SHAKOPEE
MDEWAKANTON
SIOUX
COMMUNITY

LAND AND NATURAL RESOURCES

2023-2027 Wetland Program Plan

U.S. Environmental Protection Agency-Region V
Wetland Program Development Grant U.S. EPA Reference 96596414-1

About the Shakopee Mdewakanton Sioux Community

The Shakopee Mdewakanton Sioux Community (SMSC) is a Community of Dakota people whose ancestors have lived in the region near Shakopee for centuries. The Dakota people are part of the Oceti Sakowin. Historically, the Dakota hunted wild game, fished in the rivers and lakes, gathered wild rice, and aligned their lives with the changing seasons.

Throughout history, Dakota culture has focused on the values of living in harmony with our surroundings and sharing our natural and material resources with others. These values continue to guide the decisions of our government and Community.

Our Values

Through our partnerships and collaborations, environmental stewardship activities, and charitable giving, we seek to embody Dakota values each day. Being a good neighbor, good employer, and good steward of the earth is a core part of who we are and what we do.

Good Neighbor

The SMSC regularly works with local governments, Soil and Water Conservation Districts, and many other wetland stakeholders on mutually beneficial projects, such as the restoration and improvement of Arctic Lake, this included the installation of an iron-enhanced sand filter, drainage and storage enhancements, and planting a prairie buffer. This collaborative work helps build a better community for all.

Good Employer

The SMSC bolsters the local economy by providing jobs, donations, and voluntary payments for municipal, county, and state services. Together, the SMSC and the SMSC Gaming Enterprise (Mystic Lake Casino Hotel and Little Six Casino) are the largest employer in Scott County. Through competitive wages and benefits, the SMSC is dedicated to helping its employees build fulfilling lives.

Good Steward of the Earth

Through dozens of land stewardship initiatives, the SMSC seeks to protect and preserve its lands and waters for the next seven generations. Learn more about the SMSC's sustainability initiatives at smscnativegreen.org

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Acknowledgements

The SMSC appreciates contributions from the following staff and consultants in the development of this Wetland Program Plan.

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Figure 1. Location of the Shakopee Mdewakanton Sioux Community

1 Introduction

1.1 Project Background & Purpose

The Shakopee Mdewakanton Sioux Community (SMSC or "Community") is situated in the Prior Lake, Lower Sand Creek, and the city of Shakopee-Minnesota River HUC 12 watersheds. The Community is located southwest of Minneapolis (Figure 1). The SMSC is fortunate to steward a diversity of natural areas, including numerous wetlands of different types and in various states of ecological health. The Community recognizes the important cultural and environmental values provided by wetlands – and the challenges that exist to protecting these features in an ever-changing landscape, especially one developing as rapidly as Scott County.

To protect these valued natural areas and the many benefits they provide to the Community, the SMSC has undertaken an effort to develop and refine its existing Wetland Program Plan (WPP). To date, the SMSC Land and Natural Resources Department (LNRD) has been operating under an informal WPP. However, with financial assistance from a U.S. Environmental Protection Agency (USEPA) Wetland Program Development Grant and technical assistance from Resource Environmental Solutions (RES), this document represents the Community's formalization of its WPP, which will be reviewed, revised, and updated into the future.

The SMSC LNRD has developed a comprehensive set of program goals and objectives, based on the USEPA's Core Elements of Effective State and Tribal Wetland Programs (also called the Core Elements Framework, or CEF). The CEF is a summary of the common objectives that comprise a comprehensive wetland program.

Originally drafted in 2008, the CEF outlines the core elements of a state or tribal wetland program, describes each core element, and provides a comprehensive listing of potential program-building activities for each core element. According to the CEF, a strong and effective WPP has four core elements that form the basis for wetland management and protection. These include:

1. Monitoring and Assessment,
2. Regulatory Activities,
3. Voluntary Restoration and Protection, and
4. Water Quality Standards for Wetlands.

Previous work conducted by the SMSC and its consultant, St. Mary's University, focused on Core Element 1 (Monitoring and Assessment). The primary deliverables from that work entailed development of a surface water inventory (SWI) for Community lands and development of the SMSC Rapid Assessment Method (SMSC-RAM). Ongoing work with RES (contracted through the end of 2023) will continue to advance SMSC's WPP, focusing on aspects of Core Elements 1 (Monitoring and Assessment) and 3 (Voluntary Restoration and Protection). Work underway to address these Core Elements includes:

1. Developing a standardized and reproducible method for the SMSC to update and refine the SWI for the SMSC wetland planning area,
2. Development of a web portal for tribal access to surface waters data, and
3. A threats and stressors analysis for wetlands in the SMSC wetland planning area.

1.2 SMSC Surface Water Resources

There are approximately 13,901 acres of wetlands and other surface water features within the SMSC Wetland Planning Area. The Community recognizes that wetlands do not exist in isolation, but rather they are interconnected with other natural features and resources throughout the watershed. Therefore, the SMSC has decided to develop their WPP using a watershed approach.

The lands of the SMSC are located within the Lower Minnesota River major watershed in Scott County, Minnesota. The U.S. Geological Service (USGS) defines smaller sub watersheds within major watersheds, and SMSC lands lie within three of the HUC (hydrologic unit code) 12 watersheds: Prior Lake (HUC 070200121105), Lower Sand Creek (HUC 070200120807), and the Scott County portion of the City of Shakopee-Minnesota River (HUC 070200121102). This area constitutes the SMSC's wetland planning area (Figure 2).

1.3 SMSC Wetland Program Plan Goals and Objectives

The SMSC LNRD has identified five overarching goals for this WPP. The primary core elements addressed by each goal are presented in parentheses.

Goal 1: Utilize updated mapped wetland inventory and Level 1, 2, and assessments to better understand wetland location, extent, condition, and trends (monitoring and assessment/voluntary restoration and protection)

a. Use wetland decision-support tools to aid in decision-making about land uses
b. Keep web portal with wetland information accessible to Community
c. Provide local stakeholders with enhanced wetland information if desired
d. Use SMSC RAM to accomplish various WPP goals
e. Use prioritization matrixes for preservation and restoration
f. Monitor wetland carbon sequestration metric to assess climate change trends

Goal 2: No net loss of quality related to wetlands (monitoring and assessment/ voluntary restoration and protection)

a. Maintain or improve water quality
   i. Assess pH, temperature, specific conductivity, oxidation-reduction potential, and dissolved oxygen using a water quality sonde
   ii. Assess flood storage capacity
   iii. Identify infiltration metric
   iv. Determine if location of wetland is in wellhead protection area or drinking water supply management area (DWSMA)
b. Maintain or improve floristic quality
   i. Floristic assessment
   ii. Invasive species assessment
   iii. Quantify vegetation strata – use as a diversity metric proxy
c. Maintain or improve hydrologic regime
   i. Assess downstream areas of concern - quality (impaired waters), quantity (flooding potential) and rate (erosion potential)
   ii. Assess residence time
   iii. Maintain rare, threatened, endangered or culturally significant species
   iv. Assess habitat suitability

Goal 3: Maintain wetland landscape diversity (monitoring and assessment/ voluntary restoration and protection)

a. Access natural area corridors or connectivity
b. Identify local wetland watersheds inlet and outlet streams and runoff from uplands
c. Use threats and stressors analysis to identify areas of concern and areas to improve landscape diversity

Goal 4. Maintain wildlife habitat (monitoring and assessment/voluntary restoration and protection)

a. Assess habitat suitability for mammals, songbirds, waterfowl, amphibians, reptiles, and invertebrates

Goal 5. Retain existing or regain traditional cultural uses related to wetlands (monitoring and assessment/ voluntary restoration and protection)

a. Assess presence or absence of culturally valuable species
b. Assess accessibility for cultural teaching opportunities
c. Assess cultural significance of wetland location

Core Elements 2 (Regulatory Activities) and 4 (Water Quality Standards for Wetlands) are not explicitly addressed in this iteration of the SMSC's WPP; however, the goals outlined above are foundational to advancing these two core elements.

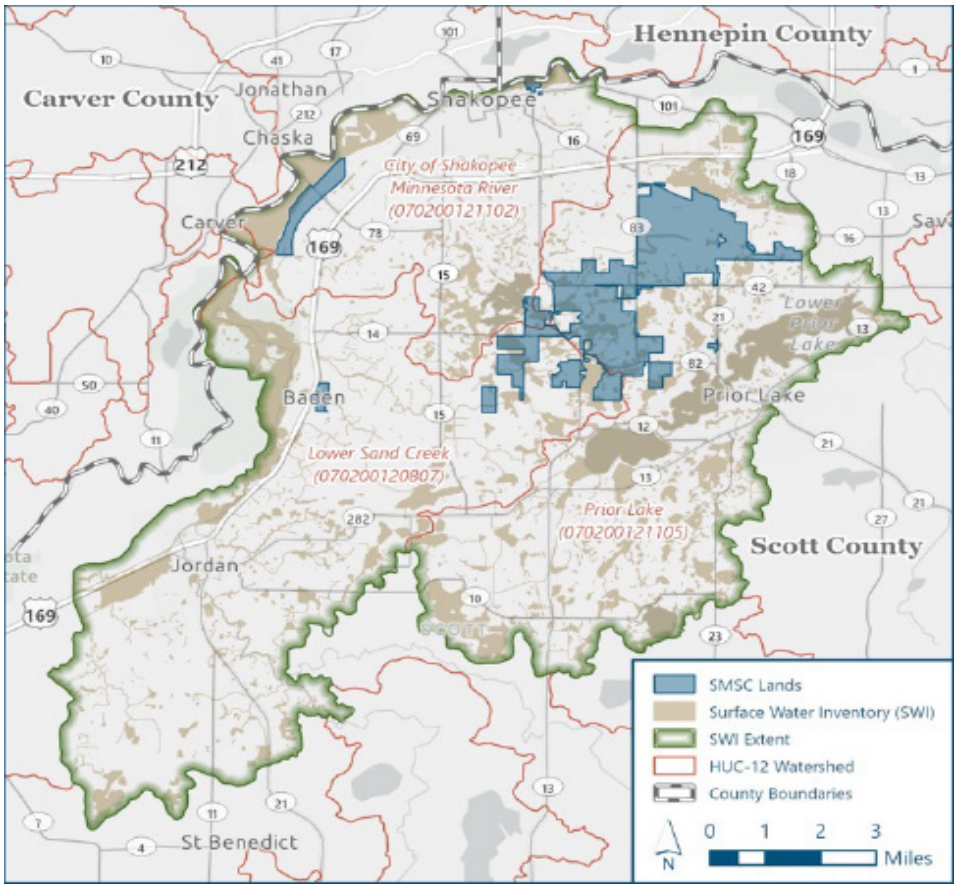

Figure 2. Shakopee Mdewakanton Sioux Community Wetland Planning Area

2 Program Plan Elements

2.1 Core Element 1: Monitoring and Assessment

Per the U.S. EPA's guidance (USEPA 2022):
For many tribes, the Monitoring and Assessment core element is an essential and practical first step in developing a wetlands program. First inventorying and mapping wetlands and their geographic distribution and extent is key. Then gathering information on the different types of wetlands, as well as their potential cultural values and ecological functions, is helpful. Knowing the current geographic location, size, and type of wetlands under tribal jurisdiction may be a prerequisite for effectively addressing actions and activities under the other program elements for how to protect, manage, and restore wetlands.

Most SMSC WPP goals and objectives (Section 1.3) are directly or indirectly related to Core Element 1, Monitoring and Assessment. With this core element in mind, the SMSC LNRD worked with St. Mary's University (Geospatial Services) from 2021-2022 to develop a preliminary surface water inventory (SWI) for the SMSC wetland planning area. The preliminary inventory was intended to build on existing surface water mapping and refine the accuracy and detail within the planning area. This SWI work provides a foundation for addressing all the core elements and many of the goals and objectives presented in Section 1.3.

In addition, the SMSC LNRD and St. Mary's University developed and initiated use of a rapid assessment framework to evaluate and document the condition of wetlands and riparian areas within the wetland planning area. The SMSC Rapid Assessment Method (SMSC-RAM) will enhance the knowledge and understanding of the location, extent, ecological condition, and function of wetland and aquatic features within the planning area. This SMSC-RAM work addresses many of the goals and objectives presented in Section 1.3.

The WPP Monitoring and Assessment of wetlands will benefit the SMSC Clean Water Act (CWA) 106 and 319 Programs for additional protection of surface water quality. The SMSC WPP Section 1.3 aligns with the current SMSC CWA Section 106 Monitoring Strategy objectives, which includes monitoring wetlands for water quality trends, determining locations needing restoration and providing a comprehensive study of SMSC water resources. The EPA-approved SMSC Quality Assurance Project Plan will be followed for use of monitoring wetlands for water quality parameters.

2.2 Core Element 2: Regulatory Activities

Per the U.S. EPA's guidance (USEPA 2022):
*The **Regulatory Activities** core element offers potential starting points and conceptual approaches to consider.*

The SMSC currently has no regulatory authority over wetlands, and it does not intend to pursue such authority. Therefore, wetlands on trust lands will remain under the jurisdiction of the U.S. Army Corps of Engineers (USACE), and wetlands on fee lands will remain under the jurisdiction of the USACE as well as the Minnesota Wetland Conservation Act (WCA) and local wetland regulations.

While this core element is not explicitly addressed in this WPP, advances in Core Element 1 (Monitoring and Assessment, discussed in Section 2.1 above) will provide a foundation for what regulations will best serve the SMSC in protecting its surface water resources. In addition, advances in Core Element 3 (Voluntary Restoration and Protection, discussed in

Section 2.3 below) will provide further guidance to ensure regulatory programs effectively promote protection and expansion of wetland resources.

2.3 Core Element 3: Voluntary Restoration and Protection

Per the U.S. EPA's guidance (USEPA 2022): *The **Voluntary Restoration and Protection** core element includes many activities that foster partnerships with state or federal agencies, other tribes, and nongovernmental organizations that support program activities (e.g., wildlife protection programs, invasive species control, cooperative ventures, or land acquisition programs).*

The SMSC has already made good progress in addressing this core element through its previous work with St. Mary's University. In 2020, the SMSC convened a planning webinar to establish the Community's values, priorities, issues, and concerns associated with their wetland resources. In brief, participants identified the following items as most important to the Community:

- Regulating and cultural services of wetlands (compared with lower scoring supporting and provisioning services).
- Regulating ecosystem services (compared with lower scoring provisioning and supporting services).
- Fresh water is the most important provisioned service from wetlands (followed by food).
- Water quality is the most important regulating service from wetlands (followed by erosion protection, climate regulation, natural hazard protection, and water regulation).
- Biodiversity/habitat support is the most important supporting service from wetlands (followed by nutrient cycling).
- Education/traditional knowledge is the most important cultural service from wetlands (followed by aesthetics).

The group identified numerous threats and stressors to wetlands, including: a suite of agricultural impacts including grazing, pasturing, row crops, tile drainage, and fertilizer/insecticide applications; stormwater effluent (e.g., increased nutrient and sediment loading from upstream land use practices); urban sprawl, which increases the imperviousness of watersheds and encroaches on riparian and wetland habitats; non-native and invasive species encroaching into wild rice habitat; spring flooding of the Minnesota River; and many of these impacts occurring in lands outside of tribal control that degrade wetlands.

The group determined that identifying reference wetlands (covering a diversity of wetland types) would be useful to use as an outdoor classroom for teaching traditions (including a wetland science curriculum). It was recognized that wetlands should be incorporated into the SMSC's water quality sampling program. Members requested development of a color-coded map that highlights high quality or priority wetlands within the SMSC area and illustrates the general flow paths through the watershed.

Lastly, the group felt it was important to address how traditional knowledge about wetlands complements Western scientific knowledge. It is a priority that this traditional knowledge and associated values are integrated into all aspects of wetland condition assessment and monitoring.

Based on the outcomes of that planning meeting, SMSC and St. Mary's University representatives developed three prioritization matrices; drafts of these three matrices are included in Appendix A.

1. **Site Selection Matrix:** to help identify the best areas to investigate and further document field attributes for potential protection.
2. **Preservation Matrix:** to help identify the best wetlands to focus protection efforts.
3. **Restoration Matrix:** to help identify the best wetlands to focus restoration and management efforts.

This work to identify, assess, and prioritize wetlands enabled the mapping of these features within the SMSC's watersheds, including Comprehensive Function Scores of the wetlands (Figure 3).

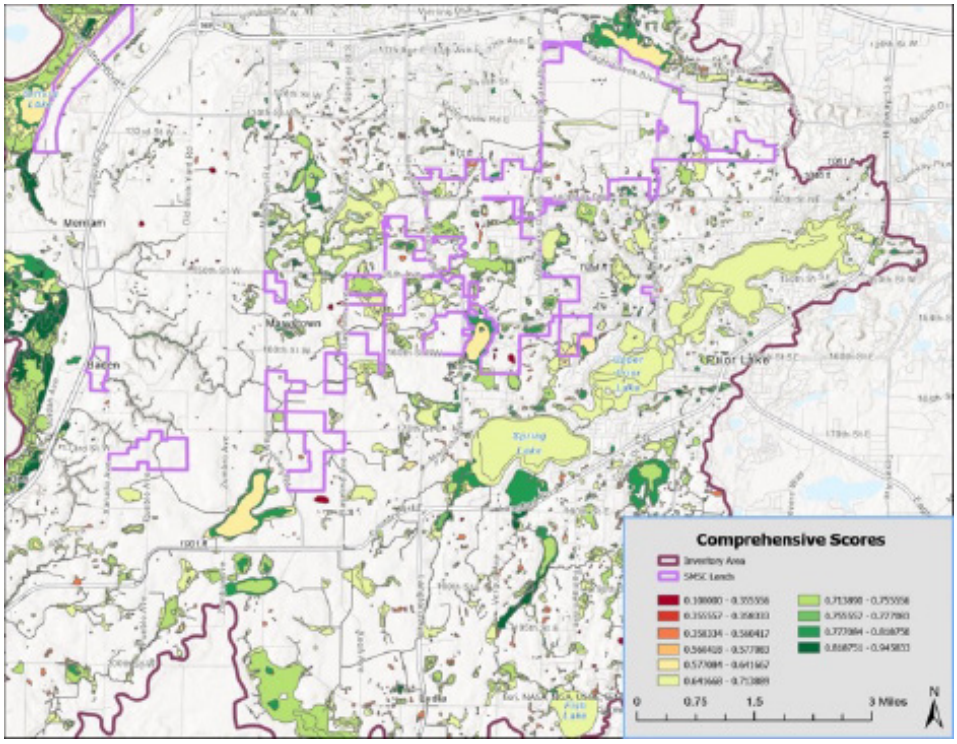

Figure 3. Comprehensive Function Scores of Wetlands within Shakopee Mdewakanton Sioux Community Watersheds

The function scores can be aggregated in several ways to provide more insight into the evaluation of wetland condition. These groupings are normally aligned with some specific habitat related condition, such as the condition of the aquatic habitat provided by the wetland assessed, or process grouping. The scoring of these groups is normally based on some type of roll-up or aggregating equation. The primary aggregation score is the Comprehensive Function Score, provided as a roll-up of all the function scores calculated for the wetland. This score is based on an aggregation of all the individual function scores. As part of the comprehensive score, aggregated scores are also created for the abiotic, biotic, and cultural functions. Using this grouping process allows for the potential to include additional weighting for specific benefits, such as improved water quality, that are called out in the WPP goals and objectives. Function group scores calculated by the SMSC-RAM are:

- Aquatic Habitat: aggregate of the biotic functions that provide aquatic habitat for a variety of species.
- Habitat Integrity: aggregate of the functions that are associated with a wetland's intrinsic capability to provide habitat for a large number of species due to its vegetation, soils, and physical structures.
- Heritage Group: aggregate of the cultural functions.
- Hydrologic Support: aggregate of the functions that are part of the regulation of the water cycle.
- Water Quality Support: aggregate of functions that are involved in the provisioning of clean water.

This core element is being advanced by the SMSC and RES through a threats and stressor analysis, to be completed by the end of 2023. Using the revised SWI and other data, this work will entail analysis of potential threats and stressors to the ecological integrity of wetlands within the SMSC's planning area. The findings will guide the SMSC's restoration and protection efforts so that limited funds and other resources are used strategically and efficiently in the areas of greatest need.

2.4 Core Element 4: Water Quality Standards for Wetlands

Per the U.S. EPA's guidance (USEPA 2022): ***The Water Quality Standards for Wetlands*** *core element would often begin with monitoring wetland resources to gather sufficient data to establish defensible regulatory benchmarks.*

While this Core Element is not specifically addressed in this WPP, advances in Core Element 1 (Monitoring and Assessment) will provide the foundation for developing a rational methodology to identify reasonable water quality standards for the SMSC's wetland and other surface water resources.

Function Group	Function
Aquatic Habitat Group	Amphibian and Turtle Habitat Aquatic Invertebrate Habitat Shorebird Habitat Waterfowl and Waterbird Habitat
Habitat Integrity Group	Characteristic Plant Community Support Energy Dissipation Landscape Connectivity Soil Surface Condition
Heritage Group	Education Potential Historical Site Potential Visual/Aesthetic Quality Water-based Recreation
Hydrologic Group	Groundwater Recharge Water Storage
Water Quality Support	Carbon Sequestration Phosphorus Retention Sediment Retention and Stabilization

Table 1. Function Groups and Functions of SMSC-RAM

3 Work Plan

Goal/Objective	Completed Actions	Proposed Actions	2023	2024	2025	2026	2027	Potential Partners	Potential Funding
Goal 1: Utilize updated mapped wetland inventory and our Level 1, 2, and assessments to better understand wetland location, extent, condition, and trends									
a) Use wetland decision-support tools to aid in decision-making about land uses	SMSC RAM being used	SMSC RAM being used	X	X	X	X	X		USEPA, SMSC
b) Keep web portal with wetland information accessible to Community		Develop and maintain portal	X	X	X	X	X		
c) Provide local stakeholders with enhanced wetland information if desired		Share data	X	X	X	X	X	SCSWCD & PLSLWS	
d) Use SMSC RAM to accomplish various WPP goals	SMSC RAM developed	SMSC RAM being used	X	X	X	X	X		
e) Use prioritization matrixes for preservation and restoration	Matrices developed	Use matrices	X	X	X	X	X	SCSWCD & PLSLWS	
f) f) Monitor wetland carbon sequestration metric to assess climate change trends	SMSC RAM developed	SMSC RAM being used		X	X	X	X		
Goal 2: No net loss of quality related to wetlands									
a) Maintain or improve water quality									
i) Assess pH, temperature, specific conductivity, oxidation-reduction potential, and dissolved oxygen using water quality sonde	Active monitoring	Continue monitoring		X	X	X	X	SCSWCD & PLSLWS	
ii) Assess flood storage capacity	SMSC RAM developed	SMSC RAM being used		X	X				
iii) Identify infiltration metric	SMSC RAM developed	SMSC RAM being used		X	X				
iv) Determine if location of wetland is in wellhead protection area or drinking water supply management area (DWSMA)	Active monitoring	Continue monitoring		X	X			MDH	
b) Maintain or improve floristic quality									
i) Floristic assessment	SMSC RAM developed	SMSC RAM being used		X	X	X	X	MPCA, SCSWCD & PLSLWS	
ii) Invasive species assessment	SMSC RAM developed	SMSC RAM being used		X	X	X	X	SCSWCD & PLSLWS	
iii) Quantify vegetation strata – use as a diversity metric proxy	SMSC RAM developed	SMSC RAM being used		X	X	X		MPCA, SCSWCD & PLSLWS	
c) Maintain or improve hydrologic regime									
i) Assess downstream areas of concern - quality (impaired waters), quantity (flooding potential) and rate (erosion potential)	SMSC RAM developed	SMSC RAM being used		X	X	X	X	MPCA, SCSWCD & PLSLWS	
ii) Assess residence time	SMSC RAM developed	SMSC RAM being used		X	X	X			
iii) Maintain rare, threatened, endangered or culturally significant species	SMSC RAM developed	SMSC RAM being used	X	X	X	X	X	MNDNR	
iv) Assess habitat suitability	SMSC RAM developed	SMSC being used	X	X	X	X	X	MNDNR	
Goal 3: Maintain wetland landscape diversity									
a) Access natural area corridors or connectivity	SMSC RAM developed	SMSC RAM being used		X	X	X		MNDNR	
b) Identify local wetland watersheds inlet and outlet streams and runoff from uplands	SMSC RAM developed	SMSC RAM being used	X	X	X	X		SCSWCD & PLSLWS	
c) Use threats and stressors analysis to identify areas of concern and areas to improve landscape diversity	T&S analysis developed	T&S analysis being used			X	X	X	SCSWCD & PLSLWS	
Goal 4: Maintain wildlife habitat									
a) Assess habitat suitability for mammals, songbirds, waterfowl, amphibians, reptiles, and invertebrates	SMSC RAM developed	SMSC being used	X	X	X	X	X	MNDNR	
Goal 5: Retain existing or regain traditional cultural uses related to wetlands									
a) Assess presence or absence of culturally valuable species			X	X	X	X	X	Hoċokata Ti	
b) Assess accessibility for cultural teaching opportunities			X	X	X	X	X	Hoċokata Ti	
c) Assess cultural significance of wetland location			X	X	X	X	X	Hoċokata Ti	

4 Conclusion

This WPP represents an important early step in the refinement of the SMSC's Wetland Program. Maintaining appropriate staffing and securing adequate funding will ensure the actions outlined in this WPP are fulfilled and that the SMSC's goals and objectives are achieved.

SMSC staff will continue to work closely with the USEPA to ensure that activities are conducted in accordance with Federal guidance. The Environmental Science & Land Supervisor will collaborate with other tribal programs within the SMSC's Land and Natural Resources Department to integrate activities where appropriate and avoid duplication of effort. Other potential partners for future work include the Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, Scott County Soil and Water Conservation District, Prior Lake-Spring Lake Watershed District, MDH, and other tribes in the state and region. SMSC staff will maintain open communications with these potential partners by attending meetings and conferences and will seek to collaborate when appropriate.

Funding for the activities outlined in this document will come from the USEPA Wetland Program Development Grant when possible. Additional funding will be sought from the Bureau of Indian Affairs and partner agencies.

5 References

U.S. Environmental Protection Agency (USEPA). 2022. Protecting Waters and Wetlands in Indian Country: A Guide for Developing Tribal Wetland Management Programs. EPA 840B21005.

U.S. Environmental Protection Agency (USEPA). No date. Core Elements of Effective State and Tribal Wetland Programs.

Site Identification, Selection, and Prioritization Decision Matrix Criteria for Wetland Restoration

Criteria	Rationale	Scoring Assumption(s)	Potential Scoring
Preservation Site Identification Criteria			
Must be on Community land	SMSC staff will only investigate field attributes in the Community		Qualifier. Not eligible if not on Community Land
Identified as a High-Quality wetland	Only higher quality wetlands based on the Identification of High-Quality Wetlands process	Based on the output of the Identification of High-Quality Wetlands process	Qualifier. Not eligible if not considered a high-quality wetland
Preservation Site Selection Criteria			
Wetland within 500' of a confirmed culturally significant site (F-70)	Site is culturally significant and should remain natural		No = 0 Yes = 1
On location designated as "Conservation District" or "Natural Area" within SMSC Land Use Plan (OF-43)	These areas are highly likely to remain "natural" and undisturbed by development per the SMSC Land Use Plan	If wetland is located within these areas, assuming more valuable for preservation	No = 0 Yes = 1
Preservation Prioritization Criteria			
Presence of wild rice (F-57 CS_Spp)	Culturally significant species that Community wants preserved	If wetland contains wild rice, assuming more valuable for preservation	Present = 1 Absent = 0
Site contains <10% cover of non-native, invasive species, AND contains ≥ 10 native species (F-39 Native and F-40 Invas)	Low non-native, invasive species competition; remnant native vegetation is still intact	If site less invaded by non-native, invasive species, assuming good candidate for preservation	Not present = 3 < 5% = 2 5-10% =1 10-25% = 0 > 25% = 0
Streams that have a Macroinvertebrate Index of Biological Integrity score of ≥ 41 (prairie stream) & ≥ 43 (forest stream)	This is an indication that the stream is higher quality based on the macroinvertebrates identified (MPCA, 2017)	If stream site has higher IBI score, assume wetlands hydrologically connected are a good candidate for preservation	No = 0 Yes = 1
Wetlands that have a Macroinvertebrate IBI score of ≥ 23	This is an indication that the wetland is higher quality based on the macroinvertebrates identified (MPCA, 2002)	If wetland has higher IBI score, assuming good candidate for preservation	No = 0 Yes = 1

Site Identification, Selection, and Prioritization Decision Matrix Criteria for Wetland Restoration

Criteria	Rationale	Scoring Assumption(s)	Potential Scoring
Restoration Site Identification Criteria			
Must be on Community land	SMSC staff will only investigate field attributes in the Community		Qualifier. Not eligible if not on Community Land
Identified as in the lower quartile ranges of wetlands	Wetlands that are potentially underperforming ecological functions are good candidates for restoration opportunities	Based on the data created by the Identification of High-Quality Wetlands process	No = 0 Yes = 1
Restoration Site Selection Criteria			
Distance to Extensive Perennial Cover (OF-6 DistPerCov)	Ability to increase habitat connectivity	How far is the closest patch or corridor of perennial cover larger than 100 acres from the AA edge? For example, if answer is <100 ft, assuming good candidate for restoration	<100 ft = 0. 100 to <300 ft = 2. 300 to <1,000 ft. = 1 1,000 to <0.5 miles = 0 0.5 to 2 miles = 0 >2 miles = 0
Size of Largest Nearby Patch of Perennial Cover (OF-12 SizePerenn)	Ability to determine if wetland will be isolated or part of a larger corridor for habitat connectivity	Including the AA's vegetated area, the largest patch or corridor that is perennial cover and is contiguous with vegetation in the AA, occupies: If answer is >100 acres assuming good candidate for restoration	<0.1 acre = 0 0.1 to <1 acre = 1. 1 to <10 acres = 2 10 to <100 acres = 3 100 to <1,000 acres = 4 1,000 to 10,000 acres = 4 >10,000 acres = 4
Perennial Cover Percentage (OF-14 PerCovPct)	Less opportunities for stressors to impact wetland restoration	What percentage of the land within 2 miles of the center of the AA has natural perennial cover? For example, if answer is >60% assuming good candidate for restoration	<5% = 0. 5 to <20% = 1. 20 to <60% = 2. 60 to <90% = 3. >90% = 3.
Landscape Wetland Connectivity (OF-18 ConnScapeW)	Better opportunity to improve quality of wetland on landscape or within 2 miles of one another. Rather than single wetland	Within a 2-mile radius of the AA center: For example, if answer is either: There are other wetlands (or a wetland), and ALL are connected to the AA by the type of corridor described. OR There are other wetlands (or a wetland), and ONE or MORE (but not all) are connected to the AA by the type of corridor described. Then assuming good candidate for restoration	There are NO other wetlands = 0 There are other wetlands (or a wetland), but NONE are connected to the AA by a corridor of perennial vegetation = 0. There are other wetlands (or a wetland), and ALL are connected to the AA by the type of corridor described = 2. There are other wetlands (or a wetland), and ONE or MORE (but not all) are connected to the AA by the type of corridor described = 1.

Site Identification, Selection, and Prioritization Decision Matrix Criteria for Wetland Restoration

Criteria	Rationale	Scoring Assumption(s)	Potential Scoring
Restoration Site Selection Criteria			
Local Wetland Connectivity (OF-19 ConnLocalW)	Better opportunity to improve more than one wetland within 0.5 miles of one another	Within a 0.5-mile radius of the AA center: For example, if answer is either: There are other wetlands (or a wetland), and ALL are connected to the AA by the type of corridor described. OR There are other wetlands (or a wetland), and ONE or MORE (but not all) are connected to the AA by the type of corridor described. Then assuming good candidate for restoration	There are NO other wetlands = 0 There are other wetlands (or a wetland), but NONE are connected to the AA by a corridor of perennial vegetation = 0. There are other wetlands (or a wetland), and ALL are connected to the AA by the type of corridor described = 2. There are other wetlands (or a wetland), and ONE or MORE (but not all) are connected to the AA by the type of corridor described = 1
Simpson's Diversity Index (OF-4 SIDI)	Opportunity to increase habitat richness on landscape	If score is < 0.25, assuming good candidate for restoration	Calculated value on a scale of 0-1
River Proximity (OF-20 RiverProx) and Historic or Archaeological Significant Site (F-69 HSite)	Potential to be a culturally significant site depending on location, want to improve quality of culturally significant sites	There is a river within 1 mile, and it is adjacent to, OR downslope from, the AA (connected or not) If yes, then determine if site contains documented historic or archaeological features representing a Mdewakaŋtuŋwaŋ village nearby	No = 0 Yes = 1
Zoning (OF-44 Zoning)	Ideal to restore wetlands in areas that are less likely to be developed or already designated for public use	The proposed primary land use for undeveloped parcels upslope and within 300' from the AA upland edge is: If not zoned; forest or open space, or entirely public lands; or agriculture or rural residential are selected; assuming good/more ideal candidate for restoration	No = 0 Yes = 1
Restoration Prioritization Ecological Criteria			
Upslope Soil Erodibility Risk (of-32 ErodeUp) and Restoration Potential of Adjacent Upland Buffer (F-27 Up_Rest)	Ability to decrease upland soil erosion if uplands can also be restored	According to the SSURGO soils dataset, the erodibility of the soil within 200 ft. away and upslope of the AA is: If serve or very severe are selected, are > 50' of adjacent uplands able to be restored?	No = 0 Yes = 1

Site Identification, Selection, and Prioritization Decision Matrix Criteria for Wetland Restoration

Criteria	Rationale	Scoring Assumption(s)	Potential Scoring
Restoration Site Selection Criteria			
Wetland Type Local Uniqueness (OF-13 UniqPatch)	Potential to increase vegetation diversity	If no vegetation class (as listed in the table below) comprises more than 10% of the AA, select "None of the above." If none of the above is selected, assuming good candidate for restoration	Herbaceous vegetation (perennial grasses, sedges, forbs; not under a woody canopy; not crops) = 0. Unshaded shrubland (woody plants shorter than 20 ft.) = 0. Trees (woody plants taller than 20 ft.) = 0. None of the above = 1.
Local Vegetated Cover Percentage (OF-16 NatVegPctScape)	If an area has a greater % of natural vegetation, less likely stressors are present to impact wetland restoration	Ignoring all permanent water within a 3-mi radius, the percent of the remaining area that is natural vegetation (NOT lawn, row crops, heavily grazed land, tree plantations, etc.) is: If >60% is selected, assuming good candidate for restoration	<5% of the land = 0 5 to <20% of the land = 0 20 to <60% of the land = 0 60 to <80% of the land = 1 >80% of the land = 2

Site Identification, Selection, and Prioritization Decision Matrix Criteria for Wetland Restoration (continued)

Criteria	Rationale	Scoring Assumption(s)	Potential Scoring
Restoration Prioritization Hydrological Criteria			
Input Water Recognized Quality Issues (OF-24 gWQin)	Potential to improve water quality	Within 1 mile upstream from the AA edge, if there are water bodies or stream reaches labeled as being 303d, 305b, Water Quality Limited (categories 3B-5); or TMDL Approved, what impairments are present? Select all that apply If >1 impairment is selected, then assuming improvement can occur.	No impaired waterbodies within 1-mile upstream of the AA = 0 The AA is located downslope of a waterbody(ies) with 1 listed impairment = 1. The AA is located downslope of a waterbody(ies) with 2 listed impairments = 1. The AA is located downslope of a waterbody(ies) with 3 listed impairments = 1. The AA is located downslope of a waterbody(ies) with 4 listed impairments = 2. The AA is located downslope of a waterbody(ies) with 5 listed impairments = 2. The AA is located downslope of a waterbody(ies) with 6 listed impairments = 2. The AA is located downslope of a waterbody(ies) with 7 listed impairments = 3. The AA is located downslope of a waterbody(ies) with 8 listed impairments = 3. The AA is located downslope of a waterbody(ies) with 9 listed impairments = 3. The AA is located downslope of a waterbody(ies) with 10 or more listed impairments = 4. AA is not within 1-mile of an impaired waterbody = 0
Flood Frequency (OF-21 gFloodFreq)	Depending on type of wetland, frequent or very frequent flooding may negatively impact wetland plant communities	The maximum flood frequency class found within the AA is: If none, rare or occasional are selected, assuming good candidate for restoration	Frequent = 0 None = 1 Occasional = 2 Rare = 3

Site Identification, Selection, and Prioritization Decision Matrix Criteria for Wetland Restoration (continued)

Criteria	Rationale	Scoring Assumption(s)	Potential Scoring
Restoration Prioritization Hydrological Criteria			
Downslope Water Quality Issues (OF-26 gWQdown)	Potential to improve impaired waters downstream	Within 1 mile downstream from the AA edge, a water body or stream reach is labeled as being 303d, 305b, Water Quality Limited (categories 3B-5); or TMDL Approved AND (b) the problem concerns one or more of the parameters listed below. Select All that apply. If >1 impairment is selected, then assuming improvement can occur.	No impaired waterbodies within 1-mile upstream of the AA = 0 The AA is located downslope of a waterbody(ies) with 1 listed impairment = 1. The AA is located downslope of a waterbody(ies) with 2 listed impairments = 1. The AA is located downslope of a waterbody(ies) with 3 listed impairments = 1. The AA is located downslope of a waterbody(ies) with 4 listed impairments = 2. The AA is located downslope of a waterbody(ies) with 5 listed impairments = 2. The AA is located downslope of a waterbody(ies) with 6 listed impairments = 2. The AA is located downslope of a waterbody(ies) with 7 listed impairments = 3. The AA is located downslope of a waterbody(ies) with 8 listed impairments = 3. The AA is located downslope of a waterbody(ies) with 9 listed impairments = 3. The AA is located downslope of a waterbody(ies) with 10 or more listed impairments = 4. AA is not within 1-mile of an impaired waterbody = 0

Site Identification, Selection, and Prioritization Decision Matrix Criteria for Wetland Restoration (continued)

Criteria	Rationale	Scoring Assumption(s)	Potential Scoring
Restoration Prioritization Hydrological Criteria			
Duration of the Connection between Problem Area Downstream and the AA (OF-27 gConnecDown)	Greater impact for improving water quality downstream if there is a direct hydrological connection	The downstream problem area identified under the gWQdown attribute has a surface water connection to the AA: Intermittent or 9+ continuous months	Not applicable, AA is not within 1-mile upstream of an impaired waterbody(ies) = 0 For 9 or more months annually 2. Intermittently (at least once annually, but for less than 9 months continually) = 1. Never (or less than annually) = 0.

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