

## Common Loon

(*Gavia immer*)

**State Status:** Sensitive, 2000

**Federal Status:** None

**Recovery Plans:** None

**State Management Plan:** None

Loons are large birds with 50-55 inch wingspans, and they weigh 8 1/2 - 19 lbs. The striking black and white breeding plumage gives way in winter to a duller gray above, white below garb. They are best known for their vocalizations: they hoot, wail, yodel, and give a tremolo call. Common loons breed across Alaska, Canada, and the northern coterminous states. They winter along both coasts, from the Aleutians to Mexico, and from Newfoundland to the Gulf coast.



Figure 1. Adult male common loon and chick on North Twin Lake, Ferry County, Washington (photo by Dan Poleschook).

The common loon population in North America is relatively healthy and robust, with a total estimated breeding population of >200,000 territorial pairs (Evers 2007); most of these birds breed in vast lake-rich areas in Canada where they are relatively isolated from shoreline development and recreational activities. The southern limit of common loon breeding has retreated northward since the 19<sup>th</sup> century due to human factors. In the northwestern U.S., common loons once nested as far south as the Mount Shasta area, but are now extirpated from California, Oregon, and Idaho (Evers 2007, Poleschook and Gumm 2009).

Historical data for the state are limited, but loons were probably once a more common nester, particularly in western Washington. Today, small numbers of loons nest on lakes and reservoirs in Ferry, Okanogan, Chelan and Douglas counties in eastern Washington, and King and Whatcom counties in western Washington. There are also unconfirmed reports of nesting in Benton, Clallam, Grant, Grays Harbor, and Jefferson counties. Non-breeding loons have been reported during summers at a total of 140 lakes, reservoirs, and rivers in the state. Post-breeding migration probably begins in late August and continues through November; subadults often remain in the marine environment all summer. Common loons winter on Washington's coastal and inland marine waters, as well as the Columbia River and Lake Chelan. Puget Sound and the Strait of Juan de Fuca hosts 3,000-4,000 wintering birds; most of these nest in Canada and Alaska. Washington may be the only known state where common loons overwinter on both saltwater and fresh water.

**Diet.** Loons feed mainly on fish, typically of a size between 0.35 to 2.45 ounces. In fresh water, these include shad, alewife, trout, smelt, mudminnows, dace, chubs, shiners, suckers, sticklebacks, bluegills, crappie, yellow perch, and walleye. Saltwater prey include eels, menhaden, herring, sprat, haddock, whiting, pipefish, shiner perch, sandlance, gobies, blennies, Irish lords, gurnards, sculpins, flounder, sole, and skates. They also occasionally take amphibians, crayfish, small crabs, and dragonflies; and in eastern Washington, adults have been observed feeding dragonfly nymphs to chicks.

**Habitat.** Common loons usually nest on lakes surrounded by forest that have deep inlets and bays. Lakes where loons nest in Washington range in size from 14-7,800 acres. Use of a lake is dependent on an ample supply of small fish for prey and isolation from human disturbance, such as wave action created from powerboats or personal watercraft. Loons often forage in shallow clear water. They primarily use

the top 15 ft of the water column, but have been recorded diving to 180 feet in clear water to obtain food. During migration, loons aggregate on rivers, reservoirs, and lakes with abundant food. In autumn, most loons move to coastal marine locations; and they winter on shallow, sheltered marine waters.

The development of lakeshores has probably eliminated nesting in many parts of the state; while reservoir development, particularly for municipal water supplies where public access is restricted, has added nesting habitat that did not exist historically. However, rapid fluctuations of water levels in reservoirs can result in nest failures due to flooding. The introduction of fish to many lakes has provided additional prey, but the use of rotenone to remove undesirable fish before stocking game fish temporarily depresses fish and invertebrate prey.

Natural sources of mortality include predation, especially of young; injuries resulting from territorial fighting; botulism; and parasitism. Predators include bald eagles, river otters, coyotes, weasels, raccoons, skunks, and mink. Human disturbance can facilitate predation on eggs and chicks. Human-related mortality factors include lead poisoning from ingestion of lead fishing sinkers, entanglement in fishing lines, injuries from fishhooks, shooting, drowning in fish nets and traps, contamination by spilled oil, poisoning by mercury or lead, and collisions with boats, powerlines and vehicles. Pollution, such as oil spills, may be the greatest threat to wintering loons where they concentrate in shallow marine waters.

**Breeding population.** Common Loons are long-lived and do not nest until at least 5 years of age, and more typically not until age 7 or later. Once a nesting territory is established, loons return to the same site each year. In recent years, <15 pairs of loons have nested at lakes in Washington. Volunteers and WDFW staff generally monitor 14 sites in western Washington and 16 in eastern Washington to determine common loon nesting status. In 2012, a minimum of 13 nests were initiated, producing at least 7 chicks surviving to fledging.

Productivity data for 2004-2009 for 13 sites had ten sites that averaged 0.78 fledglings/territory/year and three that averaged 0.33 fledglings/territory/year (Poleschook and Gumm, unpubl. data). Increases in productivity since the 1990s (Figure 2) have resulted from conservation work, primarily done by dedicated volunteers. These activities have included providing nesting platforms, erecting predator

**WASHINGTON COMMON LOON PRODUCTIVITY, 1996-2012**

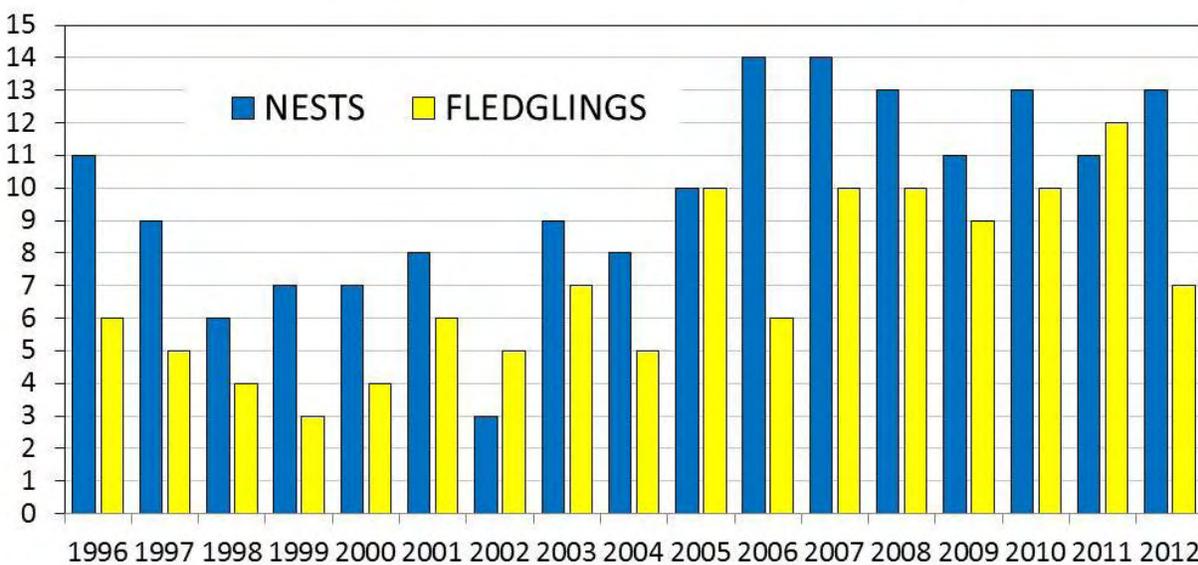


Figure 2. Number of known active loon nests and fledglings produced in Washington, 1996-2012.

guards over nests to deter avian predators (e.g. bald eagles), capture of loons to remove tangled fishing line, erecting signs and buoys to discourage disturbance by boats, purchasing fingerlings for some lakes with low food resources, monitoring, documenting mortalities, and assisting with studies of mercury contamination (Poleschook and Gumm 2001, 2004, 2006, 2007, 2009).

In June 2011, the Loon Lake Loon Association, in partnership with the USFS Colville Ranger District, donated a BioHaven floating platform to WDFW, which was installed on Blue Lake on the Sinlahekin Wildlife Area. The Loon Lake Loon Association, the Pacific Biodiversity Research Institute in Gorham, Maine, and WDFW, have banded common loons in Washington since 1995.



Figure 3. A 20-month old common loon on the Columbia River near Pateros, Washington, January 2010; this bird was banded as a chick on Bonaparte Lake, Okanogan County (Photo by Daniel Poleschook, Jr. and Virginia Gumm Poleschook).

In 2012, loons nested for the first time on Crawfish Lake in Okanogan County, and fledged 1 chick. Due to limited natural nesting opportunities on this lake, a floating platform was installed in the mid-1990s and a loon pair used the platform this year. Common loons have been observed

on the lake for many years but this is the first documented nesting on this lake. Loons attempted to nest on Beaver Lake for the first time, but the attempt failed. Daniel Poleschook, Biodiversity Research Institute, Virginia Gumm, and WDFW staff banded loons at North Twin, Ferry, Swan, Pierre, and Lost lakes; this included 1 adult male, 2 adult females, and 5 chicks; three of the adult birds also had geolocators attached. Geolocators record time and daylight, and when recovered at a future date and uploaded to a computer, it can provide data on migration and wintering location.

Also in 2012, for the first time since banding began in 1995, a bird banded as a chick, returned and nested on North Twin Lake, and fledged one chick. The bird was banded on Bonaparte Lake in 2005.

**Columbia River wintering.** In 2010, a winter survey of loons on the Columbia River was conducted by the BioDiversity Research Institute, U. S. Army Corps of Engineers, and WDFW to assess the extent of wintering by common loons (Poleschook et al. 2010). A total of 114 loons were observed along 101 river miles (Table 1). Four common loons observed on Lake Pateros during recent winters had been banded on breeding lakes in northeastern Washington.

Table 1. Winter survey of common loons on the Columbia River in central-northeast Washington, 2010 (Poleschook et al. 2010).

| Date         | River segment    | Miles surveyed | Number of birds | Loons/linear mile  |
|--------------|------------------|----------------|-----------------|--------------------|
| 28 Jan       | Rufus Woods Lake | 50             | 4               | 0.1                |
| 29 Jan       | Lake Pateros     | 28             | 79              | 2.8                |
| 30 Jan       | Below Wells Dam  | 2              | 23              | 11.5               |
| 6 Mar        | Lake Roosevelt   | 21             | 8               | 0.4                |
| <b>Total</b> |                  | <b>101</b>     | <b>114</b>      | <b>1.1 average</b> |

**Inner marine waters wintering.** WDFW conducted annual aerial surveys of common loons and other marine waterbirds in Washington’s inner marine waters from 1996 to 2008. These surveys suggested that

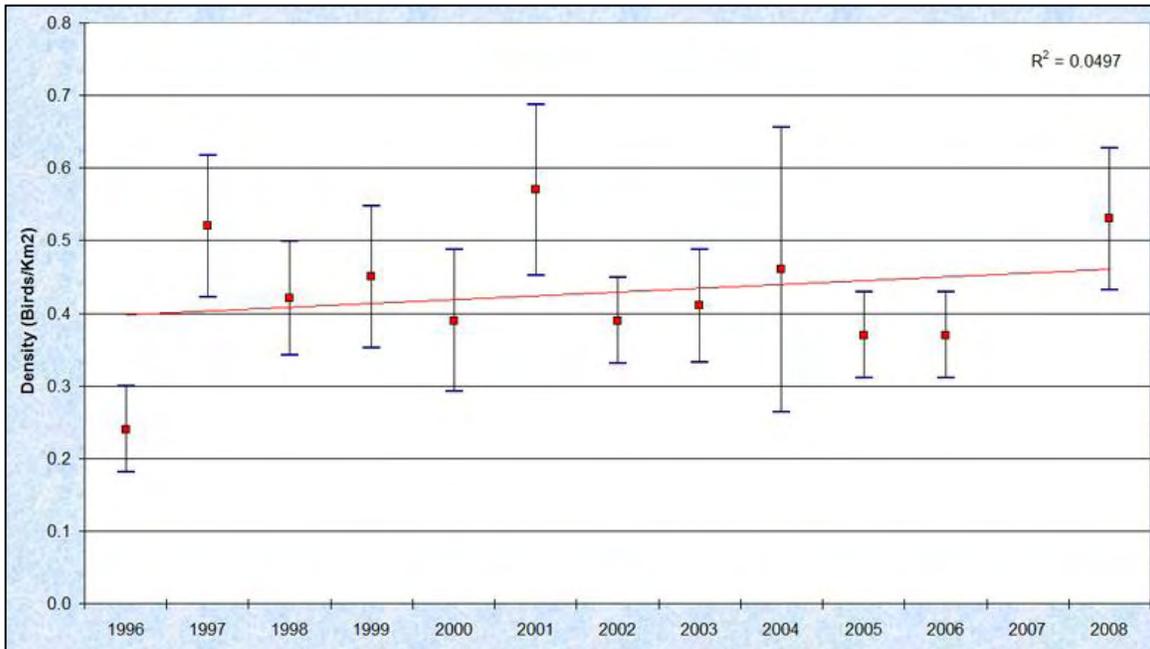


Figure 4. Density of common loons wintering on inner marine waters of Washington, 1996-2008 (WDFW data, available at: <http://wdfw.wa.gov/mapping/psamp/>).

wintering common loon numbers are generally stable or perhaps slightly increasing in this area (Figure 4).

**Lead poisoning.** Throughout the range of common loons, where loons breed on lakes with a substantial recreational fishery, ingestion of lead fishing tackle is a leading cause of death (Pokras and Chafel 1992, Sidor et al. 2003, Evers 2007). The ingestion of a single lead sinker is sufficient to cause death by poisoning. Lead toxicosis is a leading cause of known common loon mortalities in Washington (Figure 5).

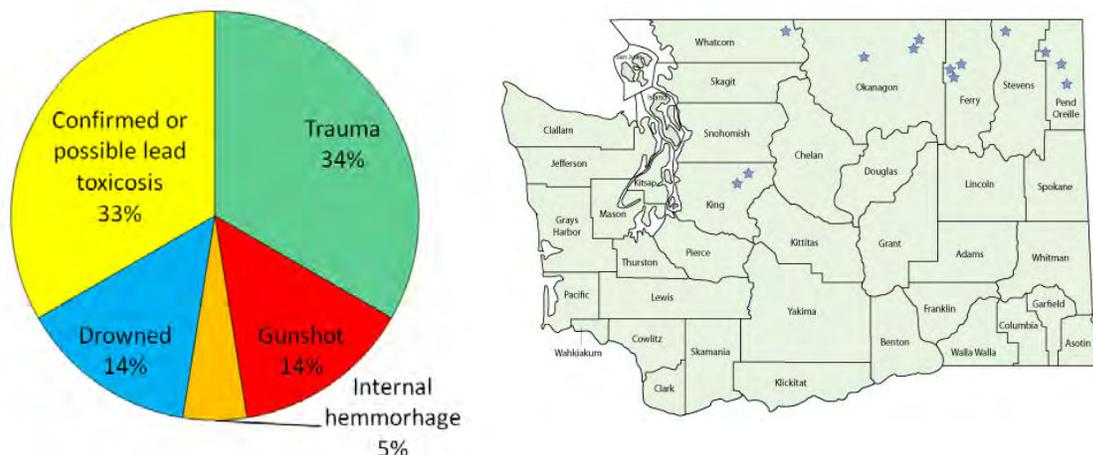


Figure 5. Thirteen lakes with lead fishing tackle restrictions to protect breeding loons (right); causes of death for 21 common loons in Washington, 1999-2010 (left; data sources included: Washington Animal Disease Diagnostic Laboratory; radiographs taken at the Veterinary Teaching Hospital at Washington State University or at private veterinary clinics; necropsy reports from the Biodiversity Research Institute; and behavioral observations by Biodiversity Research Institute staff. Likelihood of lead toxicosis based on liver Pb (lead) level of >6ppm and detection of Pb in GI (gastrointestinal) tract via radiology or necropsy, or documented clinical signs or pathology consistent with Pb toxicosis).

In May 2011, new rules went into effect at 13 lakes where loons nested. The rules prohibit the use of lead fishing tackle (weights and jigs that measure 1½ inches or less) on those lakes. The use of non-lead fishing tackle is intended to improve common loon survival in Washington on the lakes with known nesting activity (<http://wdfw.wa.gov/conservation/loons/>).

**Partners and cooperators:** Daniel Poleschook and Virginia Gumm, Loon Lake Loon Association, WSU School of Veterinary Sciences, Biodiversity Research Institute, U.S. Fish and Wildlife Service, Hancock Timber Resource Group, Seattle Public Utilities, Tacoma Water, Bonneville Power Administration, U.S. Department of Energy, U.S. Bureau of Reclamation, Colville National Forest, and U.S. Forest Service.

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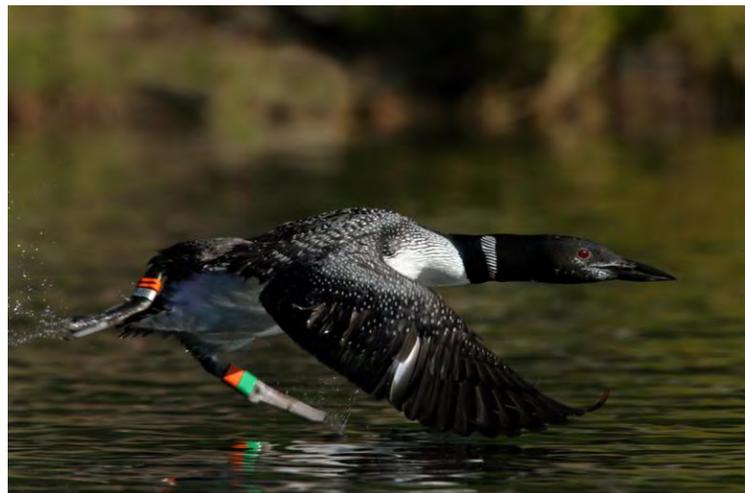


Figure 6. Female common loon banded in Washington  
(photo by Daniel Poleschook Jr.).