

2025 Accomplishment Report – Final Project Details and Photos

Narrative description of work completed and what is remaining

2022_This project is on schedule and set to begin in March/late winter 2023 with above ice cattail removal, followed by in-water cattail removal, culvert replacement, and fall seeding over the course of summer/fall months. Pre-project work completed to date includes partner meetings and RFP development for contract services.

2023_Lakes Aquatic Weed Removal (LAWR) cut and collected eight of the nine planned acres of the hybrid cattail biomass, completing the portion of the wetland reclamation on the east side of County Road 134. Approximately 665 truckloads of cattail biomass, 12 cu. yards per load, were hauled away from the restoration site. Following the site clean-up, rock and sand material were used to recover the public access, which was used as the primary location for biomass piling and removal. The remaining acre of hybrid cattails on the west side of County Road 134 is planned to be removed in the spring of 2024. Terrestrial seed mix will be planted to further recover the area around the public access. A seed mix of transition species will be planted along the northern edge of the reclaimed wetland on the east side of County Road 134. Wild rice will be introduced in the fall of 2024. County Road 134 will be raised to incorporate a navigable box culvert, 10 ft x 16 ft in size, to allow for increased water flow and safer road conditions during floods. The road project is estimated to be completed by August 31, 2024.

2024_In February 2024 the rural volunteer fire department attempted a prescribed fire on the remaining cattails. Despite little to no snow cover and good wind conditions during the burn, the material did not burn well. The Lakes Aquatic Weed Removal (LAWR) continued the cattail removal in May once road weight limits were lifted and water levels rose to accommodate the equipment. LAWR began by removing material that aggregated and surfaced over the winter. Then they moved to the west bay to cut and remove the remaining cattails. LAWR, with the help of Kennedy Trucking, removed 125 loads of material. Once the material removal stage was complete, Koochiching County Highway Department began the road project to raise and widen the road above the 2022 flood level. They also installed a 10'x16' box culvert to increase water flow between the two bays. As water levels began lowering in August, Koochiching SWCD staff seeded two acres on the north side of the east bay with a native emergent seed mix. Throughout the summer and into the fall, Koochiching SWCD worked with Couchiching First Nations to procure wild rice seed. Due to the poor 2024 wild rice crop, this part of the project will be attempted again in the fall of 2025.

2025_In spring of 2025, Koochiching SWCD staff conducted multiple site visits and met with property owners to assess over-winter cattail debris collection on the water's surface and investigate reports of accumulation of material on the channel floor. Communications with property owners included Koochiching County's plan to remove the remaining by-pass road materials from the bay which are impeding waterflow. Once materials are removed, the restored/increased waterflow through the new culvert should improve conditions.

SWCD staff will be conducting another site assessment in June 2025 with local DNR and will discuss any additional resolutions, if needed.

Wild rice seeding will be attempted again in the fall of 2025 which, although timing is outside of the grant window, is an objective included in the original work plan. Partners are committed to working with Coochiching First Nations and MN DNR to complete this task.

Tell us more about your project (what works, what didn't, changes made):

2022_The spring and summer of 2022 brought record breaking flooding to our county, including our project area. Flood damages experienced at CR 134 were extensive and, as a result, revisions to our work plan related to the number and size of culvert replacements were submitted and approved, changing from 5-6 58" arch profile culverts to one 16' x 10' box culvert. The Koochiching SWCD also experienced a staff turnover for this project. Project manager Eric Olson left employment with the SWCD in May of 2022 and his replacement Whitney Sims who began 8-15-2022 will now serve as the project manager for this project.

2023_Before machine removal was to occur, a prescribed burn was planned for March 2023 to assist with removing the hybrid cattail old growth. Poor ice conditions did not allow for the planned burn. The aquatic removal process went forward in August, one month later than the expected start date. As the County Highway Department could not keep their original offer to match through completing the biomass hauling, Lakes Aquatic Weed Removal (LAWR) was contracted to perform cutting, removal, and hauling. This strategy was less effective in terms of the efficiency of the removal and hauling process. LAWR typically does not conduct the hauling portion of cattail removal projects. Therefore, the time for the hauling and staging process was underestimated, exacerbating the already shortened project window before freeze-up.

Heavy muck subsurface material made up the bulk of the biomass. LAWR spent 97 hours cutting the biomass and over 670 hours collecting the biomass and disturbed muck that gathered on the water's surface. This biomass consistency made it challenging to work with at the drop site, where the wet material altered site accessibility and dozer equipment capacity. To manage these challenges, the biomass required three days of partial draining at the removal site before hauling. Although necessary, this resulted in accumulation and crowding at the work areas. LAWR handled the biomass 2-5 times for this draining and hauling process. Additionally, it became necessary to coordinate an alternative drop site due to landowner coordination issues. Access to the new drop site was dependent on ideal weather conditions. These challenges added significant contractor hours and extended the project timeline for this portion of the project. LAWR's contract required an extension to continue the removal and hauling process.

As work continued through the end of October, the threat of freezing conditions at the removal site became a concern. Kennedy Trucking was contracted to assist with hauling biomass to the County Transfer station. Lacking the time and weather conditions to complete the west portion,

LAWR removed a 16ft wide channel through the hybrid cattails on west side of County Road 134 as a temporary solution to assist with water flow through the culvert.

The first seeding of wild rice was planned for Fall 2023. As contractors continued the cattail biomass removal process beyond freeze-up, this wild rice seeding will happen in fall 2024.

Regardless of the challenges, this stage of the cattail removal appears to have been successful and positive. Landowners' and partner feedback was collected and found to be optimistic about the progress. Support is received for the continuation of removal on the west side of CR 134. Research supports that wild rice is viable in the wetland depth which was recovered after hybrid cattail removal. The community looks forward to the next stages and what this project could mean for the future of Rainy Lake and others in our state.

2024_ In February 2024 the rural volunteer fire department attempted a prescribed fire on the remaining cattails. Despite little to no snow cover and good wind conditions during the burn, the material did not burn well.

In March, Koochiching SWCD started receiving letters from concerned landowners in the east bay area where cattails were cut in 2023. Over the winter, silt that was once locked in the roots of the cattails had formed large clumps, some of which were floating. KSWCD staff were in contact with Lakes Aquatic Weed Removal coordinating plans once water levels became deep enough for the equipment and road weight limits were off.

Before LAWR arrived on site, KSWCD staff held a meeting on County Road 134 between the two bays in the work area to hear property owners' concerns. On May 13th, LAWR arrived on site and began mobilizing equipment. LAWR started by removing the cattail material from the previous year's cutting that had formed floating clumps. KSWCD staff maintained frequent contact with landowners to keep each other informed. Once the material had been collected from the east bay (Jackfish Bay), LAWR began cutting and collecting the remaining material on the west bay. Heavy rains from late spring to early summer created problems for hauling the material to the transfer station. The access road to the dump site became rutted, forcing LAWR and KSWCD to find secondary disposal sites. Several landowners agreed to allow the last of the loads to be hauled to their upland sites before the road work was to be completed. All disposal sites were pre-approved by the County and Board of Water and Soil Resources.

While waiting for the road portion to begin, a Rainy Lake Property Owners Association member used equipment borrowed from Voyageurs National Park to hand cut cattails along the North part of Jackfish Bay where it was too shallow for LAWR to cut. KSWCD staff used modified rakes to pull the cattails above the ordinary high-water mark. KSWCD staff also used modified rakes to try to move and break up floating silt mats to areas that wouldn't interfere with recreation. This was difficult due to the size and weight of the clumps. It was a slow process and only provided results for a few weeks before wind blew new clumps in.

Road work began in August to raise and widen County Road 134. Koochiching County Highway Department led the road project and was able to remove the cattail material that had collected near the roadway edges between the east and west bays. County Road 134 remained open

through most of this portion of the project and allowed KSWCD to frequently monitor the bays. KSWCD staff also completed multiple native plantings as water levels dropped due to the seeds floating.

KSWCD staff began contacting Couchiching First Nations Lands and Resources Coordinator to procure wild rice that was native to Rainy Lake in July. In September, KSWCD staff were notified that the wild rice crop was poor and there would be none to spare for the project. KSWCD staff checked various wild rice beds on the US side without finding enough to harvest. KSWCD still plans on seeding wild rice in 2025 and has already placed clay at the access to use to make clay balls to assist with the seeding.

In the spring of 2025, KSWCD staff will continue to monitor the bays for possible floating material, plant establishment, and remaining cattails. Staff will work with property owners to ensure the long-term success of the project and brainstorm solutions to any possible problems as they arise.

2025_In early June, the Koochiching SWCD purchased 2 silt collection bags in an effort to address property owners' concerns that suspended silt and cattail debris in the water column are impeding their ability to fully utilize the channel in front of their docks. SWCD staff will work with DNR to conduct a preliminary silt/debris collection in the channel utilizing the "silt sacs" and assess effectiveness.

HYBRID CATTAIL REMOVAL AND WATER FLOW ENHANCEMENT PROJECT

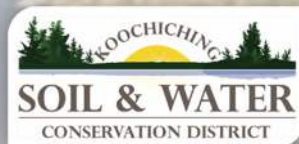
Project Partners:

Rainy Lake Property Owners
Association, Koochiching County,
Koochiching SWCD, Int'l Falls Fire
Dept / Rural Fire Protection Assn

Collaborative Support:

Voyageurs National Park,
MN Dept. of Natural Resources,
and local area residents

This project is funded by the Clean Water, Land, and Legacy Amendment and local contributions



See next pages for photos and links.

Project Photos and Links

Before: 2022 Flood Picture



After Cattail Removal: June 7, 2024 Picture (prior to road work/new culvert)



Google Earth Before and After

5/4/23 (prior to first cattail cutting)



10/16/24 (after final cattail cuttings, road work, and new culvert installed)



Links to Drone and other pictures taken during 2024

6/27/24

<https://youtu.be/Htg0-5aeDZ0>

6/7/24

<https://photos.app.goo.gl/4Cv1KYzGwUgWjxAn9>

6/3/24

Telemetry overlay: <https://youtu.be/GTU-ZYTrDr8>

https://youtu.be/7OGSkcXrqzw?si=-h_wMbUN-5TGpfbm

<https://youtu.be/Jg2fX6JlyPA?si=TU5E-kuW81B0f-fK>

<https://photos.app.goo.gl/exzksxXWwmTa9dpy8>

5/21/2024

East: https://youtu.be/3vKeUsYD_ow

West: <https://youtu.be/agfvW8VP76k>

5/6/2024

West side of jackfish: <https://youtu.be/OsqrVlwQ-Mo>

East side of jackfish: <https://youtu.be/TVNr0nNI2qE>

Pictures: <https://photos.app.goo.gl/LRWDX9LR8xzb2A5r6>

4/30/2024

<https://photos.app.goo.gl/YTYqCv2d1ixLbVjc9>

<https://youtu.be/4BJHueuPeM8>