



Friends of
Kootenay Lake

Osprey Report Summary



OSPREY

(*Pandion heliaetus*)

- Large raptor
- Global distribution
- Most populations considered secure
- Breeds in BC April-Oct
- Nests near water
- Eats fish almost exclusively

BACKGROUND

Human impacts on freshwater ecosystems are increasing worldwide, with implications for entire food webs. Declines in fish-eating raptor populations can serve as early warning signs of a freshwater ecosystem in peril.

STUDY SITE

Kootenay Lake, located in southeastern British Columbia, Canada, is impacted by hydroelectric power generation and dams and, increasingly, shoreline development and lake recreation. These impacts can reduce the quality and availability of the riparian, lakeshore, and aquatic habitats that osprey depend on.

APPROACH

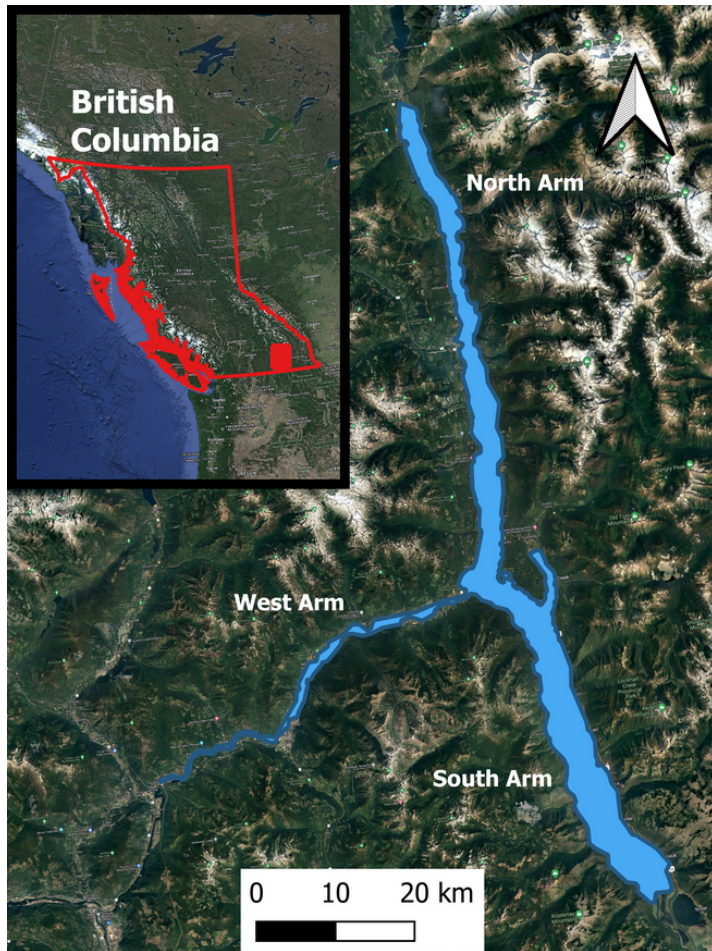
The Friends of Kootenay Lake Stewardship Society, partners, and citizen scientists tracked long-term changes in population sizes of breeding osprey by conducting nest surveys to better understand the cumulative impacts of stressors on the lake. In this report, we analyzed:

- 25 years of osprey nest observations collected on the West Arm of Kootenay Lake (1997 to 2021)
- six years of osprey nest observations from the North and South Arms (main lake, 2016 to 2021).

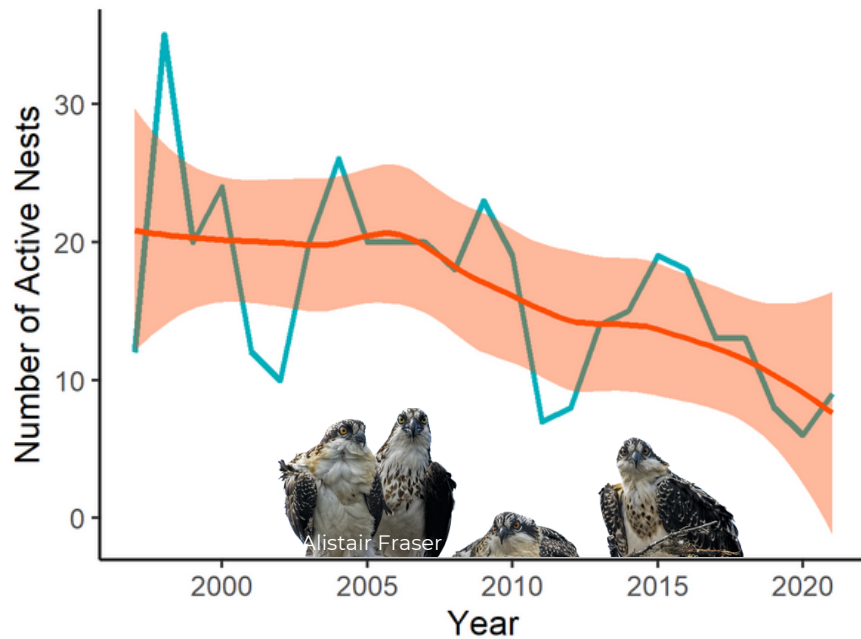


RESULTS

We detected a long-term decline in the number of active osprey nests on the West Arm. Historically, the West Arm supported an average of 39 active nests (1987–1988). We observed an average of 20 active nests from 1997 to 2009 and 12 active nests from 2010 to 2021. However, nest success and productivity remained relatively constant in the West Arm from 1997 to 2021. Preliminary findings suggest numbers are stable on the main lake, but more data is needed to confirm this.



The apparent West Arm decline may relate to changes in nest site availability, fish abundance, or competition (e.g., with Canada Goose or Bald Eagle). Further study is required to identify the causes of the decline.



Long-term decline in the observed number of active osprey nests on the West Arm of Kootenay Lake, 1997–2021. The blue line is the raw data. The orange line/band is the trendline and the uncertainty around the trend.

HOW YOU CAN HELP

Follow legal requirements and best management practices for living, recreating, and developing near raptor nests (<https://tinyurl.com/BC-guidelines>) and volunteer to monitor ospreys by emailing the address below.

MORE INFORMATION

Find more details about osprey trends on Kootenay Lake in our full-length osprey monitoring report (<https://tinyurl.com/osprey-report>).

West Arm data collected by Janice Arndt, Elaine Moore, Emilee Fanjoy, and volunteers, 1997–2021. Main lake data collected by Friends of Kootenay Lake and volunteers 2016–2021. Friends of Kootenay Lake's contributions funded by:



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