters including the Minnesota River and Lake Pepin. It is listed as a priority watershed for both nitrogen and phosphorus in the *Minnesota Nutrient Reduction Strategy*. This project will clarify and support a diverse range of water storage BMPs, foster better coordination among local and state conservation partners, demonstrate targeted conservation planning, and harness the energy of a citizen group to facilitate pollutant reduction in one of the most substantially impaired watersheds in the state.

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1:** **Strengthen networks for sharing information and discussing solutions for Water Storage
Budget: $102,250**This project aims to fulfil a regional need for improved information flow about water storage in the MRB. Three objectives include: 1)inventory diverse water storage methods (e.g. wetlands, multipurpose drainage management, and soil health). 2) Create a public resource website and story map to disseminate information on water storage research and case studies. 3) Develop educational materials (summary handbook, infographics, videos) for the general public about the benefits of water storage to support regional environmental and economic vitality.

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| **Outcome** | **Completion Date** |
| *1. Inventory the diversity of conservation practices that promote water storage. Compile and summarize existing research and water storage case studies.* | *June 2023* |
| *2. Convene advisory committee and host three (3) Water Storage Forums to share information about research, case studies, and examples of water storage practices (3 meetings; 450 people). Host numerous targeted outreach meetings (e.g. convening farmers, cities impacted by flooding, landowners impacted by erosion and flashy flows)* | *June 2023* |
| *3. A summary website, GIS story map, handbook and other educational materials to disseminate water storage research, practices and case studies.* | *June 2023* |

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| **Activity 2:**  **Conservation targeting and citizen engagement in the Le Sueur River Watershed** **Budget: $92,982**This activity aims to accelerate conservation adoption in the Le Sueur River Watershed by supporting partnerships, engaging citizens, and working with local conservation partners on conservation targeting and implementation. Watershed-wide, project partners will provide education and outreach for the general public to support a greater understanding of scientific findings and pollution reduction strategies. This will be accomplished through hosting meeting and field days, creating summary materials (videos, handouts, website development). The project team will continue to serve as a regional resource for GIS conservation targeting tools (ACPF, PTMApp, MOSM etc.) and provide subwatershed scale conservation targeting and networking to support pollution reduction scenarios in five (5) priority subwatersheds. Le Sueur River Watershed Network citizens will reach out to neighbors to increase peer-to-peer networking to implement BMPs that support reduction strategies.

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| **Outcome** | **Completion Date** |
| *1. Convene watershed meetings to explain background issues, describe benefits of targeting and facilitate conversations that clarify goals and conservation opportunities among local staff and landowners:**- Le Sueur River watershed-wide (2 per year = 6 meetings; ~500 people)**- Le Sueur River Watershed Network Steering Committee (4 per year= 12 meetings;~240)**- Selected priority subwatersheds (3 per each of 5 subwatersheds = 15 meetings; ~350)**- Field days in subwatersheds demonstrating targeted conservation planning and examples of effective BMPs in agricultural watersheds (2 per year = 6 field days; ~300)* | *June 2023* |
| *2. Develop planning and outreach materials such as subwatershed resource profiles, targeted conservation opportunity maps and BMP implementation strategies, videos and infographics*  | *June 2023* |
| *3. Provide regional support for using GIS targeting tools, training and one-on-one mentoring (e.g. ACPF, PTMApp, MOSM, spreadsheets tools etc.) and co-convening South Central GIS User Group Meetings (2 per year = 6 meetings, ~300 people).* | *June 2023* |

**III. PROJECT PARTNERS AND COLLABORATORS:****A. Project Team/Partners** Supported by this Project: Water Resources Center, Minnesota State University, Mankato staff and studentSupported by Other Projects & Staff Time: Le Sueur River Watershed Network (citizen-led group);Blue Earth County/SWCD, Freeborn County/SWCD, Waseca County, Faribault County/SWCD, Minnesota River Congress, Coalition for a Clean Minnesota River.**B. Project Impact and Long-Term Strategy**The project will help to inform a longer-term strategy to reduce pollutant loads in high-loading watersheds in the state. Over time the goal is to promote water storage, reduce the number of impairments and to improve water quality. Citizens will have a clearer idea of effective and cost-efficient BMPs for water storage and pollution reduction. **C. Timeline Requirements**This project will require 36 months to complete and be underway from July 2020-June 2023.**IV. LONG-TERM IMPLEMENTATION AND FUNDING:**Modeled climate projections indicate more intense spring storms and overall increases in annual precipitation in the MRB. Water storage is key for managing for these changes and for multiple environmental and economic benefits. Aggregating data on water storage can help support statewide policy development, local partner planning and implementation, and help citizens better understand the role each of us can play. In the future, will continue to work with local and state conservation partners to secure funding to support this effort.  |  |