

Long Lake Area Association (Hubbard County) Inc



Common Loon (*Gavia immer*)
Friendly Lake Management Plan

April 12th, 2022

Objectives

Describe the objectives of the plan (e.g., conserve loons), how the plan will be implemented, coordination with partners (e.g., MDNR, Watershed District, other lake associations, etc.).

The Long Lake Area Association (Hubbard County) Inc, abbreviated (LLAA) hereafter, prepared the LLAA Lake Management Plan for Long Lake in 2010. This living document began with training from the Healthy Lakes and Rivers Partnership’s spring training sessions with several individuals from LLAA and other lake associations in attendance. The trainers included the Minnesota Department of Natural Resources (MDNR) – both Fisheries plus Invasive Species Specialist, the Hubbard County Soil and Water Conservation District (HC SWCD), Northwest Minnesota Foundation, Minnesota Waters and the Initiative Foundation. Lake specific data was provided by the MN DNR, MPCA, and the LLAA representatives. Our initial visioning session with Long Lake users was held in July, 2010. The wildlife section includes goals for additional loon monitoring, education and signage on loon nesting sensitivity for successful hatching, and artificial nesting platforms with aerial protection to supplement the natural nesting. This Common Loon Friendly Lake Management Plan will serve as an addendum to the [2010 LLAA Lake Management Plan](#), 2014 LLAA Update and future revisions.

The LLAA will work with the MN DNR, and associated partners of the [Restoration of Common Loons](#) in Minnesota Project (RCLMP), to conserve loon populations on Long Lake in Hubbard County Minnesota. By way of this plan, the LLAA is enrolled in the MN DNR RCLMP Lake Friendly Lake Registry (LFLR). Enrollment in the LFLR is the means by which the LLAA will conserve loons on Long Lake.

The LLAA planning team, focused on the loon friendly lake management Winter 2022. The following actions are planned for implementation by the LLAA beginning in 2022:

- One additional LoonWatcher Survey(ors) has volunteered along with multiple helpers for the observation of nesting loons, team communications, plus the monthly lake survey counts which begin in May as requested in the updated DNR 2022 LoonWatcher Survey information received.
- Our LLAA website www.longlakeliving.org will be updated and contain a loon section “Give Loons Their Space” with “Be Loon Aware” information and loon productivity statistics, etc.
- The [LLAA Spring and/or Autumn Newsletters](#) will contain at least one article focused on Loons; articles become both Facebook posts and Website posts. Loon posts are popular and well read.
- The LLAA annual meeting 2022 will focus on loons. LLAA attendees will receive sample lead-free tackle through the MPCA “Get the Lead Out” program (GOTL) in exchange for lead tackle which will be weighed and turned into the hazardous waste site.
- Email E-Blast for LLAA prior to Walleye Fishing Opener in 2022 to jump-start the education process with GOTL and Give Loons Their Space theme – stay at least 200 feet away from the loons, describe a loon’s behavior when distressed, keeping pets away from nests, etc.
- The LLAA kiosks at the south and north public water accesses (PWA) will contain at least one loon-related educational post. Some ideas include reduced speed in shallow lake areas and the channels in the stumpy areas especially near the PWAs to prevent erosion of shoreland and prevent suspension of sediment from the lake bottom which can impact water clarity for the loons who need to “see” their prey. Reduced speeds near shore will help paddlers, help keep the aquatic vegetation rooted for loon and fishery habitat, and boat waves from washing over loon nests. We’ll also feature DNR literature “Be Loon Aware” as a takeaway in kiosks.

- The Spring and Autumn roadside cleanup will include a “wade your lakeshore” suggestion also to clean up fishing line / sinkers to prevent entanglement and lead poisoning of waterfowl.

The LLAA will continue to follow research by the University of MN St. Anthony Falls Laboratory on waves and boat thrust plus the MN Aquatic Invasive Species Research Center (MAISRC) and partners on invasive cattails. (See the Artificial Nesting Platform information on the Garr ANP in Appendix E for suspected impact of invasive cattails affecting the natural loon nesting and waterfowl habitat for wood ducks also in the SE area of Long Lake.)

The LLAA will continue its efforts to improve the healthy lake clarity with free, volunteer coaching from UMN Extension Master Gardener and others on lake friendly gardening and [restoring the shoreland](#) with the use of buffers, rain gardens on land. Plus encouraging the natural native lily pads and bullrush along the shoreline to flourish. This will help prevent runoff of rain water and undercutting erosion of the shoreline, provide natural loon nesting habitat, and help allow the loons to continue to “see” their prey. Long Lake has high phosphorous sensitivity per the DNR with declining water quality when looking at long term trends. LLAA has a goal to reduce phosphorous by 49 pounds per year. The annual meeting presenters in 2020 and 2021 focused on this [education](#). LLAA will continue to look for grant opportunities through the HC SWCD on erosion control and runoff projects. A project was completed in 2021 on the 2 Chippewa Loop accesses with our partners, the Hubbard Township and HC SWCD.

The LLAA is a member of the Hubbard County Coalition of Lake Associations (HC COLA) along with 30 other lake associations. Beginning in 2021, MN DNR presenters from the partners of the [Restoration of Common Loons](#) in Minnesota Project (RCLMP), spoke on opportunities to conserve loon populations in Hubbard County, Minnesota. [*The opportunity to attend and/or learn from the recorded presentation is shared with LLAA.*] Loon Liaison-focused presentations were also available for Hubbard County lake associations. The MPCA “Get The Lead Out” team will present in hybrid meeting May 2022. The HC SWCD continues presentations on shoreland restoration-related topics annually. LLAA members are invited to attend these online educational sessions. When possible, the presentations are recorded and available on the [HC COLA website](#) for convenient, continuous education. The HC COLA newsletters feature educational articles on loon preservation, shoreland restoration and lead-free tackle. These [newsletters](#) are shared with LLAA members also.

Loon Use

Describe what is known about loons use on the lake, including a description of the number, history, locations of territories, and descriptions of the management activities within territories. Describe the habitat conditions/characteristics, foraging resources, nesting chronology, chick productivity, and existing monitoring/conservation efforts for loons on the lake. Include a map that denotes the territories. Loon use information may be used to identify future management action, e.g. protection of important shoreline nesting habitat.

Long Lake has been a part of the [Loon Watcher Survey](#) (LWS) since 1999. The number of loons observed on the lake has ranged from eight (1999) to 21 (07/24/2017). Note that in the autumn of 2018, 2020 and 2021 information was provided to the DNR LoonWatcher Survey also. In 2019, the LoonWatcher Survey through the DNR took a hiatus. HC COLA coordinated the loon count in Hubbard County that year. Long Lake had 14 adult loons and 6 juvenile loons in 2019 with Eagle, Osprey and Great Blue Heron nests also observed. The number of chicks hatched between 1999 and 2021 has ranged from

one to eight. Additionally, there has been zero to six artificial nesting platforms (ANPs) on the lake. Only one ANP has been used successfully (Garr's) since 2014, thus far. See the general loon territories with natural nesting areas, ANP maps and history in the Appendix D through G at the end of this report based on information as of 2021. LLAA will continue to update these maps. Appendix D through G are provided with input from the LLAA Planning Team and lakeshore owners (citizen volunteers) as follows:

Appendix D:

Citizen Volunteers on Long Lake to Monitor Loons in 2022 Based on the Known 2021 Territories

Appendix E:

Southeast Long Lake Map Notations and History for Garr ANP – successfully used by loons

Appendix F:

Northeast Long Lake Map Notations and History for Roberts ANP

Appendix G:

Long Lake Map Notations and History of Retired Lais-Natzel ANPs

The MN DNR has classified Minnesota's lakes into 43 different types based on physical, chemical, and other characteristics. Long Lake is in lake class 22. Class 22 lakes have the characteristics of being deep, having hard water, and a small littoral zone (lake area less than 15 feet in depth). Further, Long Lake is classified as a Recreational Development lake, with 615 individually owned parcels on the lake shore. Long Lake has a resident population of cisco (tullibee), an important forage fish for loons, especially during fall loon migration. Rafts of 25 – 50 loons are seen during the migration period in the deep areas.

As well, Long Lake is listed on the DNR infested waters list for two invasive mollusks, faucet snails since 2017 and zebra mussels with 3 adults discovered 2020 near the south PWA. LLAA has a wide network of zebra mussel settlement samplers hosted by lakeshore owners on their docks to determine any zebra mussel (ZM) populations in the various bays. LLAA continues to participate in a MAISRC pilot and is following the research on ZM being conducted by the MAISRC also.

Loon Threats

Describe current threats to loons on the lake, including disturbance from human recreational activities, inadequate or limited nesting/foraging habitat, predators, poor water quality, fluctuating water levels, shoreline development, fishing line/lure entanglement, and contaminants (e.g., mercury, lead, organic compounds). Threats to loons may vary per lake, e.g. higher levels of human disturbance on more densely developed lakes.

As a Recreational Development lake, the loons on Long Lake are exposed to high levels of disturbance by boat and recreational watercraft traffic. Throughout the summer there are all types of watercraft from paddle boats and peddle bikes, paddle boards, kayaks and canoes, personal watercraft, regular fishing boats, bass boats, ski boats, pontoons with various size motors plus boats with ballast tank(s) for wake-boarding. Tubers pulled by many of these seem to be most popular. The first three weeks in July are the busiest for boat traffic generally speaking although we may find a new normal post covid with more remote workers at their cabins throughout the summer. The July 4th holiday / weekend is by far the

busiest. Early July is when nesting is wrapped up unless the loon parents were unsuccessful in their first nesting due to predation and are trying a second nesting. The juvenile loons are very tiny at this time when just hatched. At this stage, the chicks are least noticeable for boaters to spot on a wavy lake. Large boat wakes do occur. There is a ski team that teaches skiing and practices for ski shows in the deeper area of the lake at least one evening during the week. The wind can produce high wave situations and was observed to have impacted a natural loon nest on the shallow Wilkins point in 2020, washing two loon eggs off the nest.

The lake level does not fluctuate a great deal due to the fixed weir dam at the south end of the lake. The lake is fed by groundwater and is about ¾ groundwater in volume. Based on a DNR study led by Darrin Hoverson, MN DNR Area Hydrologist / Ecological & Water Resources in Feb 2020, there is 21.3 cubic feet per second going over the dam in just Long Lake on 2/4/2020. The inflow from Mud Lake at the Highway 34 inlet was 7.4 cubic feet per second. See the [LLAA Spring Newsletter](#) article on page 7.

There are also usually two productive eagle nests around the lake. If you tune your ears to the loon calls during the day, they alert each other when there is an eagle flying nearby and when a personal watercraft is in the area. Large fish and snapping turtles can also make a quick meal of an unsuspecting loon chick.

Additionally, with 615 lakeshore parcels on Long Lake, loon nesting habitat may be a limiting factor for loon populations. MN DNR conducted an analysis on Long Lake as part of the Sensitive Lakeshore Assessment Project (SLAP). The SLAP was initiated to identify lakeshore areas of unique or critical habitat, or high biological diversity. As a result, there were five shoreline areas, totaling 1,022 acres or 19 linear miles, identified on Long Lake as ‘Highly Sensitive’. Long Lake is listed as ‘Impaired’ by the MPCA for mercury content.

Long Lake is infested with faucet snails and zebra mussels. To avoid spreading AIS, based on MN law, lake users are all required to remove all aquatic plants or animals from their watercraft and drain all water from their boat before leaving. The LLAA suggests decontamination with hot water pressure washer before coming to Long Lake and after leaving Long Lake. Call ahead for a free appointment to decontaminate your watercraft at the Hubbard County decontamination station in Park Rapids, MN very near Long Lake at 218-252-6738. It is open 7 days a week from opening fishing to after Labor Day. Boaters can also locate a decon station through mndnr.gov/decon courtesy map.

As an extremely popular fishing lake, the loons on Long Lake may be exposed to lead fishing tackle. At any given time on the lake, you’re likely to find a few fishing boats nearly every bay. There are a couple of fishing leagues that come to Long during mid-week a few times during the summer. There is one annual tournament the Sunday after Labor Day Weekend that fits the requirements for registration with the DNR for the tournament list with 40 boats – see 2021 schedule:

Start Date / #	Tournament Name	Est Prize	Contact	Day Phone	Entry Fee	Fishing Dates / Hours
9/12/2021 Permit Number 2021 F117 T06 <input type="checkbox"/> Cancelled 7056	Park Rapids Fall Slam Waters: Long Species: Largemouth Bass, Smallmouth Bass, Northern Pike, Walleye Primary DOW #: 29016100 Primary County: Hubbard	\$5,000 - \$9,999	Mike Johnson prbassclub@gmail.com; johnsonservice@gmail.com	(218) 252-0798	\$160.00	9/12/2021 Day 1: 07:30 AM - 03:00 PM Day 2: -
			Est. Entrants: 80			Est. Boats: 40

MN DNR Ecological and Water Resources Lake Habitat Program and Section of Fisheries conducted a 'Score The Shore' (STS) study on Long Lake. STS is a natural resources survey to estimate the amount of habitat in three lakeshore zones; shoreland, shoreline, and aquatic. This scoring process provides a simple method of ranking individual lake sites and the entire lake based on the amount of lakeshore remaining in natural condition. There were 77 sites sampled, with 62 sites developed, for a STS score of 75.1, and a final determination of 'Moderate' for Long Lake. Moderate sites have a high percentage of unaltered habitat, but at least one zone has lower habitat quality than a 'High' site.

Management Recommendations to Benefit Loons

Describe management recommendations and strategies to protect loons and increase productivity. Identify short, mid, and long terms actions. Management actions might include nest and nursery protections via signs, buoys, and area closure, development of a monitoring program, annual deployment of artificial nesting platforms, an advocacy program to promote the use of non-lead fishing tackle, placing shorelines in conservation easements, and landowner outreach.

Management actions on Long Lake to protect loons and increase loon productivity are based on enrollment in the LFLR. Participation in the LFLR includes the following loon conservation steps:

1. Establishment of a Loon Liaison (LL) as the LLAA representative that partners with MN DNR to assist in guiding loon conservation on Long Lake. LLAA Loon Liaison is currently Sharon Natzel, email: sharonmnatzel@gmail.com and cell phone: 763-355-7908 (voice / text).
2. The LL, or selected lake association member(s), will partner with MN DNR to train association members as volunteers to assist with loon monitoring through the MN DNR Loon Watcher Survey program. The LLAA has participated in the MN DNR LoonWatcher Survey since 1999. With the focus on the preservation of loons and enrollment in 2022 of LLAA in the Loon Friendly Lake Registry, the LLAA Planning Team viewed the [DNR loon monitoring training](#) presented via Zoom on 3-31-2022 for HC COLA. This recorded training may be used in the future to help train additional loon monitor "helpers".

After training, the LLAA Planning Team met virtually identifying and then documenting additional steps that will be taken beginning in 2022, see page 2-3. Another LLAA LoonWatcher Survey(or), Charlie Garr, signed up with the DNR in addition to existing LoonWatcher Survey(or), Sharon Natzel. The Long Lake loon territories based on 2021 history are identified on the map of Long Lake in Appendix D. The history of ANP's used on Long Lake circa 2011-2021 are documented in Appendix E-G.

3. The LL, or selected lake association member(s), will integrate loon conservation information into LLAA newsletters, websites, and agenda items in meetings. The LLAA Planning Team identified and documented additional steps that will be taken beginning in 2022, see page 2-3. In the past, we have had occasional articles in our newsletters focused on loons, Facebook posts have included loon pictures, our LLAA Lake Management Plan includes a Wildlife Section, and preservation of water quality has been raised along with an educational focus and shoreland coaching since 2019 LLAA annual meeting with the [shoreland buffer](#) topic presented; loons require clear water to see their "prey". The LLAA will raise the level of awareness of loon sensitivity even more beginning in 2022.

4. The LL, or selected lake association member(s), will provide loon conservation information at key lake access points (pending MN DNR Parks and Trails Division and/or county permission), in our kiosks at the PWAs on the south and north ends of Long Lake, and to lakeshore owners of resorts, campgrounds and short term rental units for their guests, as desired. The LLAA will be invited to the Thursday, May 26 2022, 6:30 PM hybrid presentation by the Minnesota Pollution Control Agency on the “Get the Lead Out” Program by MPCA staff at the HC COLA meeting. The presentation is open to the public, will be advertised in our local paper, email & social media.

LLAA is hosting a lead tackle exchange at the LLAA Annual Meeting on Saturday, June 25th at 9:30 AM at the Hubbard Community Center. LLAA will have lead-free samples available for attendees. An article in the LLAA Spring Newsletter is planned on the loon focus at our annual meeting. HC COLA is also hosting a 3-day lead tackle exchange at the Hubbard County Fair in mid-July in the Environmental Education Building too. HC COLA hosted this exchange last year at the fair also. An article in the Park Rapids Enterprise will provide information on the GOTL exchange opportunity at the fair, just like last year, along with emails and social media.

5. If deemed appropriate by MN DNR and USFWS/USGS RCMLP staff, the LL, or selected lake association member(s), will assist in the optimization the construction and annual deployment of artificial nesting platforms.
6. The LL, or selected lake association member(s), will employ the following strategies to reduce the use of lead-based tackle on Long Lake: encouraging members to dispose of lead tackle at Household Hazardous Waste sites, and hosting a lead tackle drop-off event with lake association members. See item 4. Above.

Background

Best Practices for Loon Nesting and Chick Rearing

A number of factors may explain why loons are not nesting on a lake, including lack of nesting habitat, poor food base, high levels of human disturbance, or simply that the loons are successfully nesting on a nearby lake. If territorial loons nest on a lake but have a history of nest failures, the DNR suggests that you should first work to enhance natural nesting sites. This might be through regulations such as a slow-no-wake zone near the nest, contacts with the landowners about naturalizing shorelines, or educational programs for lake residents or users. With Long Lake being a productive loon lake, we will keep this advice in mind if the productivity of loons decreases in the future.

The LLAA Planning Team identified and documented additional steps that will be taken beginning in 2022, see page 2-3 to help conserve the loons. We will grow those plans as we continue to learn more about our loons and their preferred territories. The Loon Liaison (LL) will also explore permission to determine if there are loons nesting on a small unnamed lake just east of Crystal Beach Bay. Frequently in the evening, loons can be heard calling on the unnamed lake and it seems that loons on Long may answer. Short flight calls seem to occur too. The DNR advises that if natural nest sites are not available

and cannot be restored, and factors leading to nest failure are controlled, then artificial nesting platforms are a consideration.

The best way to enhance long-term health of loons across Minnesota is to protect natural nesting and foraging habitat. Maintaining shorelines in natural, undisturbed vegetation assures that loons have nesting habitat, as well as access to foraging areas near their nests. Habitat alteration surrounding nesting sites, may deter loons from using those sites in subsequent years. Lakescaping and shoreline restoration can provide more suitable nesting habitat for loons than traditional lawns and rock rip-rap. The LLAA Planning Team identified and documented additional steps that will be taken beginning in 2022, see page 2-3 to help conserve the loon habitat. For more information, please consult the MDNR Lakescaping and Shoreland Restoration Program <https://www.dnr.state.mn.us/lakescaping/maintaining-and-restoring-natural-shorelines.html>.

Best Practices for Limiting Human Disturbance

The primary anthropogenic impacts on loon breeding habitats are noise and visual disturbance to adults (both of which may result in failed reproduction). Physical disturbance of adult loons after eggs have been laid may flush loons from their nest, and cause total nest failure. Loons will leave the nest if watercraft comes within 500 feet of the nest. This leaves the eggs without warmth or protection from predators. Loons may also permanently abandon a nest if disturbed too often. If loons that are approached do start to call and/or stand-up straight out of the water, they are alarmed by the proximity of a boat/personal watercraft. Personal watercraft and motorboat operators can help significantly by staying away from shorelines, and keeping a safe distance from foraging loons. The LLAA Planning Team identified the opportunity for an email E-Blast prior to opening of walleye fishing 2022 with the theme of “Give Loons Their Space”. See the other education opportunities identified and actions planned on pages 2-3 above.

Best Practices for Loon Foraging

Loons have several characteristics that make them a valuable “indicator” of the health of a lake. As diving birds that use sight to hunt prey, they thrive in clear lakes with healthy fish populations. Taking steps to monitor and maintain water clarity and quality may preserve foraging opportunities for loons. The LLAA website page “[Water Quality Data](#)” contains some key water monitoring reports based on our water quality data from monthly testing.

The LLAA has been participating in the HC COLA coordinated water quality monitoring program with the RMB Environmental Laboratories (RMB) in Detroit Lakes since 1997, monitoring for Chlorophyll-a, Total Phosphorous and measuring water clarity with Secchi Disk from May – Sept annually. The current water quality monitor (WQM) for LLAA is Sharon Natzel. RMB provides the data to the MPCA also.

On the transparency trend through the MPCA, which has earlier data than 1997, the data indicates a downward trend of 0.8 of a foot per decade. That is why LLAA is actively educating on shoreland buffers, raingardens and reducing runoff & erosion control (see pg 2-3 above.) Additional sampling is done during the summer by the WQM for LLAA including chloride, calcium, total suspended solids, total suspended volatile solids, zebra mussel veliger and spiny waterflea sampling. In addition, the HC SWCD

is hired to analyze the dissolved oxygen and temperature at our deepest spot in the lake along with the WQM who provides the boat. **MPCA:** <https://webapp.pca.state.mn.us/cmp/stations/29-0161-00-202>

For more information consult the MPCA Citizen Water Monitoring Program www.pca.state.mn.us/water/citizen-water-monitoring. Informing the angling public about risks related to lead fishing sinkers and lures (i.e. jigs) and encouraging use of non-toxic materials can also mitigate negative effects on foraging loons.

Other LLAA programs include shoreline monitoring with citizen volunteers who check aquatic vegetation near shore in the littoral zone for AIS in their neighborhood areas, around the entire lake. The high risk accesses are part of this shoreline monitoring which is conducted 3 times per summer – mid to late June especially looking for Curly Leaf Pondweed, mid to late July especially looking for Eurasian Watermilfoil, and late August especially looking for Starry Stonewort. The citizen volunteers meander and peer into the calm and clear waters at the vegetation and sample vegetation in about 4 to 6 spots to determine if the aquatic vegetation is native or invasive. [Early detection of AIS](#) is desirable for potential management and to prevent the spread to other waterbodies. There is a LLAA website page containing the 2011 and 2018 [aquatic vegetation survey](#) results conducted by professional surveyors. LLAA plans to repeat professional aquatic vegetation surveys as needed, but at least once every 5 years.

An [aqua weedstick tool](#) to aid boaters to remove aquatic vegetation from their boats / trailers at the two PWAs was added beginning in 2021. This will help “contain” any AIS from Long Lake from hitching a ride on aquatic vegetation to another waterbody.

Learn More

There are effective strategies for reaching out to lakeshore landowners, including;

- 1.) Promoting a Loon-Friendly Lake Registry Program for lake associations within the focus area for the Restoration of Common Loons in Minnesota Project (RCLMP).
- 2.) Train lake association members as volunteers to assist with loon monitoring on lakes registered in the Loon-Friendly Lake Registry Program.
- 3.) Integrate loon conservation information into lake association newsletters, websites, and as agenda items in meetings.
- 4.) Provide loon conservation information at key lake access points.
- 5.) Invite MN DNR staff to speak about the Restoration of Common Loons in Minnesota Project, loon conservation, and citizen loon monitoring programs at lake association meetings. MN Loon Program Coordinator: MLRP.DNR@state.mn.us.
- 6.) Invite MPCA to speak about the Get the Lead Out Program at lake association meetings: Kelly.amoth@state.mn.us or steven.tang@state.mn.us
- 7.) Include Get the Lead Out information in lake association newsletters, websites, and as agenda items at meetings.

Education is the best way to encourage loon awareness and good boating behavior. Contact Restoration of Common Loons in Minnesota Project staff MLRP.DNR@state.mn.us if you are interested in an educational brochure to share with lake residents and users titled “Be Loon Aware” that describes responsible watercraft use to help limit conflicts between boaters and loons.

Appendix A: Loon Monitoring Protocol

Volunteer Loon Survey – Survey Tips

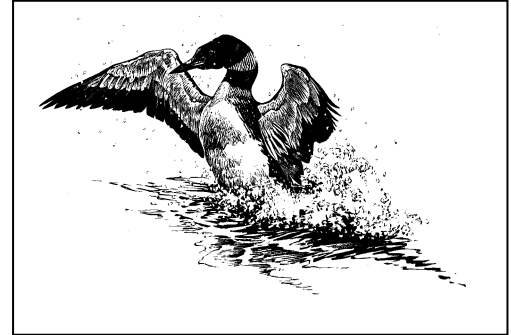
Minnesota Dept. of Natural Resources

Nongame Wildlife Program

www.dnr.state.mn.us/eco/nongame/projects/mlmp_state.html

Contact Volunteer Loon Watcher Survey Coordinator

LoonWatcherSurvey.dnr@state.mn.us



General survey tips

1) When to Survey:

- **Do not survey in heavy rain or whitecap conditions.** Loons are very difficult to see in choppy water conditions (>7 mph wind speed, crest break, white caps). If the weather is bad, reschedule your survey for another day. Watch the forecast and plan your surveys accordingly.
- Early morning and late evening generally provide the best survey conditions.
- **Try to avoid disturbing the loons – observe them from a distance.**

2) What you will need:

- **Binoculars** and/or spotting scope
- **Map of lake for navigation and marking nest locations**
- **Be careful – wear life vests in boats and canoes**
- **Bird identification guide book** – you may note other bird species present on the lake that you may want to add to your comments section on the data sheet.
- **Ask for permission before crossing private land**

Other important Information

1) Loon Facts

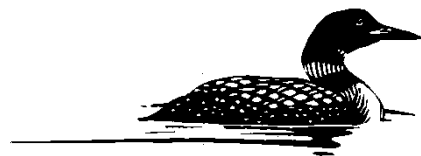
- Most breeding pairs of loons will have 0 - 2 young
- Lakes smaller than 150 acres are unlikely to have more than 1 breeding pair of loons, which means that most small lakes will not have more than 1 or 2 juvenile loons.
- Adult loons frequently fly to other lakes for feeding and social interactions. Thus while you survey your lake, any loon(s) associated with your lake may be off your lake, or an “extra” loon could be visiting.
- Chicks up to 1 – 2 weeks of age have gray downy feathers. Juvenile loons are brown and gray from 2 – 4 weeks and then turn gray and white after about 4 weeks of age.
- Female and male adult loons are indistinguishable by feather pattern and color. Males tend to be slightly larger. They share nest and chick-raising duties equally on average (it’s a myth that only “mom” tends to the nest and young).

2) Monitoring Tips

- Count all loons on the lake including those leaving or landing. **Do not count loons that fly overhead but do not land.**
- Count only the loons **you** see but use calls to help you find other loons.
- Be careful not to count cormorants as loons – from a distance they can look similar. **Use binoculars to look for white on the breast of any bird that looks like a loon.** Cormorants are entirely dark.



Double-Crested Cormorant

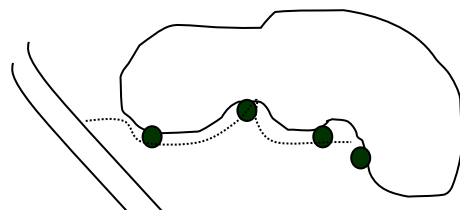


Loon

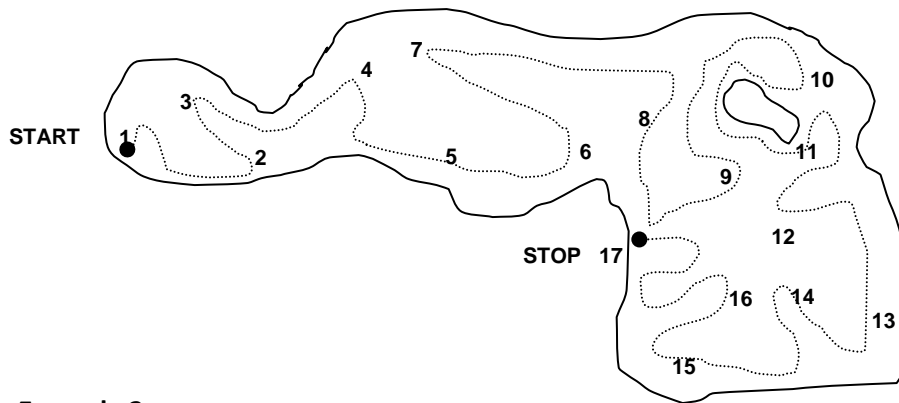
- **Surveying from Shore:**
 - Make sure you can see the entire lake.
 - View the lake from multiple vantage points, if necessary (Example 1).
 - If you cannot see the entire lake, view for a longer period of time in case there are loons “around the corner”.

Example 1:

Suggested route for surveying by shore



- **Surveying by Boat:**
 - **Round Lakes:** stay about 200 feet from shore while moving around the lake.
 - **Narrow, long Lakes:** move back and forth (zig-zag) down the length of the lake.
 - **Large lakes (>400 acres):** Survey under calm, windless conditions with low boat traffic (which conditions will typically occur in early morning). Have 3 people in the boat (1 driver, 2 observers). Scan to the FRONT, SIDES and BEHIND the boat...if you see a loon, stop and survey for a minute. Note the location of the loon and any direction of its movement. Be careful not to double count loons as you move around the lake (keep track of the loons you observe).
 - **Stop the boat every 400 yards to fully scan the lake** with and without binoculars. With the motor off, you can hear loon calls from all parts of the lake.
 - Be conservative...if you think you may have already counted one or more loons, do not count them again.



Example 2:

Suggested route for observing by boat

Appendix B:

Strategies for Promoting the Use of Non-lead Fishing Tackle

Lead is a toxic metal that has adverse effects on the nervous and reproductive systems of animals, including loons. The Get the Lead Out Program, administered by The Minnesota Pollution Control Agency (MPCA), and supported by the MN DNR, and the U.S. Fish and Wildlife Service, serves to reduce the use of lead fishing tackle.

The LLAA Planning Team identified and documented additional steps that will be taken beginning in 2022, see page 2-3. Many of the additional steps address the General Concerns and General Strategies Below. Also, the HC COLA team has held a “Get The Lead Out” event at the Hubbard County Fair in 2021 with lead-free samples available in exchange for lead tackle which was turned in to the Hazardous Waste site in Hubbard County after being weighed at the end of the fair. This will again be a 3-day event at the fair in 2022. Additionally the public is invited to the May 26th evening hybrid presentation by the MPCA GTLO team on the dangers of lead to loons and other birds like trumpeter swans and eagles too.

General Concerns:

- 1.) Even in small amounts lead is lethal to loons and other wildlife including eagles and trumpeter swans.
- 2.) Loons pick up lost lead tackle while gathering pebbles for their gizzards.

General Strategies

- 1.) Organize a lead tackle exchange: LLAA’s is Saturday, June 25, 2022 at annual meeting.**
 - a. Include information on a lead tackle exchange in the lake association newsletter.
 - b. Place lead tackle exchange information on the lake association social media pages.
 - c. Hold a lead tackle exchange event at the annual lake association annual meeting.
 - d. Find a household hazardous waste collection site through the MPCA:
<https://www.pca.state.mn.us/waste/find-your-household-hazardous-waste-collection-site>
- 2.) Provide non-lead fishing tackle information to lake association members.**
 - a. Include non-lead tackle information, including lists of products/manufacturers, in lake association newsletters.
 - b. Share the MPCA’s lead-free manufacturers website for options to buy lead-free tackle: [Manufacturers of lead-free tackle](#)
 - c. Include MPCA Get the Lead Out [webpage](#) and [social media](#) links on lake association social media pages.
 - d. Encourage members who want to dispose of lead tackle to contact their local Household Hazardous Waste site.
 - e. Contact MPCA’s Get the Lead Out program at leadout@state.mn.us to acquire lead-free tackle sample packs for distribution at lake association meetings.
 - f. Secure permission to post educational signage about fishing lead-free at high visibility shoreline areas.
 - g. Ask an association member to volunteer to be the leader and organizer of Get the Lead Out activities for your lake.

- h. Include Get the Lead Out messages and articles in your newsletters and communications with association members.
- 3.) **Invite MPCA Get the Lead Out staff to speak at lake association meetings:**
Email leadout@state.mn.us for more information.
- 4.) **Talk to your favorite retailers and ask them to stock non-lead fishing tackle.**

Appendix C

Best Management Practices for Artificial Nesting Platforms

Artificial nesting platforms have been used to increase loon nesting success in many states. While they have been effective at enhancing loon productivity and are very popular with lakeshore residents, artificial platforms do not ensure nesting success.

Important: Individuals or Lake Association volunteers are responsible for maintaining artificial nesting platform for its lifetime. This responsibility includes: placing platforms on the lake soon after ice-out, removing it in late summer, storing it on shore, and making necessary repairs at the end of the season. Platforms are a long-term responsibility. If the nesting platform is not properly maintained, it may cause the nest to fail.

Artificial nesting platforms are not always the answer.

- Platforms may seem like an “easy out” from the true challenge of balancing human lake use and the habitat needs of loons and other species. Protection of nest and habitat from development, coordination of water level fluctuations to protect nests, and an understanding of specific lake habitat suitability are essential.
- There is no guarantee that loons will use a platform and, in fact, artificial nesting platforms can sometimes create problems for loons. For example, predators such as crows, gulls, or eagles may more easily locate nests on platforms. Avian guards can be added to nest platforms to reduce the risk of predation by birds. In addition, curious humans can impact loons by boating too close to a platform and frightening loons from the nest.
- The best way to enhance long-term health of loons across Minnesota is to protect natural nesting and foraging habitat.

Consider the following questions and steps as guidance for evaluating the appropriateness of an artificial nesting platform.

If loons are nesting on the lake, start here.

If you answer yes to Questions 1 – 3, then a platform is probably not the right option for the lake.

1. Do loons produce chicks on the lake once every three years?
2. Do loons successfully nest on a nearby lake most years?
3. Are there natural nesting locations on the lake that could be enhanced through means other than placing an artificial platform?

If loons are not nesting on the lake, start here.

You need more information to understand loons are not nesting on the lake. Check historically records, or record your own observations, to answer questions 4 – 7.

4. Do you know that historically loons nested on the lake?
5. Can you identify territorial loon behavior (exhibiting defensive postures such as the penguin dance) separate for behavior of non-breeding resident loons or just occasional visitors?
6. Is the lake subject to water level fluctuations that may flood nests?
7. Has unsuccessful nesting been observed? If so, try to document locations, numbers, and causes of nest failure. Please report to the Restoration of Common Loons in Minnesota Project Coordinator at MLRP.DNR@state.mn.us.

More to consider

A number of factors may explain why loons are not nesting on the lake. These include: lack of nesting habitat, poor food base, high levels of human disturbance, or simply that the loons are successfully nesting on a nearby lake.

If territorial loons nest on the lake but have a history of nest failures, you should first work to enhance natural nesting sites. (Sharon – do you have any info on nest failures?) This might be through regulations such as a slow-no-wake zone near the nest, contacts with the landowners about naturalizing shorelines, or educational programs for lake residents or users.

If natural nest sites are not available and cannot be restored, and factors leading to nest failure are controlled, then artificial nesting platforms are a consideration. The most appropriate locations for artificial platforms are lakes where all natural nesting sites have been developed, water levels fluctuate severely (such as reservoirs), or where loons nest on mainland shores and have lost their eggs to shore predators such as raccoons for at least three consecutive years. Artificial nest platforms should be placed away from existing loon territory boundaries.

If you are considering an artificial platform, please do the following:

- Contact Restoration of Common Loons in Minnesota Project Program Coordinator MLRP.DNR@state.mn.us for help in selecting an appropriate location.
- Check with your local Law Enforcement Unit or Sheriff's Office to obtain permission or a permit for platform placement.
- Platforms cannot interfere with boating traffic.
- We encourage you to involve your lake association in any plans.
- Monitor the nesting success of loons on the lake as well as use at platforms. Consider joining MN DNR Loon Watcher Program.



Loon nesting on natural substrate adjacent to an ANP.

The following section with Appendix D through Appendix G is provided by the LLAA Planning Team 2022:

Appendix D:

Citizen Volunteers on Long Lake to Monitor Loons in 2022 Based on the Known 2021 Territories

Appendix E:

Southeast Long Lake Map Notations and History for Garr ANP – successfully used by loons

Appendix F:

Northeast Long Lake Map Notations and History for Roberts ANP

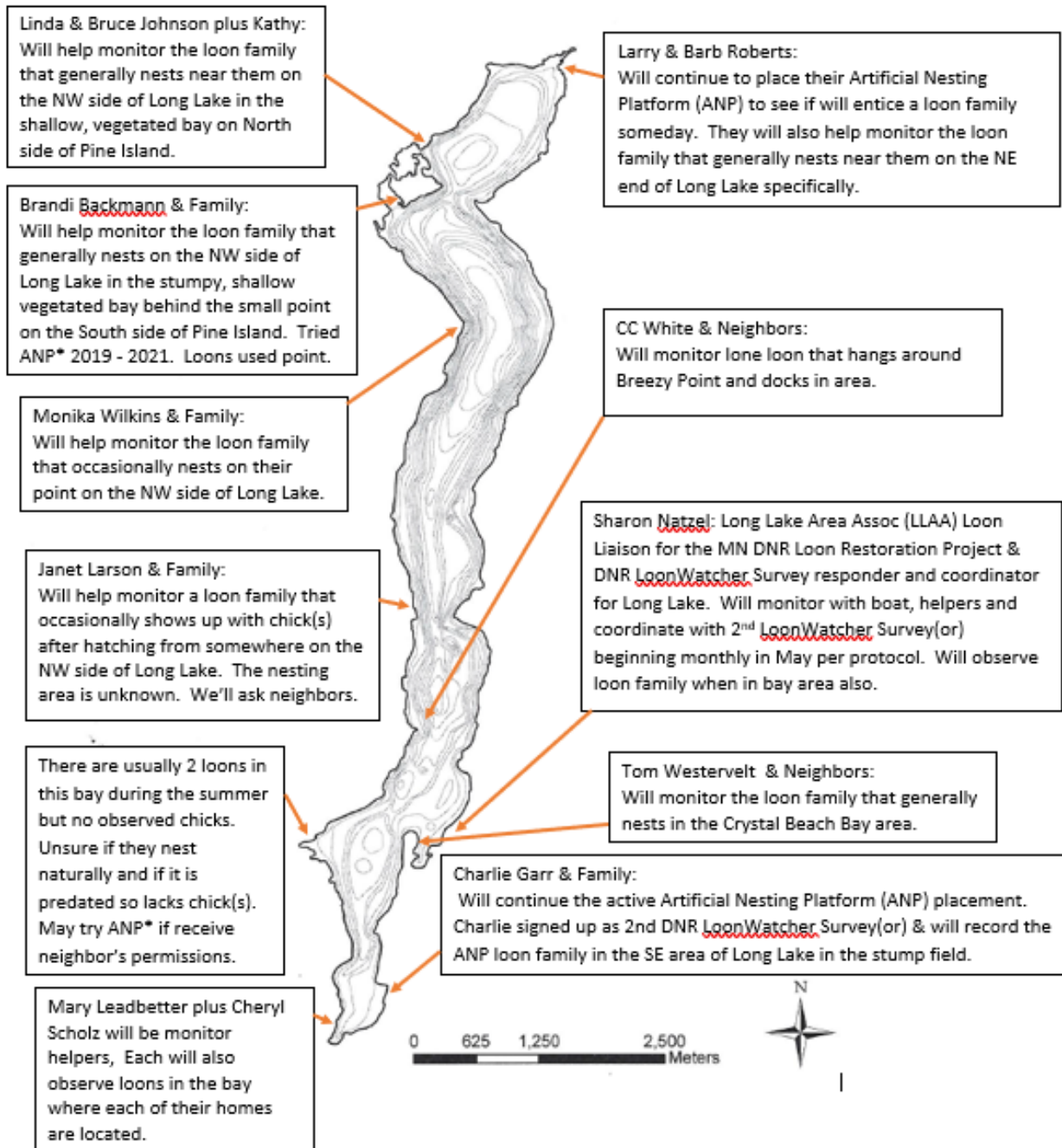
Appendix G:

Long Lake Map Notations and History of Retired Lais-Natzel ANPs

Appendix D

Citizen Volunteers on Long Lake to Monitor Loons in 2022 Based on the Known 2021 Territories

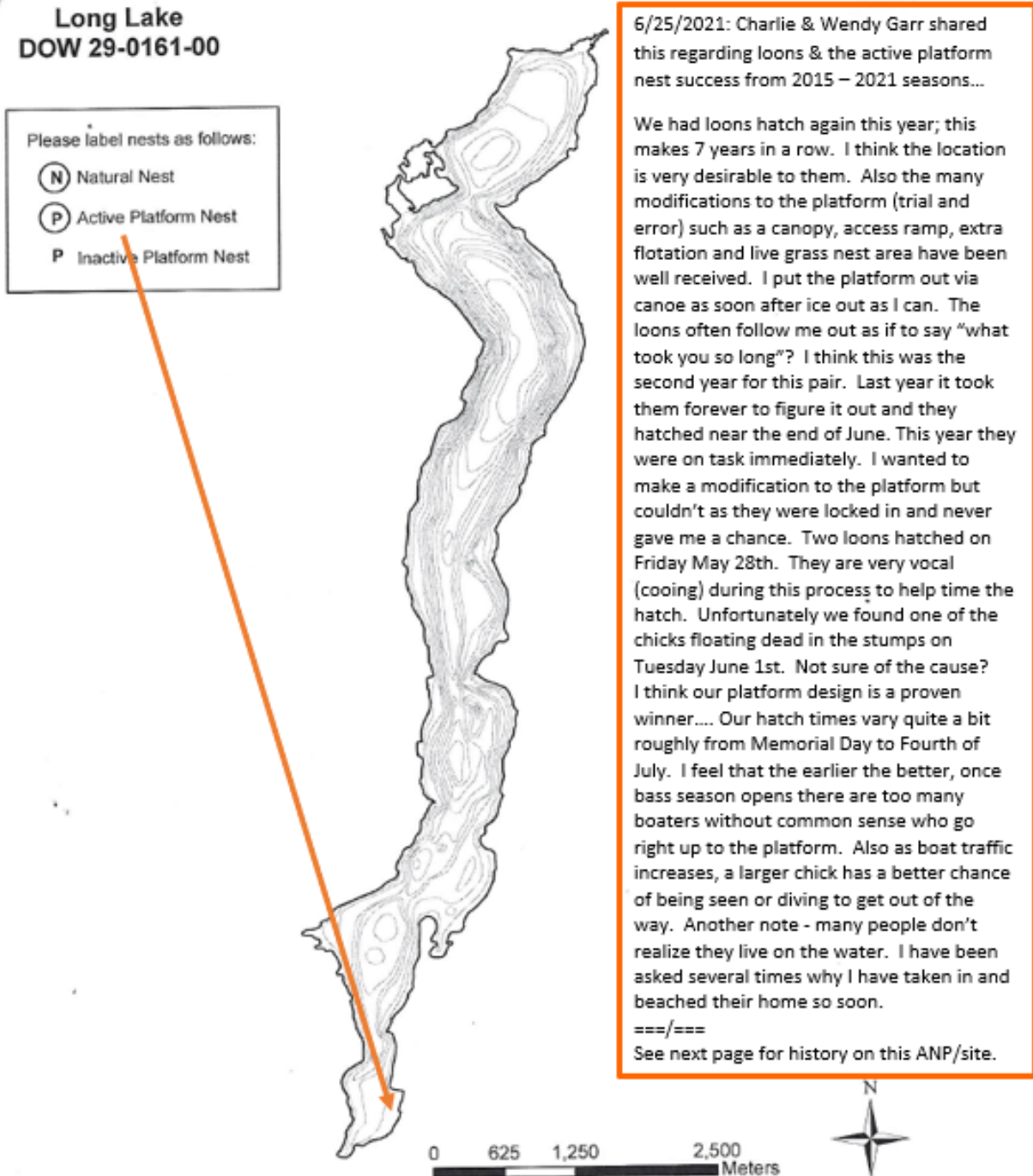
Loon Monitoring "Helpers" roles are being the "Eyes" and "Ears" in the loon territories to alert the "MN DNR LoonWatcher Survey" Long Lake team members so in-person observations per DNR protocol can be made and recorded for the annual DNR report. *(Note: In 2022 we'll determine if Long Lake loons require more individuals in different areas of the lake in the LoonWatcher Survey "role" too.)* In addition, the seasonal history of loons on Long Lake will be gathered by the Loon Monitoring "Helpers" for sharing through communications also for the entire Long Lake Area



Appendix E

Southeast Long Lake Map Notations and History for Garr ANP – successfully used by loons

Southeast Stump Field ANP Location below: Active Artificial Nesting Platform owned by Charlie & Wendy Garr



History of the Garr Artificial Nesting Platform (ANP) on SE end of Long Lake provided by Charlie Garr

My folks bought the property from the Manlove's in 1969 and we have observed loons nesting in the area from the beginning. They like the protected bay. Sometimes we would find a shoreline nest on our or the Manlove's property. Due to predators or flooded nests they weren't always successful. Skunks and raccoons are in the area and work the shoreline.

Eventually my dad tried a platform for the loons. This first platform was all wood and was pretty crude and cumbersome. It did get used a few years but sometimes they just preferred shoreline nesting.

During the last couple decades the plant life in the bay has changed significantly - hybrid cattails have basically taken over the shoreline. I hate them and wish we could do something to go back to the diverse plant life we used to have. Why the cattails matter to the loons is that the cattails choke off the shoreline and make it more difficult for the loon to find and access a potential shore nest site. So the loon nesting platform we provide becomes even more desirable to them now.

We used to have lots of wood ducks in the bay. Years ago I had as many as 5 wood duck houses on our property that would be used by wood ducks or mergansers. Now I have one wood duck house left (just in case) and it never gets used. I moved all the wood duck houses to add to a series of houses I maintain on local rivers (Shell, Fishhook, etc.) There is no interest anymore from the wood ducks in the hybrid cattail choked shoreline.

Note: Long Lake Area Assoc (LLAA) will follow the Research Outcome from the UMN Aquatic Invasive Species (AIS) Research Center (MAISRC) on the in-progress Hybrid Cattail <https://maisrc.umn.edu/cattails>

More on the Garr Artificial Nesting Platform and how it is made:

The base platform we use now is one of the two that Eagle Scout, Joe Quehl built in 2013 for Long Lake (see the history of the other platform built by Joe in Appendix G). We keep him informed of the loon nest results annually as he is now at the Univ of Tennessee Knoxville getting his masters in wildlife management and spends much of the year working on wild turkey research. The Quehl's are our neighbors 2 cabins north and still help lift the platform back on shore each year for storage. It is mostly a PVC framework with extra foam flotation. It has a treated plywood deck and a hinged carpeted plywood on ramp. It has a waterproof canvas roof.

I cut sod to make a nest ring on the deck each season, the grass gets wet enough to grow making it similar to shoreline to the loon. The platform has to float high enough to withstand stormy wave action yet the clumsy loon has to be able to get on board.

I think our site is the most wind protected site on the lake for a floating platform. We are exposed for about a half mile to a southwest wind.

I use two anchors on opposite corners and position the floating ramp side to the north east which is most wind protected.

The roof provides protection from aerial predators (we have many), sun and rain. I bug spray the underside of the roof as gnats have been a problem in the past.

This whole process has been refined over time. In year one, we did license it through the Hubbard Sheriff.]

Note: In Spring, 2022, photos will be taken of this productive artificial loon nesting platform at Garr's.

Appendix F

Northeast Long Lake Map Notations and History for Roberts ANP

This Inactive Artificial Nesting Platform is owned by Larry & Barb Roberts

Long Lake
DOW 29-0161-00

Please label nests as follows:

- (N)** Natural Nest
- (P)** Active Platform Nest
- P** Inactive Platform Nest



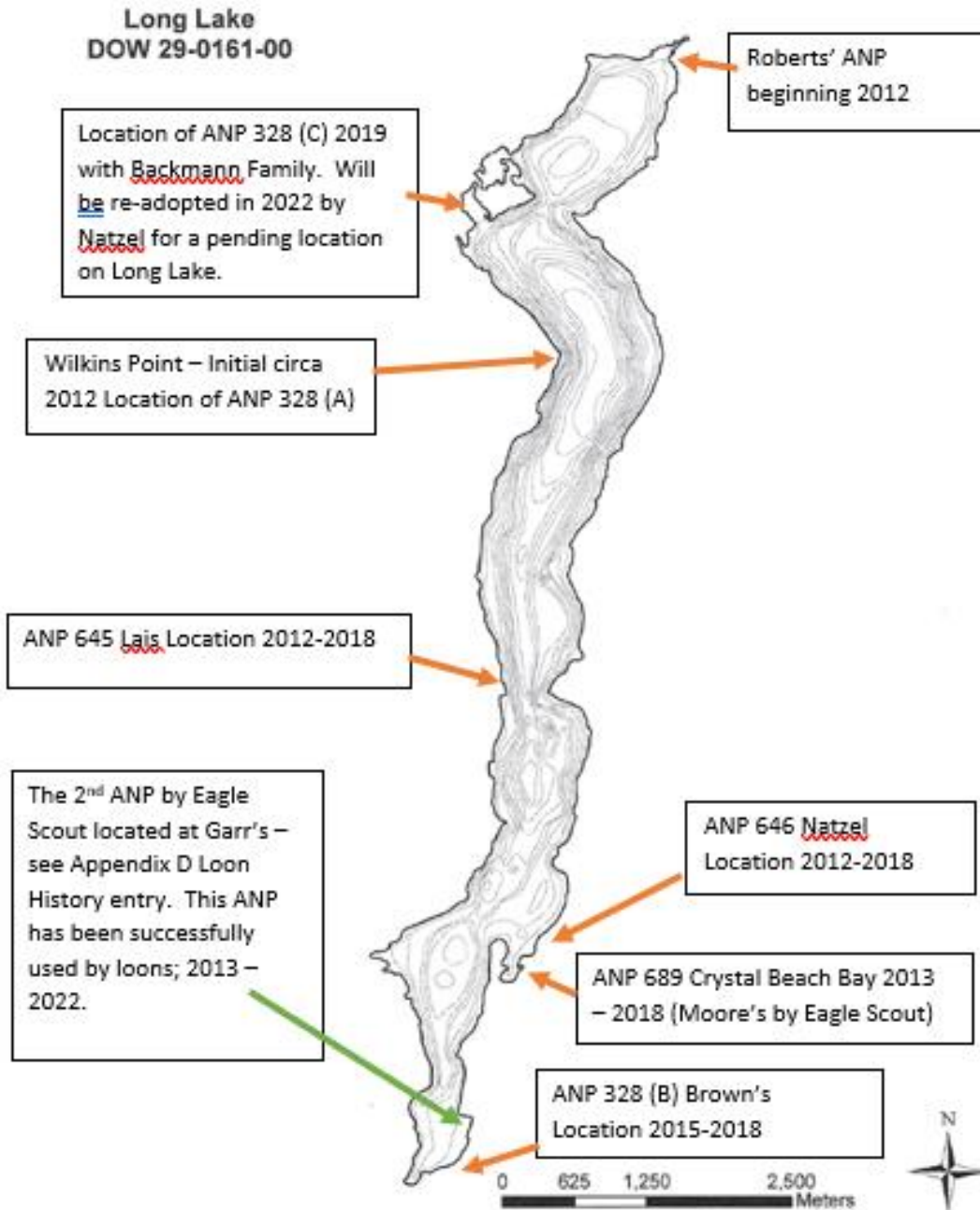
We first noticed a pair of loons on the northeast corner of the lake in the spring of 1999 (after purchasing the property in the fall of 1998). We thought they were great but did not become aware that they had a nest in our area until we moved permanently to our property in 2003. This pair of loons has a nest back in the shallow bay past the stumps. It seems unusual for them to be so far back in shallow water, but it is protected from boaters and wave action. We noticed them on a nest several years in a row, then they quit using that nest and moved somewhere else in the area. To date, we still have not located that nest, but suspect it is in an area behind some reeds.

We purchased a used nesting platform from the Big Mantrap Association loon project in the Fall of 2011. We have put the nest out nearly every spring in various locations with no success. Fortunately, this pair of loons has returned every year and hatched at least one egg successfully, except for the 2 years following the huge gulf oil spill. They generally hatch 2 eggs every season. Loon chick survivability seems to be about 50%. Predation of the eggs and the small chicks has been a concern recently. We have some large snapping turtles in our area (shallow bay). The rapid growth rate of the babies helps their survival. Eagles fish in the area regularly and the loons are constantly on alert for them.



Appendix G

Long Lake Map Notations and History of Retired Lais-Natzel ANPs



Artificial Loon Nesting Platform (ANP) History from the Lais / Natzel clan based on experiences circa 2011 – 2021. This history is by Sharon Natzel of the Lais / Natzel clan. Lakeshore owners in the history below, plus Sharon with her family and friends helped put these 4 registered artificial loon nesting platforms in the lake in the Spring, fully outfitted with “renewed vegetation” and held down by two anchors each. 3 of the 4 ANPs also were paired usually with registered buoy’s that said “caution – loon nesting area” and were on a separate anchor also. By Autumn these ANPs and buoys were removed and cleaned up for the following Spring (sometimes occurring mid-July to August.)

Fresh vegetation, dried over the winter was cut in early Spring for each ANP. We were able to trim native dead cattails and grasses from Larry & Barb Roberts’ marsh, just off of the lake at the north end in the early spring of 2012 and 2013. Beginning in 2014, we were able to trim native dead cattails / reeds from the marsh just off of the lake near the Crystal Beach Bay location on Long Lake for all 4 ANPs. The ANPs were placed in the water as soon as possible after ice-off. They were stored at each of the lakeshore owner’s locations.

Due to the unsuccessful ANP’s over the years, these 4 ANP have been re-distributed and adopted by other lakes / other lakeshore owners as of Autumn 2018 for new uses in 2019. See below for the unique history of each of the 4 ANPs.

Autumn 2018 – Redistribution of 4 ANPs from Long Lake:

4 ANPs were cleaned, drained and dried over 21 days in Autumn, 2018 for re-distributed, free of charge to new lakeshore owners (1 still on Long) – see below. They would be over-wintered until Spring 2019 to prevent any unknown AIS before being used at the new locations. Instructions were provided to the new owners on the need to register the ANP with their County Sheriff’s Dept. prior to use on their lakeshore. The link to the Big Mantrap Program ANP instructions for what vegetation to include on the platform before launching in the Spring was also provided.

1) ANP Number 689’s Long Lake History 2013 – 2018 (see Appendix G map):

This was the ANP used in Crystal Beach Bay on Long Lake on the East side about 1 mile north of Hubbard, MN. This was one of the 2 Eagle Scout platforms created for Long Lake over the winter of 2012 by Life Scout Joe Quehl of Troop 248 located in West St. Paul, MN. Joe created 5 that winter with his team. Three went to other lakes as part of his Eagle Scout project.

This ANP below was launched in Spring 2013 in Crystal Beach Bay. It was provided originally to now deceased Mr. Moore. Carol, Mr. Moore’s partner and Sharon handled the platform together from 2014 to 2017 in his memory – then it needed repair. This ANP was not successful as far as loons nesting on it for the 5 years it was placed in Long Lake in this bay. Two locations for the ANP in the bay were tried. Turtles or ducks would sun themselves on occasion during the summer on the ANP, but no loons. The buoy “caution – loon nesting area” was tried a few years in the bay also. The loons used natural nests in the bay in different locations (see the natural nesting insights on the next page.)



See Page 7 of the Spring 2013 Long Lake Area Association (Hubbard County) Inc newsletter:
https://docs.google.com/file/d/1cbr4NKv1xyUJFs9jli6XD8x4foE4xmD2WfJy54jmoC81mwMf_ObwmJgPOsc/edit

Crystal Beach Bay, Long Lake Loon History on natural nests based on recent memories. This bay is on the east side of Long Lake about 1 mile north of Hubbard, MN accessed by Bay View Drive. There are still some native cattails and reeds and some undeveloped shoreline. There is much wildlife in the bay including snapping and mud turtles, red wing blackbirds, cardinals, red fox, beaver and otter. Lily pads, underwater stumps and logs create a haven for the fish. The bay is heavily fished from spring through summer.

In the Crystal Beach Bay, each summer there is a nesting pair of loons that try natural nesting in different locations – sometimes a couple of nesting attempts with predation due to different predators occurring after two to three weeks. In 2013, a natural nest in the native cattails / reeds allowed the loons to produce one chick successfully and it was able to migrate.

Recently a stump in the water a few feet off the shore and hidden usually by vegetation by June was discovered being used by the loons and has been the first nesting location of the season for the loon pair in this bay since 2019. The loons were successful with a pair of chicks in 2019 that did grow to migrate. In 2020, the egg was not fertile although the loons sat on the egg for almost 2 months before giving up. In 2021, the stump nest was predated (neighbors thought it was perhaps crows as there were crows observed around the eggshell on the ground when found.) It appeared to have been a fertile egg based on the few remains within in the eggshell. We have hope in 2022!

2) ANP Number 645's Long Lake – Some years prior to 2012 – 2018 (see Appendix G map):

Long Lake History beginning in 2012 - 2018:

This ANP was an older design adopted by the Lais / Natzel clan from now deceased Mr. Moore. It had not been successful for him in Crystal Beach Bay. It had been sitting on his shoreline in need of repair for a couple of years. Based on the newer designs at that time by Big Mantrap with their successful ANP program in our Hubbard County lakes area, it also needed a larger entrance.

The old ANP was updated / remodeled for use in the Spring of 2012 by Bob Natzel and was again used on Long Lake. This time on the west side of Long Lake near the mid-section of the lake in a tiny alcove along the Lais' shoreline. A neighbor said they observed a loon that Spring climb onto the nesting platform once. It was apparently not found to be satisfactory by that loon as there were no nesting loons on the ANP at that location over the 6 years it was anchored along that shoreline in a couple of different, slightly protected spots on the main lake. The large waves on the main lake may have impacted the desirability. Occasionally, female Mallard hens with growing ducklings would climb up and sun themselves on the anchored platform over the summer. A "caution – loon nesting area" buoy was placed nearby.

Long Lake History - some years prior to 2012:

Mr. Moore originally received the ANP from a family on another lake after they tried it unsuccessfully on their lake. Mr. Moore believed it likely originated from Big Mantrap's re-sale of used ANPs as their new platform designs evolved. This ANP was not successful as far as loons nesting on it for Mr. Moore. Occasional turtles would climb up on the platform and sun themselves when located in Crystal Beach Bay, Long Lake.

3) ANP Number 646's Long Lake History 2012 – 2018 (see Appendix G map):

This ANP was purchased by the Lais/Natzel clan in the Autumn of 2011. It was from the Big Mantrap loon program. They sold older ANPs as they updated their inventory of redesigned ANPs. (Two similar ANPs were purchased by Long Lake Families then. The Roberts' ANP is pictured on the next page and is used at northeast end of Long.) We were all impressed by the Big Mantrap loon nesting platforms in the "nursery" when we picked them up. Sharon Natzel and Janet Larson of the Lais/ Natzel clan were really excited about trying their new birthday present to each other in the Spring of 2012. We were ready to "count loons"!

In the Spring of 2012, the launch of the ANP took place on Long Lake in front of the Natzel home along the lakeshore on the east side of the main lake about a mile north of Hubbard, MN. The two anchors were definitely needed with the large waves that sometimes wash in from the Northwest to this area. A "caution – loon nesting area" buoy was placed nearby too. In the Spring, occasionally loons would swim by, but did not climb up on the platform. The closest natural nesting by loons was in the Crystal Beach Bay – see above.



See Page 7 of the Spring 2012 Long Lake Area Association (Hubbard County) Inc newsletter for ANP article:

https://drive.google.com/file/d/13EhRKU3Lz71xBfKnsSt0Z1CjHP2vrgmOPw1I-NjkOet-39-grYwM_LdTO/view

4) ANP Number 328 on Long Lake was adopted by another Long Lake Family in 2019:

The Backmann family is on the southwest end of Hamilton Island in the vegetated / stumpy bay, with the lily pads and abundant wildlife. Typically, there is a loon family that frequents that area that has success with loon chicks over the years, but there was some predation known to occur also on natural nests. The ANP was not used by the loons in 2019 – 2021. Note that In 2022, this ANP will be re-adopted by Sharon Natzel and placement on the lake is pending, based on neighbor permissions in potential location on the SW side (see Appendix D map).

Prior Long Lake history 2012 – 2018:

This ANP was a used nesting platform received in 2013 from Big Mantrap's Loon Program by now deceased Mr. Wilkins. A loon on Long Lake nested on the Wilkins' point on a natural nest not far from the ANP which was just off shore in the water in 2013. The Wilkins family gifted the platform for use on Long Lake in 2015 for a few reasons; it had not been successful near their lakeshore and with Mr. Wilkins passing in 2014, it could be tried in other areas of Long Lake. In addition, there were mink along their lakeshore then that predated the entire purple martin colony there in 2014.



From Big Mantrap Lake Association's website on the Loon Program. ANP & buoy look like this on Long Lake.

This ANP was registered then by the Lajs / Natzel clan. It was hosted by Mr. Brown down on the southeast end of Long Lake at Hubbard for 4 years. It did not attract any nesting loons in that location.

Natural nesting continues to occur on the Wilkins Point some years. This point is on the West side of Long Lake by the deepest portion of the lake. There the loon natural nesting history continues with some success in some years. The loons had a natural nest in 2016 that produced 2 chicks. During the nesting period, one of the "caution – loon nesting area" buoys was placed nearby; wind made it difficult to keep it in place though. The loons also nested successfully with a natural nest in 2019 with 2 eggs on the Wilkins point. In the Spring of 2020, with heavy wind, large waves washed the 2 eggs off the natural nest. In 2021, there wasn't a natural nest. Their lakeshore is in a natural state to provide habitat and prevent runoff / erosion. We are hoping for natural nesting success in 2022!

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