

Credit Rebecca Field

Common Loon Minnesota Conservation Summary

*Audubon Minnesota
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The *Blueprint for Minnesota Bird Conservation* is a project of Audubon Minnesota written by Lee A. Pfannmuller (leepfann@msn.com) and funded by the Environment and Natural Resources Trust Fund. For further information please contact Mark Martell at mmartell@audubon.org (651-739-9332).

Common Loon

Priority for Minnesota's Bird Conservation Plan:

- Boreal Hardwood Transition: Moderate Level Priority
- Potential Statewide Stewardship Species (2.03% of global population in Minnesota; 2.95% of North American breeding range: considered stewardship species based on public value)

Other Status Classifications:

- Minnesota Species of Greatest Conservation Need (SGCN)
- Minnesota's Loon Abundance, as measured by the MNDNR Loon Monitoring Program, is an official Performance Indicator to track the Department's progress in achieving the following goal: Minnesota's fish and wildlife populations and the habitats that support them are healthy.
- USFWS Bird of Management Concern in Region 3 (1995)
- United States Waterbird Conservation Plan: Moderate Concern; apparently stable population (PT=3)
- Northern Prairie and Parkland Waterbird Region: Low Conservation Risk
- Upper Mississippi River and Great Lakes Waterbird Region: Moderate Priority in BCR12; Low Priority in BCR23; Focal Species for Region-wide monitoring because it is a Stewardship Priority species in UMVGL Region

Population Information:

- North America population estimate: 252,000-264,000 breeding pairs (UMVGL Waterbird Conservation Plan)
- Minnesota population estimate: 11,626 breeding pairs (Strong, P.I.V. and R. Baker. 1991. An estimate of Minnesota's summer population of adult Common Loons. Final report submitted to the Minnesota Department of Natural Resources. 64 pp.)

Minnesota BBS Data:

- Blue Level of Credibility
- 1966-2009: Increasing trend (not statistically significant) of 0.8; 1999-2009: Increasing trend of 0.9
- Minnesota does not have one of the highest centers of the species abundance

Minnesota Residency: Breeds North and South; Migrant throughout the State

Habitat Requirements: Deep Lakes

Prefers lakes larger than 24 ha with clear water, an abundance of small fish, numerous small islands, and an irregular shoreline that creates coves; however, uses a wide variety of freshwater aquatic habitats, including reservoirs (even if water level fluctuations result in repeated nest failures); rivers are not used for nesting habitat unless oxbow-like areas with minimal current are available (Birds of North America)

Oligotrophic lakes >24 ha (60acres) surrounded by boreal and mixed forest with numerous islands, rocky shorelines, and small fish. Prefers small islands and floating bog mats for nesting; lowest preference for marshy hummocks. Density of territorial pairs dependent on lake size and configuration. Usually one or multiple lakes per nesting territory. Breeders tend to remain and forage 50-150 m from shore in water <5m deep; "nurseries" close to shore. Pairs in lakes <24 ha (60 acres) use at least one other lake for foraging. Non-breeders use partial lakes, usually sharing with a breeding pair (UMVGL Waterbird Conservation Plan).

Migration: Temperate

Climate Change Vulnerability: Low (1); projected to decrease in abundance and distribution in Minnesota by climate change models

Threats (from UMVGL WCP):

- Botulism during migration
- Shoreline development
- Contaminants, especially mercury, lead sinkers, other heavy metals
- Acidification of lakes
- Human disturbance (especially jet skis and boats); will lead to nest abandonment
- Injuries/death from entanglement in fishing gear

OVERALL MINNESOTA GOAL: **Maintain current population levels**

BEST MANAGEMENT PRACTICES

- As long as Minnesota's common loon population remains stable no active management practices are deemed necessary.
- On a lake-by-lake basis recreational activity in the north-central region of the state may be the highest concern to loon occupancy and reproductive success. Working with active lake associations to monitor loon activity and educate lakeshore residents about the impacts of recreational activities on the lake's nesting pairs is among the most effective management practices.
- Inform angling public about risks related to lead fishing sinkers and lures (i.e. jigs) and encourage use of non-toxic materials. Inform angling public about risks related to lead fishing sinkers and lures (i.e. jigs) and encourage use of non-toxic materials.

Action: Actively support the Minnesota Pollution Control Agency and the Department of Natural Resources in their promotion of non-toxic fishing sinkers and lures.

MONITORING RECOMENDATIONS

- A statistically robust monitoring program is essential in insure that the current statewide population level is maintained.

Action: Support annual implementation of the Minnesota Department of Natural Resources' statistically designed Minnesota Loon Monitoring Program

Background: Begun in 1994, MNDNR's Loon Monitoring Program tracks loon populations in six Index Areas selected to represent different factors which may affect loons and their habitat throughout their breeding range within Minnesota. The Index Areas cover portions of the loon's range in BCR11, 12 and 23. Both adults and juveniles are recorded one day during a 10 day window in July. Over 1000 volunteers are involved in the program. To date, the results indicate that Minnesota's loon population remains stable.

- Monitor the species distribution in the prairie pothole region

Action: Continue implementation of Minnesota's Breeding Bird Atlas.

Background: Begun in 2009, the Minnesota Breeding Bird Atlas is an effective way to document the species distribution and abundance in BCR11 and establish a baseline for future monitoring.

CONSERVATION ACTIONS

Statewide

- Promote responsible shoreline development practices and protect high quality shoreline habitat.

Action: Actively support the formal adoption of Minnesota's updated shoreland rules.

BCR11: Prairie Pothole Region

- Because this species is on the region's fringe, and a low conservation risk, the only recommended action is to implement a broad survey that would help determine current populations and distribution and provide a baseline for following population trends. This is being done via the Minnesota Breeding Bird Atlas.

Upper Mississippi Valley/Great Lakes Waterbird Conservation Region (BCR12, 23):

- Maintain current population size in BCR12 because this region supports the majority of Minnesota's breeding pairs. This is being accomplished via Minnesota's Loon Monitoring Program.

RESEARCH NEEDS

- Support/contribute to recommendations of the Common Loon Status Assessment and Conservation Plan (2004) relative to Minnesota
 1. Identify potential sink populations in the UMVGL (i.e. areas that have a rate of fledged young per territorial pair less than 0.48 over a six consecutive year period) by investigating potential population-level impacts. Northernmost Minnesota is considered a population area that may be a population sink because of low reproductive success.

Action: Assess potential factors responsible for the low number of juveniles per loon pair in the Cook/Lake index area of northern Minnesota where the number of juveniles per adult pair has been consistently below 0.48.

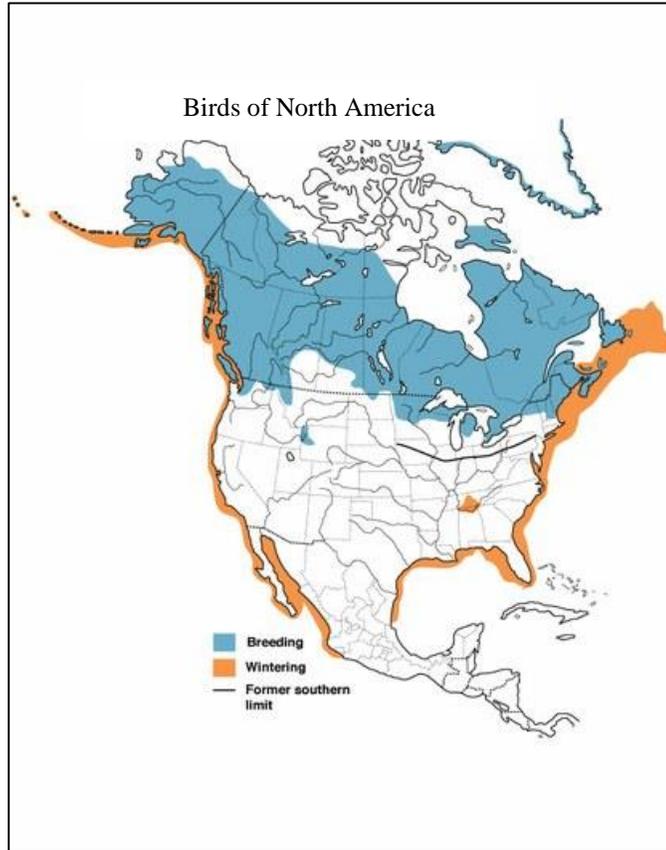
2. Investigate potential of the Common Loon as an indicator of mercury risk to piscivorous wildlife populations through standardized long-term monitoring efforts on multiple lands, including Voyageurs National Park and the Chippewa and Superior National Forests.

Action: Develop a standard long-term monitoring program using loon blood and egg Hg levels.

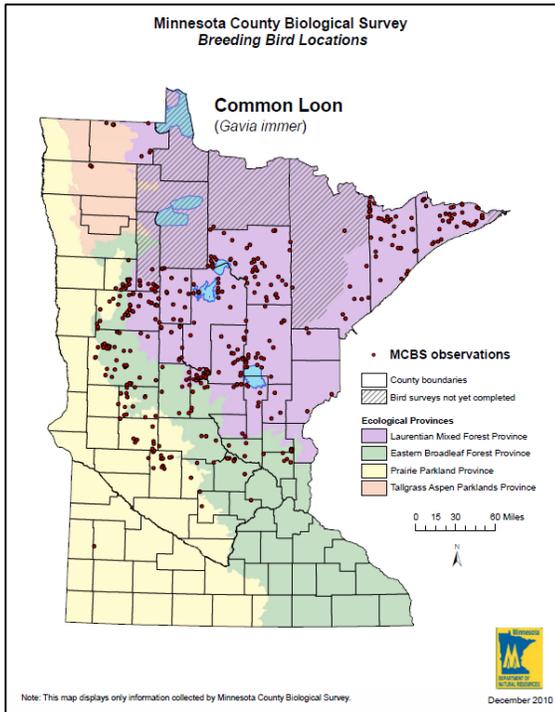
Specific Action for Audubon Chapters:

- Participate in Minnesota's Common Loon Monitoring Program

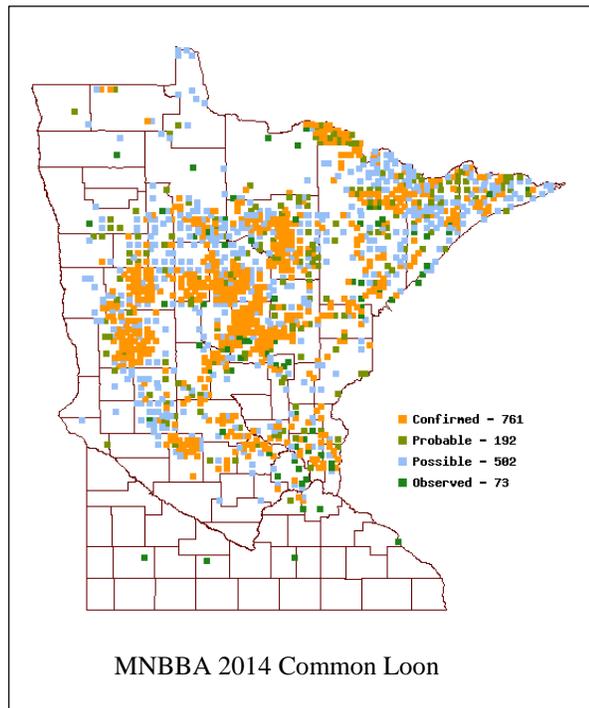
Common Loon Distribution Maps



Birds of North America <http://bna.birds.cornell.edu/bna/>



MN DNR http://www.dnr.state.mn.us/eco/mcbs/bird_map_list.html



MN Breeding Bird Atlas <http://www.mnbb.org/>