**PROJECT TITLE:** Marsh Bird Conservation Planning in St. Louis River Estuary

**I. PROJECT STATEMENT**

Audubon Minnesota, the Natural Resources Research Institute (NRRI) of University of Minnesota Duluth and Minnesota Land Trust (MLT) will develop a **landscape scale conservation action plan** for the **most critical marshes of the St. Louis River Estuary (SLRE)** in Northeast Minnesota. The project team will work with several land owners and other conservation partners to **document baseline numbers** of quality emergent marsh and breeding marsh birds across the SLRE and then **establish acreage and bird population goals** that will inform management and can be tracked over time.

This science-based planning and restoration actions are aimed at reversing the declining population trends of species of high conservation concern such as Common Gallinule, Least Bittern, and Virginia Rail, which have suffered region-wide declines in parallel with the degradation of deep marshes and large wetland complexes in Minnesota and across the Midwest. While setting population-based goals is challenging, once established, they provide a **tangible metric** for conservation, **improve leverage** for restoration, and allow **broad partnerships** to form around landscape-level objectives. Through aerial surveys, the project team will map at least 3,000 acres of emergent marsh along an 11-mile stretch of the SLRE. During the summer months over three years, the project team will survey for 10-14 focal marsh bird species using the North American Secretive Marsh Bird Survey protocol.

This proposed project integrates with and targets objectives of Minnesota DNR’s St. Louis River Restoration Initiative (SLRRI), which aims to restore and protect the largest and most biologically-rich wetland complex in Western Lake Superior. The ecological integrity and habitat quality of the SLRE has been impacted by several historical and ongoing threats including habitat loss, increased sedimentation, development, invasive species, and contaminant exposure from industrial activity. These threats have caused significant impairments, including the loss of rich mosaics of open water and emergent native plants such as cattail, reeds, and rushes. These “emergent marshes” have been replaced by open water “ponds” or closed monocultures of invasive plants severely impacting wildlife and water quality.

The SLRRI partnership has successfully cleaned up legacy impairments and greatly improved fish habitat, with a number of restoration projects ongoing. To date however, this work has yet to incorporate avian objectives. With significant overlap between quality emergent marsh, breeding habitat for marsh birds of conservation concern, and water quality, this project is a critical next step in the partnership to sustain long-term conservation with demonstrable outcomes of success that can be replicated across the state.

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1 Title:** Establish baseline numbers of emergent marsh (acres) and marsh birds (breeding density)

**Description:** Through remote sensing via drones and satellite imagery, the project team will map current conditions of emergent marsh. Additionally the project team will review historical data and consult with local experts in order to map areas where the potential to recreate native emergent marsh is the greatest. The project team will implement the North American Standardized Marsh Bird Survey, which utilizes playbacks during summer, to document the density of the following marsh bird species: American Bittern, American Coot, Black Rail, Common Gallinule, King Rail, Least Bittern, Marsh Wren, Pied-billed Grebe, Sora, Swamp Sparrow, Virginia Rail and Yellow-headed Blackbird.

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| **ENRTF BUDGET: $ $176,320** |  | | |
| **Outcome** | | **Completion Date** |
| *1. Baseline of quality marsh documented across the SLRE* | | *November 2020* |
| *2. Map of highest priority marshes of SLRE established* | | *November 2021* |
| *3. Baseline of breeding marsh birds established* | | *November 2021* |

**Activity 2 Title:** Set regional goals and recommend restoration actions.

**Description:**The project team will facilitate a regional planning process that sets acreage goals of emergent marsh and population goals of at least three breeding marsh birds that provide an indicator of overall marsh functionality (i.e. quality hemi-marsh habitat). The partnership of conservation organizations will work in tandem with agency partners of the SLRRI to identify and develop avian restoration projects with specific plans to improve hydrology and vegetation and that are complimentary to Area of Concern objectives. While the primary conservation target will be framed around breeding marsh birds, there will be significant potential to benefit a wider range of natural resources, including water quality.

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| **ENRTF BUDGET: $107,748** |  | | |
| **Outcome** | | **Completion Date** |
| *1. Acres and population goals established and supported by SLRRI* | | *January 2022* |
| *2. Conservation Action Plan for the Critical Marshes of SLRE published* | | *January 2023* |
| *3. Breeding marsh bird populations increased from baselines* | | *June 2023* |

**III. PROJECT PARTNERS AND COLLABORATORS:**

The Natural Resources Research Institute, University of Minnesota Duluth (funded)

Minnesota Land Trust (unfunded)

Minnesota Department of Natural Resources (unfunded)

The City of Duluth and other SLRRI partners (unfunded)

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

This project specifically targets objectives established by partners of the SLRRI and within beneficial use impairment goals of the SLRE’s listing as a Great Lakes Area of Concern. The project team and additional partners will utilize the outputs of this science-based planning process to secure funding directly from the Great Lakes Restoration Initiative, MN Land & Legacy Outdoor Heritage Fund as well as charitable foundations with whom Audubon is already working. This funding will facilitate the future protection and restoration of up to 3,000 acres of coastal wetlands and shoreline along nearly 11 miles of the SLRE. This critical project will allow the project team to incorporate bird related data and plans into the long-term plans of the SLRRI, which is taking a coordinated, holistic, and landscape-scale approach to long-term conservation and management of the SLRE’s natural resources. This project will also be used as a model for landscape scale conservation plans that can be implemented throughout the state.

**V. SEE ADDITIONAL PROPOSAL COMPONENTS:**

**A. Proposal Budget Spreadsheet**

**B. Visual Component or Map**

**C. Parcel List Spreadsheet**

**D. Acquisition, Easements, and Restoration Requirements**

**E. Research Addendum (Not required at proposal submission stage. Required later in process, if proposal is recommended. Staff will provide further information at that time)**

**F. Project Manager Qualifications and Organization Description**

**G. Letter or Resolution**

**H. Financial Capacity**