Executive Summary

The Lower Minnesota River West Partnership (Partnership) is a group of the Counties and Soil and Water Conservation Districts (SWCDs) of McLeod, Nicollet, and Sibley, and High Island Creek Watershed District. The Partnership covers an area north and west of the Minnesota River herein referred to as the "Lower Minnesota River West watershed" or "planning area." The Partnership was formed to develop a Comprehensive Watershed Management Plan (Plan) through the One Watershed, One Plan (1W1P) program detailed in Minnesota Statutes 103B.801. Through the 1W1P program, the local governments (Partners) prepared this document to guide cooperative water and natural resource management actions over the next 10 years.

Introduction

This Plan outlines a cooperative and coordinated strategy by which the Partners will work together to protect, maintain, and restore the water and natural resources within the planning area. Through prioritized and targeted actions, the Partners will make progress towards measurable, common goals. This Plan provides a framework for the Partners to operate as a local, coordinated partnership while effectively leveraging the resources of local governments (i.e., the Partners) and supporting organizations (e.g., State and Federal agencies). The Plan is a local plan emphasizing the interests of local water managers, policy makers, and affected stakeholders consulted during Plan development (see Section 1.5). The Plan was developed through the efforts of:

- Steering Team – comprised of technical staff of the Partner organizations
- Advisory Group – including staff from state and local cooperators and invited stakeholders
- Policy Committee – comprised of elected officials representing the Partner organizations

This Plan will be executed through a Joint Powers Agreement (JPA) between the Partners (see Appendix D). The JPA recognizes the importance of partnerships to implement watershed protection and restoration efforts for the planning area on a cooperative and collaborative basis pursuant to the authority contained in Minnesota Statutes Section 471.59.

Planning Boundary and Subwatersheds

The Lower Minnesota River West planning area includes the portion of the Lower Minnesota River 8-digit HUC watershed (07020012) west of the Minnesota River. Initial 1W1P conversations included the entire Lower Minnesota River 8-digit HUC watershed as a single planning area. Ultimately, the planning area was split into an east and west portion divided by the Minnesota River and along the Sibley County-Carver County line in the northeast portion of the planning area.

The Lower Minnesota River West planning area covers 498,000 acres (778 square miles) and includes portions of four counties (see inset figure). A small portion of Renville County is included in the planning area although Renville County and SCWD are not members of the Partnership. The planning area was subdivided into six major subwatersheds at approximately the 10-digit HUC level for planning purposes (see Section A.1 and Figure A-1). The Lower Minnesota River West planning area is shown in Figure 1-1.

The planning area includes primarily agricultural land use as well as areas of pastureland, and forested areas near the Minnesota River. While development of the planning area has altered the natural landscape, it has also made possible the significant agricultural productivity that supports the local and regional economy. Urban development within the watershed is very limited, with smaller towns located throughout the planning area (see Table ES-1). The terrain of the Lower Minnesota River West watershed includes gently rolling terrain in the western and central portions of the watershed transitioning to hills, bluffs, and ravines in the far eastern portion of the watershed adjacent to the Minnesota River.

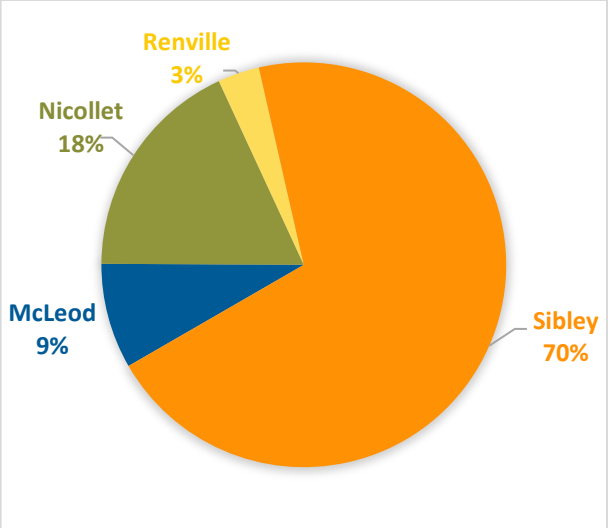

Figure ES-1 Planning Area by County

The Minnesota River flows from south to north along the eastern boundary of the planning area. Major hydrologic features include High Island Creek and Rush River (including its North Branch, Middle Branch, and South Branch), which generally flow from west to east across the planning area before discharging to the Minnesota River. In the northeast, Silver Creek and Bevens Creek flow north out of the planning area into Carver County.

Additional information about the physical and environmental characteristics of the planning area are presented in Appendix A.

Table ES-1 Summary of Land Use/Land Cover within the Planning Area

Land Cover	Square Miles	% of Total Area
Barren Land	0.74	0.09%
Cultivated Crops	657.30	84.40%
Deciduous Forest	33.72	4.33%
Developed, High Intensity	0.54	0.07%
Developed, Low Intensity	8.29	1.06%
Developed, Medium Intensity	2.32	0.30%
Developed, Open Space	21.30	2.74%
Emergent Herbaceous Wetlands	22.57	2.90%
Evergreen Forest	0.04	0.01%
Hay/Pasture	11.43	1.47%
Herbaceous (grassland)	0.73	0.09%
Mixed Forest	0.79	0.10%
Open Water	12.49	1.60%
Shrub/Scrub	0.42	0.05%
Woody Wetlands	6.06	0.78%
Total	**778.75**	**100%**

Source: Minnesota Land Cover Classification Dataset (MLCCD)

Issue and Resource Prioritization

Section 2 of the Plan summarizes the issue identification and prioritization process used by the Partners and documents the resulting issue priorities. The Partnership implemented an iterative process to identify and prioritize watershed issues with consideration of existing data and input from the Advisory Group, Steering Team, Policy Committee, and public (via stakeholder engagement efforts).

The Partners ultimately established a three-tiered issue prioritization, with four major issues categorized as Level 1 (top priority), two major issues categorized as Level 2 (medium priority), and two major issues categorized as Level 3 (lower priority) (see inset figure). The partners placed emphasis for implementation on Level 1 issues, although many of these activities have direct or indirect benefits for Level 2 and Level 3 issues. Measurable goals (see Section 3) were established for all levels of priority issues.

Figure ES- 2 Issue Priority Levels

Section 2 also details the delineation of priority areas for focusing implementation activities related to priority issues of degraded surface water and altered hydrology and drainage. This process used existing geospatial data, modeling results, and watershed assessments. Priority implementation areas for addressing degraded surface water quality and altered hydrology and drainage are presented in Figure 2-8 and Figure 2-9.

Measurable Goals

Section 3 describes the development of measurable goals. The Partners considered a range of available information, including:

- Existing management plans, studies, reports, data and information, including:
  - County Water Management Plans
  - Lower Minnesota River Watershed Restoration and Protection Strategy (WRAPS) report and associated scenario modeling
  - Lower Minnesota River Total Maximum Daily Load (Part I)
  - Lower Minnesota River Groundwater Restoration and Protection Strategy (GRAPS) report
- Input received from stakeholder engagement (see Section 2.1 and Appendix C)
- Input from the Steering Team
- Input from Advisory Group members
- Input from Policy Committee members

Generally, goals were developed first at a qualitative level ("what types of things would we like to achieve?") and refined to include quantifiable elements ("how much can we achieve?") where supported by available data and tools. In situations where existing data is not sufficient to develop a quantitative goal, the goals focus on collecting and interpreting information to support developing more quantitative

future goals. Measurable outputs for each goal were selected appropriate to the level of quantification. Emphasis was given to goals that address Level 1 priority issues, although goals were developed to address all eight priority issue areas.

The Plan goals are divided into long-term (i.e., desired future condition) and short-term (i.e., 10-year, or Plan goals) goals. Long-term goals may not be achievable within the 10-year life of the Plan. 10-year goals are presented as reasonable progression towards the desired future condition. Specific 10-year pollutant reduction goals were estimated using HSPF-SAM.

A complete list of measurable goals developed by the Partners are presented in Table 3-2 and Table 3-3.

Targeting of Projects and Practices

The Partners used digital terrain analysis to identify potential locations to implement best management practices (BMPs) to address excessive erosion and sedimentation and surface water quality degradation issues. Potential BMPs include grade stabilization, increased runoff/flood storage, cover crops, and others. Potential project locations were identified throughout the planning area, regardless of subwatershed priority level. Sites identified via terrain analysis were supplemented with existing databases of drainage and/or erosion issues (see Figure 4-1). The Partners used existing HSPF-SAM models to estimate pollutant reductions anticipated from implementing projects at these locations in addition to other implementation activities (see Section 4.2).

Priority areas for addressing degraded surface water quality and altered hydrology and drainage issues (presented in Figure 2-8 and Figure 2-9), will be used to target projects, studies, and education efforts to achieve applicable goals and evaluate multi-benefit practices. Some activities are targeted to more specific geographies applicable to the specific need or outcome (e.g., groundwater-related activities targeting drinking water supply management areas, or DWSMAs).

Implementation

The Plan includes a targeted and measurable implementation schedule that outlines the projects, programs, and other activities the Partners will implement over the next 10 years (see Section 5 and Table 5-4). The Partners established the implementation schedule with input from the Advisory Group (which represents many of the entities identified as cooperators in Table 5-4).

The implementation schedule provides sufficient direction and measurable outcomes while maintaining flexibility to adapt to developing opportunities. The targeted implementation schedule includes a range of strategies and tools, including cost-share projects, education programs, and new and expanded programs necessary to achieve the goals of the Plan.

The Plan implementation schedule is presented in Table 5-4. The activities included in the implementation program are intended to leverage the existing roles, capacities, and expertise of the Partners while providing a framework for the Partners to perform expanded roles. The activities and projects described in

this Plan will be implemented through existing, new, and expanded programs of the Partners. Programs and activities may be adjusted based on the associated funding source.

Activities included in Table 5-4 are assigned to the following categories:

- Administration of the Partnership
- Projects and project support
- Monitoring and studies
- Education and public involvement
- Regulatory oversight

The proposed timeframe, estimated cost (local and non-local contributions), measurable outputs, and lead and cooperating entities are identified for each implementation activity. Estimates of costs, measurable outputs, and timeframes were developed based on a combination of HSPF-SAM model runs and documentation, Partner estimates of local capacity, and consideration of future BWSR Watershed Based Implementation Funding (WBIF). The current implementation schedule (Table 5-4) was derived from iteration with the Partners. The Partners may revise the implementation schedule, if needed, following the amendment procedure described in Section 5.5.

Implementation Costs

The implementation schedule includes planning level cost estimates for individual activities. Planning level costs are split between local funding sources and external funding sources. Local funding sources include funding borne by the Partners, while external funding sources include all other funding sources (e.g., cost-share with non-Partner entities, State grants). Costs are subtotaled by category and funding source as presented in Table ES-2 and Figure ES- 3.

This Plan includes an ambitious implementation schedule. Total estimated annual costs (approximately $1.7M) exceed current local funding allocated to existing and similar programs within the planning area. Thus, additional funding provided from WBIF, other State funds, Federal funding, and/or private funding sources will be necessary to accomplish Plan goals.

Table ES-2 Summary of Estimated Plan Funding

Type of Activity	Partner Local Funds	Estimated Landowner Contribution	Watershed Based Implementation Funds (WBIF)	Other state/ federal funding sources	Total
Partnership Administration	$350,000	--	$300,000	--	$650,000
Project and Project Support	$6,122,000	$650,000	$2,590,000	$5,883,000	$15,245,000
Studies and Monitoring	$775,000	--	--	$150,000	$925,000
Education and Outreach	$355,000	--	$110,000	$107,000	$572,000
Regulatory Review/ Oversight	$30,000	--	--	--	$30,000
Total	$7,632,000	$650,000	$3,000,000	$6,140,000	$17,422,000

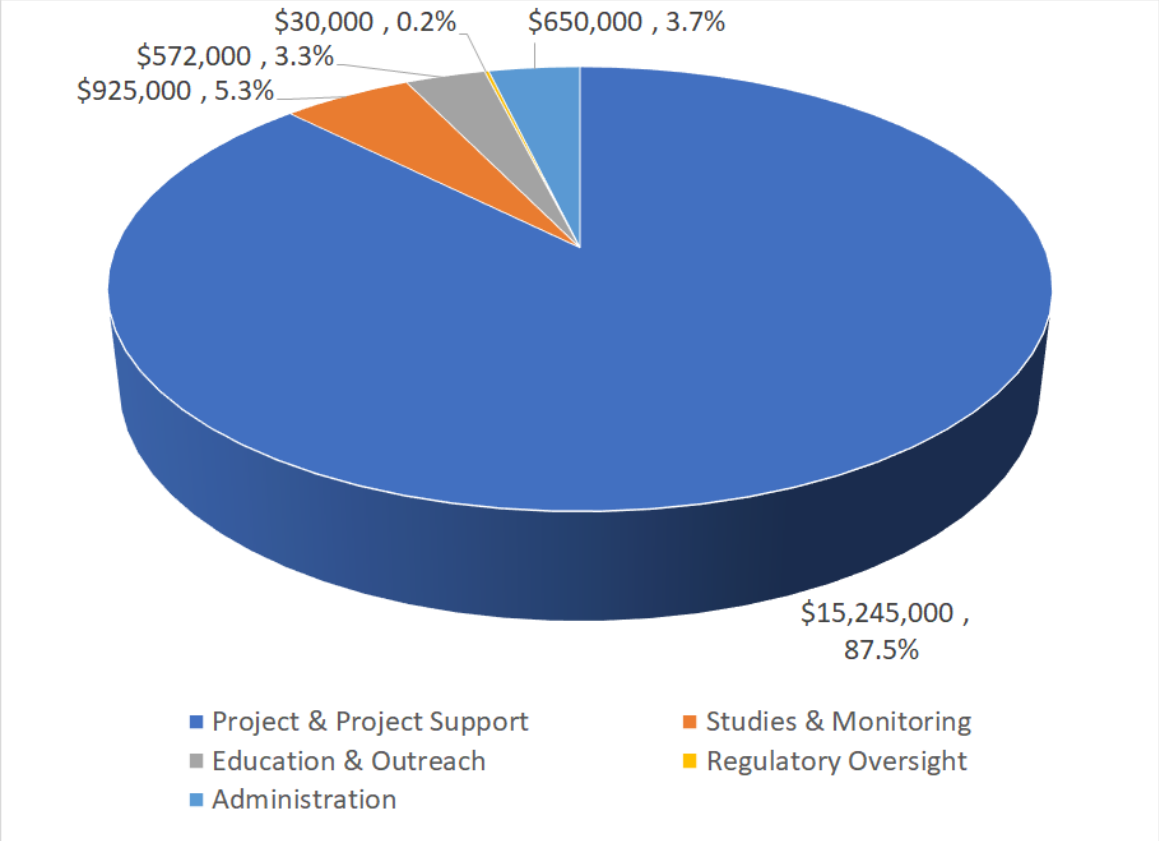

Figure ES- 3 Estimated Plan Implementation Costs

Additional non-governmental funding sources may be used to fund Plan implementation. The Partners will coordinate with non-governmental organizations to explore potential cost-share opportunities

surrounding shared goals. The Partners will seek additional partnerships with private sector businesses as such opportunities arise. Future opportunities may include working with agri-business on incentives that provide opportunity for water resources improvements. Incentives may not be implemented through the Partnership but are instigated through Partnership actions.

Additional information about Plan costs and funding sources is included in Section 5.3.

Implementation Roles and Responsibilities

The Partners will implement this Plan according to the governance structure established in the implementation Joint Powers Agreement (JPA, see Appendix D). The JPA does not create a new entity. Instead, the JPA is a formal and outward commitment to work together as a partnership and specifies mutually accepted expectations and guidelines between partners. Per the JPA, the Partners will establish committees to carry out the coordinated implementation of this Plan. During implementation, the Plan will be executed through the coordinated effort of the following committees:

- Policy Advisory Committee
- Technical Advisory Committee
- Local Implementation Work Group

These groups are described in greater detail in Section 5.4. The Local Implementation Work Group will perform the annual work planning, which will be based on prioritized implementation activities, the availability of funds, and the roles and responsibilities for implementation. Coordination and communication are critical for a partnership operating under a JPA. The Partners will continue to coordinate with BWSR, MDA, MDH, MDNR, and MPCA as required through State-legislated programs and to accomplish the many Plan activities that identify State agencies as cooperating entities. The Partners will also coordinate with Federal partners where appropriate, including NRCS, FSA, USACE, EPA, and USFWS. Similarly, continued coordination and communication with local governmental units, such as cities, township boards, joint powers boards, drainage authorities, and other water management authorities is necessary to facilitate watershed wide activities. The Partners will also collaborate with non-governmental organizations where mutual benefit may be achieved.