**PROJECT TITLE: Update and Expand 11-County Metro MLCCS Coverage**

**I. PROJECT STATEMENT**

This project will update and expand Minnesota Land Cover Classification System (MLCCS) coverage throughout the 11-county metro area to inform both water and ecological project planning and analysis; develop and employ a property level ecological project identification and ranking protocol; and provide training on the methodology. The resultant data will enhance current water resource project planning, and the developed methodology will elevate ecological project targeting and implementation to be on par with that routinely completed for water quality improvement projects. The latter methodology has the potential to be expanded for use statewide.

Up-to-date MLCCS data, which provides detailed information on impervious surface composition in cultural environments and species level detail in natural environments, are instrumental for science-based site-level water and ecological resource project identification, benefits analysis, and ranking. This resolution of data is critical to inform natural resource management decisions in the rapidly developing 3.2 million acre 11-county metro area, which is home to 61% of Minnesota’s population, is expected to grow by an average of 16.8% by 2045, is the epicenter of the most intensive water resource management challenges in the state, and contains all or portions of 7 of the top 8 ecological subsections in Minnesota ranked in terms of the number of species of greatest conservation need.

This project will update MLCCS coverage for 1.9M acres largely in the 7-county metro area, which was originally surveyed between 1999 and 2009. In the remaining 1.3M acres, largely encompassing Wright, Sherburne, Isanti, and Chisago counties, first ever MLCCS coverage will be created. These data will be collected and put to use in natural resource management by the members of the Metro Conservation Districts (MCD). MCD includes Hennepin and Ramsey counties, and the Soil and Water Conservation Districts of Anoka, Carver, Chisago, Dakota, Isanti, Scott, Sherburne, Washington, and Wright counties and serves as a venue for its members to jointly plan, develop and implement programs and activities for natural resource conservation.

The data will then be used to develop and implement an analytical protocol for a portion of the Anoka Sand Plain, Big Woods, and St. Paul-Baldwin Plains ecological subsections. This protocol will identify and rank project opportunities and answer the question, “Which property owners should we target with outreach efforts to protect, restore and enhance habitat for species of greatest conservation need, ecological connectivity and resilience, and public enjoyment of wildlife?” Training on the protocol and utilization of MLCCS data will be provided to all MCD members and other interested partners.

**II. PROJECT ACTIVITIES AND OUTCOMES**

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| **Activity 1: Conduct MLCCS Inventory Throughout the 11-County Metro** | **Budget: $2,765,124** | | |
| MLCCS standardized methods will be followed to update and expand inventories of cultural and natural land cover types throughout the 3.2M acre 11-county metro area. With the advent of high resolution aerial photos, pictometry, and statewide LiDAR in the last 6 years, the accuracy and resolution of work products utilizing remote sensing has been greatly enhanced since the 1990s, when MLCCS inventories were initiated.  A combination of remote sensing and field surveys will be used. Cultural landscapes (substantially altered vegetation or >4% artificial surfaces) will be completed to level 3 or 4, which includes anthropomorphic elements, vegetation form, plant type, and percent impervious surface. Natural landscapes will be completed to the levels 4 or 5, which includes vegetation form, plant type, soil hydrology, and plant species composition, as well as known invasive species, and species of greatest conservation need. Minnesota Natural Heritage System and the Minnesota’s Native Vegetation: A Key to Natural Communities will be used. | | | |
| **Outcome** | | **Completion Date** |
| 1. 7-County Metro - MLCCS in natural landscapes level 4/5 – 463,967 acres | | November 2021 |
| 2. 7-County Metro – MLCCS in cultural landscapes level 3/4 – 1,441,724 acres | | March 2023 |
| 3. 4-County Expanded Metro - MLCCS in natural landscapes level 4/5 – 304,862 acres | | November 2024 |
| 4. 4-County Expanded Metro – MLCCS in cultural landscapes level 3/4 – 1,008,817 acres | | June 2025 |

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| **Activity 2: Ecological Analysis Protocol Development and Training** | **Budget: $169,500** | | |
| Develop and implement analytical protocol utilizing MLCCS data for a portion of the Anoka Sand Plain, Big Woods, and St. Paul-Baldwin Plains ecological subsections. This protocol will identify and rank project opportunities to the individual property level for ecological protection, restoration and enhancement. Training on the utilization of the protocol and MLCCS data will be provided to all MCD members and other interested partners. | | |
| **Outcome** | | **Completion Date** |
| 1*.* Subsection reports identifying priority parcels and actions for ecological protection, restoration and enhancement. | |  |
| * Anoka Sand Plain | | March 2022 |
| * St. Paul-Baldwin Plains & Big Woods | | November 2023 |
| 2. Three trainings hosted at BWSR Academy and/or throughout the Metro | | June 2025 |

**III. PROJECT PARTNERS AND COLLABORATORS:**

The MCD is a joint powers organization formed under MN Stat. §471.59 and is composed of eleven members, including: Hennepin and Ramsey counties, and the Soil and Water Conservation Districts of Anoka, Carver, Chisago, Dakota, Isanti, Scott, Sherburne, Washington, and Wright counties. Through its long-standing tradition of collaboration, MCD increases its members’ capacity, efficiency, and project outcomes. Each MCD member actively partners with counties, municipalities, watershed management entities, lake associations, and non-profits in their respective jurisdictions.

**IV. LONG-TERM IMPLEMENTATION AND FUNDING:**

Once completed to a common standard, MLCCS updates will be more easily completed by MCD members utilizing alternative funding sources. It is anticipated that it will cost approximately $3,000/year on average for each county to complete updates utilizing current high resolution aerial photography. Updated MLCCS data and analytical protocols, and subsequent training, will enable practitioners to identify priority areas for land protection, restoration, and enhancement. MLCCS data on vegetative type and impervious cover will inform surface water management efforts.

**V. SEE ADDITIONAL PROPOSAL COMPONENTS:**

A-Proposal Budget Spreadsheet: B-Visual Component or Map: F-Project Manager Qualifications and Organization Description: G-Letter or Resolution