**To:** LSC Steering Committee **Date:** 3/22/2022

**From:** Carnelian Marine St. Croix Watershed District

**Subject:** WBIF Project Request:Goose Lake Wetland Restoration

# Table of Acronyms

|  |  |
| --- | --- |
| CWMP: Comprehensive Watershed Management Plan | LSC: Lower St. Croix |
| SWCD: Soil & Water Conservation District | WD: Watershed District |
| WBIF: Watershed Based Implementation Funding | WMO: Watershed Management Organization |

# Eligible Project Sponsors

A sponsoring agency is required for each submitted project. The sponsor fills out this request. That agency must be a party to the Joint Powers Agreement for the implementation of the Lower St. Croix Comprehensive Watershed Management Plan. The sponsor, if the project is selected for funding, will enter into a subcontract with the Chisago Soil and Water Conservation District (SWCD) for project funding.

# Description of Project (brief paragraph)

The Goose Lake Wetland Restoration will remove legacy soils leaching soluble reactive phosphorus (SRP) from a 0.4 acre wetland which has been the recipient of decades of intensive agricultural land use and livestock runoff.  The wetland discharges SRP to Goose Lake, which is listed as impaired for excessive nutrients.  Because of past projects implemented by CMSCWD, all contributing loads to the wetland have been mitigated.

In 2020 monitoring of the wetland outflow (ISCO automated sampler May-October) identified 28lbs. outflow from the wetland to Goose Lake. This phosphorus load was predominately SRP, which is 5 times more bioavailable than particulate phosphorus and a significant contributor to in-lake phosphorus and reduced clarity.

The District will utilize technical services from the Washington Conservation District to coordinating soil boring and lab analysis of the depth of legacy soils in the wetland, develop excavation plans, and will develop and implement native wetland vegetation restoration plans. Based on academic literature, this project will reduce annual average phosphorus loading to Goose Lake by 20 lbs./yr. The total estimated cost is $58,000.

# Benefitted Waterbody Information (add rows for additional waterbodies if necessary)

|  |  |
| --- | --- |
| Goose Lake area (acres) | 75 |
| Mean and max depths | Max Depth 25 feet |
| Watershed area (acres) | 755 acres |
| Recreational uses | Fishing |
| Description of the watershed and near-shore land uses | 31% developed, 16% forests and woodlands,   0.5% grassland/shrubland/sparse vegetation, 12% lake and open water wetlands,  31% planted or cultivated,  9% wetlands |
| Impairment status and description of degree of impairment: | Barely impaired for excess nutrients with a 10 year improving water quality trend |
| Describe any previous internal loading projects: | Gully stabilization and iron enhanced sand filter. |

# Project Details

|  |  |
| --- | --- |
| Project Name | Goose Lake Wetland Restoration |
| Project Sponsor | Carnelian Marine St. Croix Watershed District |
| Additional Project Partner(s) (other than sponsor) | Washington Conservation District |
| Project Location (lat/long, address, or description) | 22010 OLDFIELD AVE N, SCANDIA MN |
| DNR Level 8 Subwatershed | 82005900 |
| Applicable WBIF Work Plan Activity | Activity 6 Wetland Restoration |
| Funding Specifically Allocated to this Project in Work Plan (if applicable) | $48,000 CMSCWD Annual Budget Line Item |
| Estimated Construction Timeline | Fall 2022 |
| Total Project Cost | $58,000 |
| Estimated Lifetime Project Cost (incl. O&M) | $68,000 |
| Requested Grant Funding | $10,000 |
| Target Waterbody (from CWMP Table 5-2, 5-3, 5-4) | Not |
| Est. Phosphorus Load Reduction @ Target Waterbody | 20.0 lbs./yr. |
| Est. TSS Load Reduction @ Target Waterbody | Negligible since the majority of the outflow is soluble reactive P which is 5x more bioavailable than particulate P |
| Project Lifespan | 30 years |
| Lifetime Cost-Benefit ($/lb phosphorus removed) | $2,266.00 |

**Informational Attachments/Templates:**

1. WBIF Project Request Process Flow Chart
2. CWMP Priority Waterbody Maps
3. Wetland Restoration Scoring Matrix (for Activity 6)

**Required Attachments for Requesting Partner to Complete (check all that apply):**

Project Plans/Visual/Map

Completed Appendix C Project Scoring Matrix (for Activities 2, 4, 5)

Completed Wetland Restoration Scoring Matrix (for Activity 6)

Completed Internal Analysis Scoring Matrix (for Activity 7)

Completed Targeting Analysis Scoring Matrix (for Activity 8)

|  |
| --- |
| WBIF Work Plan Activity Color Coding |
| Implementation - BMPs/Restoration Activities |
| Implementation - Shared Services |
| Prioritization & Analysis |
| Administration |

*Submit this form and attachments to Angie Hong at (*[*ahong@mnwcd.org*](mailto:ahong@mnwcd.org)*) one week prior to the Steering Committee meeting.*

# Roll Call Vote

Roll call vote to recommend project for Lower St. Croix Watershed Based Implementation Funding in the amount of $10,000.

|  |  |  |  |
| --- | --- | --- | --- |
| **Organization** | **Aye** | **Nay** | **Absent** |
| Anoka SWCD | x |  |  |
| Brown's Creek WD |  |  | x |
| Carnelian Marine St Croix WD | x |  |  |
| Chisago County | x |  |  |
| Chisago Lakes LID |  |  | x |
| Chisago SWCD | x |  |  |
| Comfort Lake Forest Lake WD | x |  |  |
| Isanti County |  |  | x |
| Isanti SWCD | x |  |  |
| Middle St. Croix WMO |  |  | x |
| Pine County |  |  | x |
| Pine SWCD | x |  |  |
| South Washington WD | x |  |  |
| Sunrise River JP WMO |  |  | x |
| Valley Branch WD |  |  | x |
| Washington CD | x |  |  |
| Washington County |  |  | x |
| **TOTAL (need majority vote to pass)** | **9** |  | **8** |