



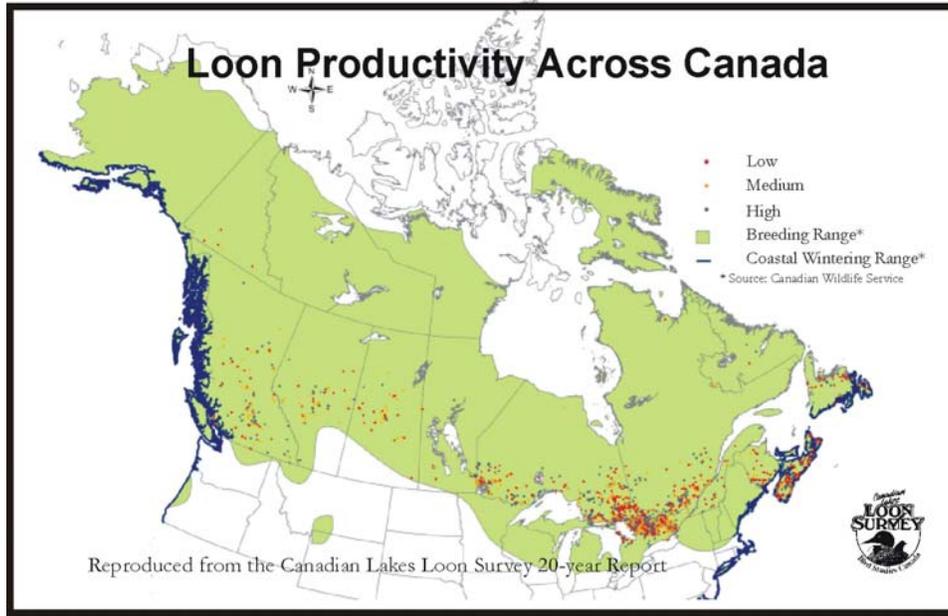
## Canadian Lakes Loon Survey Background Information

- 1. Bird Studies Canada:** Bird Studies Canada (BSC) is Canada's national body for bird conservation, and is a not-for-profit organization. BSC administers national, regional, and international research and monitoring programs that advance the understanding, appreciation, and conservation of wild birds and their habitats. BSC has headquarters in Port Rowan, Ontario, and also operates out of regional offices in New Brunswick, Quebec, Manitoba; Saskatchewan; and British Columbia. To learn more about BSC visit [www.birdscanada.org](http://www.birdscanada.org) or contact the head office at 1-888-448-2473.
- 2. Canadian Lakes Loon Survey:** The Canadian Lakes Loon Survey (CLLS) is one of BSC's national research programs. Each summer, volunteer surveyors across Canada report on loons and loon breeding success in their area, contributing to a national database about annual loon chick survival and providing insight into the lives of loons. To learn more about the Canadian Lakes Loon Survey visit [www.birdscanada.org/volunteer/cls](http://www.birdscanada.org/volunteer/cls) or contact the Aquatics Surveys Volunteer and Data Coordinator at 1-888-448-2473 ext. 124.
- 3. Why loons?** Loons fulfill the same role for a lake that the canary fulfilled in the mines – acting as an indicator of environmental conditions. CLLS monitoring of loon reproductive success has proven effective for monitoring broader lake health. In fact, survival of loon chicks is a good indicator of the impact of lake acidification and other conditions on fish stocks and aquatic life.
- 4. Loons are a northern symbol, and a Canadian symbol:** Our basic unit of currency is called the Loonie! Loons are a widely recognized symbol of wilderness. People love loons; they are highly compelling birds because of their beauty, their haunting call, and their association with wild places. Even more importantly, factors that affect loons influence other fish and wildlife that use the same lake.
- 5. The history of the CLLS:** Almost three decades ago, as “dead” lakes were being discovered in central and northern Ontario due to acid rain, concern grew that loon chicks in these areas were starving. A broad-based scientific approach was needed to accurately assess the long-term health and productivity of Common Loons, and the lakes they depend on. The Canadian Lakes Loon Survey was developed to provide this information.
- 6. What do CLLS participants do?** Each summer, hundreds of CLLS participants spend time observing loons at nearby lakes. They watch their lake at least once in June for signs of nesting, once in July for chicks, and once more in August to see if the chicks survive long enough for their first flight. The participants then fill out the CLLS reporting form and return it to BSC, or they enter their observations online through the Bird Studies Canada website.

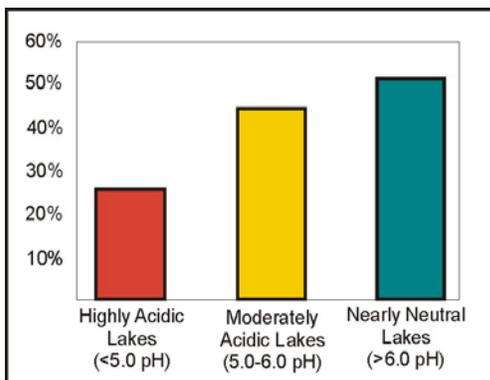
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7. **What has been learned from the CLLS? Loon Productivity:** CLLS data over many years indicate that loon productivity in Canada has been consistently higher in western regions (Prairie provinces, British Columbia, and Yukon) than in the east (Ontario, Quebec, and Atlantic Canada). When loon productivity is examined over time, average productivity across Canada is cyclical but relatively stable. During the 1980s, average productivity rose across Canada. From 1990 to 1997, it declined. Productivity peaked again in 1998, and has since dropped to relatively low but stable levels.



8. **Acid and Mercury levels decrease loon chick survival:** CLLS data collected in Ontario over many years confirm a direct link between acid rain and loon chick survival. The likelihood that a loon pair will raise one chick to fledging age gets progressively worse as lake acidity increases (see Figure 1). Once a lake gets down to pH 4.0 or 5.0, productivity is considerably handicapped.



An insidious effect of acid rain is that the fish remaining in sterile acid lakes are apt to accumulate high levels of harmful mercury, which is leached out of the soils by acid rain. Analysis of mercury concentrations in loon eggs (largely contributed by CLLS participants) in Canada concluded that over 30% had mercury levels exceeding those reported to be associated with reproductive impairment in Common Loons.

Figure: The Percent of Common Loon Pairs Successfully Raising One Chick

9. **Human Disturbance:** Loon surveyors have provided hundreds of anecdotal observations describing human impacts on loons. Nesting sites can be disturbed by boats, canoes, personal watercraft, and water level changes (through managing water control structures). Loons get caught in entangling debris such as fishing lines and domestic garbage. Lake users may inadvertently attract and support nest predators such as raccoons, skunks, and gulls. Finally, loons are displaced through habitat destruction.

CLLS data suggest that the actual impact of development on loons is variable. Development can either promote loon success by providing cover for fish (e.g., docks), hinder success by destruction of loon habitat (e.g., infilling of wetlands), or be neutral.

## 10. What Can You Do To Help:

### Loon Friendly Tips for Lake Users

- Keep it Wild – Work to preserve the wild parts of your lake thus ensuring nesting habitat remains. At your cottage maintain a natural and vegetated shoreline thus providing shelter for both fish and loons. If no nesting habitat remains consider installing a floating nest platform.
- Watch Your Wake – Use sensitive boating practices and steer clear of loons. If you cannot steer clear slow down and give them a chance to respond. Whenever possible avoid boating near nests and in shallow areas. If you cannot avoid it, slow down to prevent wakes and to give the wildlife a chance to respond to your presence.
- Take it to Shore – Don't discard plastics, metals, fishing line, tackle, or other garbage in waterways. Return your refuse to shore and dispose of it in appropriate containers.
- Be Level-Headed – Work to reduce large water level changes during the nesting season (May to July). Talk to your local officials.
- Don't Mess With the Food Chain – Don't feed nest predators such as raccoons or gulls. Dispose of your garbage properly.
- Use Eco-friendly products – at home, at the cottage and on the lake.
- Spread the Word – Educate your friends, family, and fellow cottagers about loon and lake conservation. Pamphlets and signs can be obtained from many organizations including the Canadian Lakes Loon Survey. To learn more about educational materials and conservation signage available through the CLLS contact the Aquatic Surveys Volunteer and Data Coordinator by email at [aqsurvey@birdscanada.org](mailto:aqsurvey@birdscanada.org) or by phone at 1-888-448-2473 ext. 124.
- Be Involved – Consider Becoming a **CLLS Volunteer**: The Canadian Lakes Loon Survey is a great opportunity to help support loon conservation while enjoying your favourite lake. You can help loons by becoming a member of Bird Studies Canada and participating in the Canadian Lakes Loon Survey. With your \$35.00 membership you receive 4 issues of the magazine *BirdWatch Canada* annually and the opportunity to participate in three programs (The Canadian Lakes Loon Survey; The Christmas Bird Count, and Project FeederWatch). Your membership will cover the costs of the loon survey that receives all its core program funding from Bird Studies Canada fees and donations.

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