**PROJECT TITLE:**

Rainy Lake Non-native Hybridized Cattail Removal

**I. PROJECT STATEMENT**

The overall goal for this project is to eliminate non-native hybridized floating cattail mats, focusing mainly on a 19-acre bog located in the southwest portion of Jackfish Bay, that have displaced native vegetation outside of the Voyageurs National Park (VNP) area on Rainy Lake within the United States and Koochiching County. These floating cattail mats have limited biodiversity, degraded fish and wildlife habitat, impaired recreational opportunities, and degraded cultural resources compared to native wild rice stands which are connected to the lake’s substrate. Removal efforts will be done in consultation with VNP staff, building on their knowledge, research, and current work with cattail removal efforts inside Voyageurs National Park. After the non-native cattail mats have been removed, a native wild rice seed bank residing in the soil will emerge with oxygen, sunlight, and room to grow. The native wild rice will provide a more diverse habitat for aquatic living organisms than the non-native cattail mats.

As water rises in the spring, the lake becomes susceptible to wind and waves causing cattail mats to break free and move from location to location based on wind and current. Once displaced, these floating bogs create navigational and safety hazards, attach to shore, and establish non-native communities in new locations. A response team will be created to identify and move floating cattail mats to one of four strategic locations near areas where these bogs are known to break free. Due to their size, moving floating mats to a secure location can take anywhere from 8-24 hours each instance. Once relocated, floating mats will be staked down to prevent them from moving again and will be removed by grabbing them from the top and picking them out of the water with a backhoe bucket and thumb approach to avoid touching or disturbing the substrate.

Removal efforts will be done when water levels and/or ice conditions are optimal to avoid disturbing the substrate and improve the potential for regeneration of native vegetation, including wild rice. Once removed, the material will be hauled to an upland location nearby where it can decompose in a field and avoid entering the waters of Rainy Lake where it currently thrives. If wild rice does not regenerate naturally over the first spring/summer after removal, wild rice will be planted during the fall of that same year or the following year in order to reestablish a native plant community.

**II. PROJECT ACTIVITIES AND OUTCOMES**

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| **Activity 1 Title:** Survey non-native hybridized floating cattail mat locations**Description:**SWCD administrative staff will track project expenditures and prepare contracts with contractors;SWCD technical staff and Rainy Lake Property Owner Association (RLPOA) members will identify areas of known non-native hybridized cattail stands and define the size of the floating mats to determine the largest and most vulnerable floating cattail stands.**ENRTF BUDGET: $14,000****Activity 2 Title:** Move andsecure non-native hybridized floating cattail mats at designated locations**Description:** Rainy Lake Houseboats will provide equipment and purchase supplies to move and secure floating cattail mats that break free from their original location. Contractors will transport the floating mats to the nearest holding location and stake them down to prevent further hazards and the spread of non-native hybridized cattails. **ENTRF BUDGET: $61,500****Activity 3 Title:** Remove and dispose of non-native hybridized floating cattail mats**Description:** Once the extent of the floating cattail mats has been identified and the free-floating bogs have been secured, local contractors will be hired to remove the floating portions of the bogs during the summer and /or winter months and bring to an upland location nearby where they can decompose. Follow up with seeding of wild rice and bulrush if not naturally regenerated.**ENTRF BUDGET: $124,000** |  |

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| **Outcome** | **Completion Date** |
| *1. Floating cattail stands will be identified for size and location during summer of 2020.* | *7/31/2020* |
| *2. Free floating mats will be secured and transported back to original location or to nearest removal location each summer and fall and removed during summer and/or winter months.* | *6/30/2023* |
| *3. The main 19-acre floating mat, along with the other small floating mats, will be removed and harvested material will be hauled to an upland location; wild rice stands will be planted by fall of 2022 if they do not successfully regenerate on their own.* | *6/30/2023* |

**III. PROJECT PARTNERS AND COLLABORATORS:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name**  | **Title**  | **Affiliation**  | **Role** |
| **Tom Dougherty**  | **RLPOA President**  | **Rainy Lake Property Owners Association (RLPOA)** | **Assist with initial floating cattail stand survey and with moving free-floating cattail mats back to designated location and staking down to await removal.** |
| **TBD** | **RLPOA Member** |
| **Bryce Olson** | **Biologist** | **Voyageurs National Park (VNP)** | **Advise SWCD/RLPOA members on methods of cattail removal and re-establishing native wild rice stands where cattail mats once were.** |
| **Steve Windels** | **Biologist** |

**IV. LONG-TERM IMPLEMENTATION AND FUNDING:**The SWCD and the RLPOAwill continue to monitor the spread of the non-native hybridized cattails and their locations in the areas outside of VNP. The SWCD will continue to work with VNP on best management practices for controlling the spread and displacement of floating cattail mats along with re-establishing native wild rice stands. Each winter, local volunteers will be sought to plow snow from standing non-native hybridized cattail stands located near shore in an effort to shear the cattail stems off, hopefully causing them to drown and die off when water rises in the spring, flooding them out. If large floating mats continue to break free and re-establish in other locations, the SWCD may seek another grant opportunity.

**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**