**PROJECT TITLE:**

Local Agriculture Steward Partnership: Science to Sustainable Action

**I. PROJECT STATEMENT**

This partnership seeks to turn science into action by implementing conservation practices that: 1. gain local farmer-led acceptance; 2. improve the quantity and quality of our water supplies; 3. provide on-farm education and outreach opportunities. This project plans to implement 4,000 acres of in-field soil health practices (i.e. cover crops, conservation tillage, and nutrient management plans) and treat an additional 1,000 acres with structural conservation practices (i.e. bioreactors). Four events will be planned to showcase the projects at the field level to help sustain the local farm economy and support healthy rural communities.

This agricultural stewardship partnership leverages local, state, and regional experts from public and private sectors to deliver agroeconomic solutions to rural communities. The project will be focused in the Middle Fork Crow River Watershed and will seek to implement practices that result in positive economic outcomes for farmers, while improving the environmental condition. This effort will also improve social dynamics and challenge conventional thinking of the relationship between agricultural and environmental outcomes, while offering a new perspective on ways agriculture can lead environmental improvements in the State of Minnesota.

This LCCMR project concept will dovetail into an existing working partnership between Middle Fork Crow River Watershed District (MFCRWD), Houston Engineering, Inc. (HEI), and Minnesota Soybean Research and Promotion Council (MSR&PC) for the development and application of a framework to create and sustain farmer-led councils that provide input on local conservation priorities. The conservation practices implemented through the proposed project will be driven by the input received from the farmer-led council in the Middle Fork Crow River Watershed. Bringing together this diverse private-public group increases the likelihood of project success by capitalizing on existing farmer relationships through a wide range of technical experience. Discovery Farms will bolster the partnership by providing edge-of-field research and demonstration sites as well as providing education and outreach services. This project will also use the prioritized, targeted, and measurable implementation goals of the locally adopted North Fork Crow River One Watershed, One Plan (1W1P), the plan that governs MFCRWD’s local activities.

**II. PROJECT ACTIVITIES AND OUTCOMES**

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| **Activity 1 Title:** Implement Farmer-Led Conservation Practices  **Description:**This activity will leverage feedback obtained from the engagement of a farmer-led conservation council within the MFCRW regarding preferred conservation practices. This feedback will be used to guide the implementation of 4,000 acres of in-field management practices that promote soil health, such as cover crops, perennials, conservation tillage, and nutrient management plans. The partnership plans to treat an additional 1,000 acres with structural conservation practices, such as bioreactors and sediment control basins.  The environmental outcomes from **Activity 1** will be assessed as part of **Activity 2** within this project.  **ENRTF BUDGET:** $507,300 |

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| **Outcome** | **Completion Date** |
| 1. Engineering and design development for conservation implementation practices | 02-28-2021 |
| 2. 1,000 acres treated with structural practices | 05-30-2022 |
| 3. 4,000 acres of in-field management practices | 11-30-2022 |

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| **Activity 2 Title:** Demonstrate Environmental Outcomes  **Description:**The environmental impacts of implementing the conservation practices will be assessed at both a watershed (**Activity 1**) and field scale. At the field scale, monitoring data will be collected for up to two years at two demonstration sites to evaluate the performance of selected systems.  One demonstration site will be an in-field management practice (i.e. nutrient management), and at least one demonstration site will be a structural practice (i.e. bioreactor). Installation, maintenance, and monitoring will be carried out by Discovery Farms. At the watershed scale, advanced software applications will be used to gauge effectiveness. The Minnesota Board of Water and Soil Resources’ (BWSR’s) Prioritize, Target, and Measure Application (PTMApp) will be used to evaluate the water quality improvements realized through conservation practices. We will also use a method developed by HEI through a MSR&PC project to evaluate the water quantity benefits of the conservation practices. HEI will lead efforts to evaluate the water quality and quantity benefits associated with the conservation practices implemented from **Activity 1** and report the outcomes to project partners.  **ENRTF BUDGET:** $66,000 | |
| **Outcome** | **Completion Date** |
| *1.* Evaluation of watershed-scale water quality and quantity benefits | 07-30-2023 |
| *2.* Evaluation of field-scale demonstration sites | 11-30-2023 |

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| **Activity 3 Title:** Conduct Education and Outreach  **Description:**Education and outreach activities will be conducted with focus around the two demonstration sites listed in **Activity 2**. These activities will be a coordinated effort on behalf of MFCRWD, HEI, and Discovery Farms. Activities will include four events: two for the in-field practice and two for the structural practice. Events will include at least one field day for each demonstration site. Case study video stories will be developed based on the results of this project, providing an opportunity for broader public outreach on the environmental benefits of farmer-led conservation practices.  **ENRTF BUDGET:** $47,120 |

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| **Outcome** | **Completion Date** |
| 1. Four education and outreach events: two events for in-field management practices and two events for structural practices | 11-30-2023 |
| 2. Video recordings that provide stories around the environmental benefits of famer-led conservation efforts for the broader public | 11-30-2023 |

**III. PROJECT PARTNERS AND COLLABORATORS:**

Middle Fork Crow River Watershed District (MFCRWD) will lead in collaboration with Houston Engineering, Inc. (HEI) and Discovery Farms. Project partners will also include local stakeholders within the Middle Fork Crow River Watershed where conservation projects will be implemented.

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

This project is consistent with water quality and quantity goals and objectives found in the North Fork Crow River 1W1P, with specific connections to the Rural Stewardship criterion of the plan. In addition to the use of MFCRWD general operating funds, continual efforts will be made to seek grant funds to provide educational opportunities and financial assistance for methods for sustainable agricultural practices that would help to address the high nutrient and sediment loads reaching the Mississippi River.

In addition, this partnership may open doors to private sector and/or non-governmental organizations (NGO) investments that would reduce the demand on public sector grant funds. However, to get this project off the ground, we do require LCCMR funds. **Without LCCMR funds, the implementation of farmer-led conservation practices, the environmental assessments, the demonstration and outreach events, and public communication videos described in this proposal, will not take place.**