



Working together to protect, restore, and enhance the St. Louis River

St. Louis River Alliance
394 Lake Avenue S, Suite 321
Duluth, Minnesota
55802-2338
Phone: 218-733-9520

Minnesota Land Trust Wild Rice Project – Final Report Prepared by Contractor: St. Louis River Alliance

Project Manager: Kris Eilers
Project Coordinator: Carson Main
Project Start Date: May 15, 2019
Project End Date: December 31, 2019

Objective 1: Conduct Active Goose Deterrent on 7 sites

“Seven sites will be covered 5 days a week for 4 weeks, at the appropriate time for discouraging geese to eat the wild rice plants. A variety of methods of deterrent will be employed. Manager will work with research data to devise plan.”

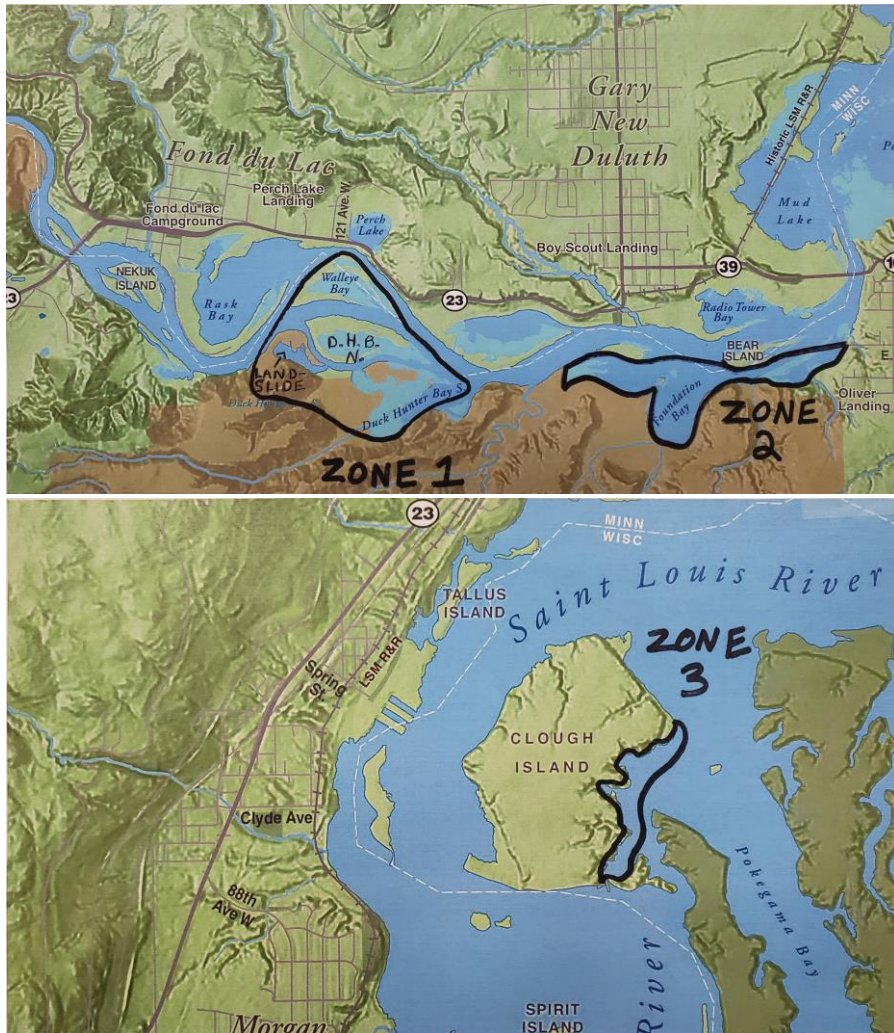
Summary of project timeline

- mid May to late June – project planning and development, project field site scouting, project partner communication and collaboration, identifying staffing needs, job description development, job posting and recruitment
- early July – staff interviews and hiring, staff training and scheduling, field gear and safety equipment research and acquisition
- mid July to mid August – project implementation and management
- mid August to early September – staff exit interviews and data review

Methods

The SLRA developed the parameters and goals of this project with reference to the 1854 Treaty Authority 2015-2018 wild rice (manoomin) restoration initiative and in conjunction with the Lake Superior National Estuarine Research Reserve (NERR) program coordinator, Hannah Ramage as well as Sam Hansen, a UMD-Duluth undergraduate researcher. A literature and data review ensued to determine effective goose deterrent methods. Eleven seasonal, part-time staff members were hired to carry out the objective of deterring goose populations from foraging on the emergent stage of plant vegetation. 7 bays were sorted into three zones throughout the lower St. Louis River estuary. 2-3 paddlers monitored each zone for 4 hours per day, 5 days a week, for 4 weeks (July 17 - August 18). The paddling hours were limited to mornings and evenings to coincide with active goose feeding times (approx. 6-9am and 6-9pm).

Update: NERR was not able to provide the photos from cameras in the bay due to lack of resources. We will work on obtaining them.



Seven bays included in project area:

- Landslide
- Walleye
- Duck Hunter Bay North
- Duck Hunter Bay South
- Foundation
- Oliver
- Clough

Deterrent methods:

- active paddling with multiple traverses across each zone
- paddle splashing with vocal noise
- dogs in boat
- placement of anchored swan decoys

Throughout the last two weeks of the project, swan decoys were moved daily throughout the 4 bays in Zone 1. The NERR placed trail cameras throughout each study zone that gathered images at frequent, regular intervals. An image analysis and data review by NERR staff is pending and contingent upon staff/student availability. SLRA has no additional funds in the budget to digitize project data sheets, but can provide copies of original data.

Results

Based on anecdotal accounts and a preliminary review of the data, water splashing and swan decoy deterrent methods may be the most effective. Geese flushed from an area frequently return to the same bays. They retreat onto land and wait for the paddler to move on, or fly out and circle back around. The presence of the decoys may help prevent their quick return or cause them to avoid an area all together.

For future projects, SLRA recommends the increased use of decoys in addition to implementation of other experimental deterrent tactics referenced in the research such as the broadcasting of goose distress audio calls. The project would benefit by an extended monitoring season of up to 2 additional weeks. 80-100% of the emergent vegetation was reportedly grubbed by geese, but there is some suggestion that the plants may be able to survive this initial grubbing and still produce a flower. This project ended as paddlers noted numerous geese alongside many wild rice flowering stalks. A longer monitoring season would have helped determine what percentage of the grubbed plants actually did flower.

Objective 2: Plant Wild Rice at Clough Island

“SLRA will purchase 1500 lbs. of wild rice seed and plant it in the wild rice bed that is beginning to immerge on the east side of the island. SLRA has a picker that will supply us with as much as he can, as he is committed to the project. SLRA will organize an event(s) in which volunteers learn about wild rice and then paddle from Spirit Lake Marina to the island to plant it. We will provide an escort boat for safety. We will do two events if necessary as needed for seed.”

Planning for the wild rice planting began in July. 2 events were scheduled in September, but the first one was canceled due to lack of seed available. One event on September 19th was held after picker committed to delivering 1500 lbs on Sept 19. 20 volunteers attended. Irene Folstrom was hired to lead the program on Ojibwe culture. After the program there was instruction and the group loaded up and headed out to Clough Island. There was two film crews on site, one from the WDNR, one from SLRA. All 1500 lbs was planted without incidence. Volunteers paddled back to the Spirit Lake Marina landing and was served lunch. Volunteer SLRA members assisted in providing a spot to have lunch, served us, and provided additional food along with what SLRA provided. An SLRA volunteer provided an escort motor boat to carry the seed and direct the event.

Objective 3: Indoor Display Sign

“SLRA will work with designer from Fond du Lac to create an interpretive display that can be used indoors at places like the aquarium, the NERR, SLRA office or other. Display will have 3 dimensional elements as well as background.”

SLRA resumed working with designer Sarah Howes on this after researching companies and options for large displays. An 8 x 10 portable display was decided upon and artist parameters were given to the designer. SLRA held meetings with designer as well as with MLT to understand elements that were

desired. A three dimensional aspect was created with obtaining a ricing pole and ricing knockers from a Fond du Lac Band member. A children's table and chair was ordered so it would serve as a spot for children to engage and color pictures and interact with the display with parents. Initial design was created and text edited to work to provide viewers with an overall Manoomin understanding. Logics and design challenges to make it a pleasing functional piece delayed the finish product. We have the original artist files of the last two iterations, as well as the three-dimensional product to accompany display for deliverables, but fell short of the deadline to work out the challenges and were not able to finish the display.

Objective 4: Outdoor Wild Rice Interpretive pedestal kiosks

"SLRA will work with designer and utilize elements of indoor display to create design for 18x24 pedestal sign. Signs will be manufactured and installed at 7 designated wild rice sites. SLRA will seek permission at sites."

Planning for this sign began in July. Met with artist Sarah Howes and scheduled a meeting with partners. Kris worked with artist and partners in directing the design elements. Different designs were provided, and artist was directed to start fresh with more art. Design art was re-worked and approved for a positive outcome. Signs and pedestals were delivered in December. Sign placement: Linda Cadotte (Parks Supervisor, Superior) agreed to install signs in the spring at the following locations in Superior:

Wi Point (Allouiz Bay)

Arrowhead

Langs (Now called Woodstock Bay)

Pokagama

Kris will continue to work with the City of Duluth to place and install the other 3 signs in the spring.

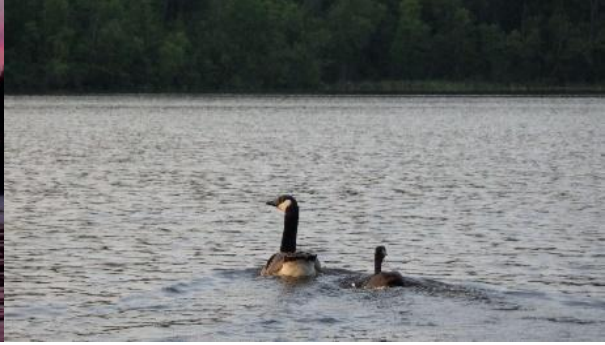


Image Descriptions (top to bottom and L to R)

1. Flock of Canada geese at sunrise
2. Adult and juvenile Canada geese
3. Grubbed emergent wild rice vegetation
4. Active paddling deterrent method
5. Dog deterrent method
6. SLRA staff member
7. Swan decoy deterrent method