

**Alberta Conservation Association  
2024/25 Project Summary Report**

**Project Name:** Lower Profile Game Species Fisheries

**Fisheries Program Manager:** Peter Aku

**Project Leader:** Nikita Lebedynski

**Primary ACA Staff on Project:** Heather Frechette, Nikita Lebedynski, Ariel Schlereth, and Clayton Temple

**Partnerships**

Government of Alberta

**Key Findings**

- Over four events we captured 551 burbot at Lac Santé for an average of 0.75 fish/trap/24-hour period.
- We tagged 530 individual burbot at Lac Santé of which 23 were recaptured twice. Estimated population size was 4,661.
- Over four events we captured 25 burbot at Lac Ste. Anne with an average of 0.04 fish/trap/24-hour period.
- We tagged 25 individual burbot at Lac Ste. Anne. We were unable to estimate the population size due to no recaptures.

**Details**

In Alberta burbot have typically been undervalued as a sport fish and before 2017 the flesh could legally be wasted. Unlike most sport fish that are protected during their spawning season, burbot angling is particularly popular during the winter when they congregate on spawning grounds. Alberta Conservation Association (ACA) has been performing mark-recapture surveys on burbot to monitor populations and aid in their management. In 2024 we completed surveys at Lac Santé and Lac Ste. Anne.

We conducted four mark-recapture sampling events each at Lac Santé and Lac Ste. Anne between May and October 2024. We used baited cod traps set for 24-hour periods and distributed throughout the lake. All captured fish were recorded along with their length (mm) and weight (g). Upon their first capture, each burbot was implanted with a passive integrated transponder (PIT) tag with a unique code under the belly skin and given a fin clip unique to each sampling event. On subsequent capture occasions, the PIT tag number was recorded. Any mortalities were sampled for sex and maturity, and otoliths were collected for aging.

We set cod traps for 24-hour periods, over four events, totalling 732 sets at Lac Santé, capturing 551 burbot for an average of 0.75 fish/trap/24-hour period. We also captured 64 white suckers. We tagged 530 individual burbot of which 23 were caught twice; no burbot were caught more than twice. We estimated the population to be 4,661 burbot (95% CI = 3,210 – 6,898). Burbot ranged in length from 45 to 813 mm and in weight from 2 to 4,035 g with averages of 503 mm and 951 g respectively. Of the 31 fish analyzed, ages ranged from age 1 to 16 years.

We set cod traps for 24-hour periods, over four events, totalling 681 sets at Lac Ste. Anne, capturing 25 burbot for an average of 0.04 fish/trap/24-hour period. We also caught four northern pike and one walleye. All burbot were only captured once; without recaptures we were unable to derive a population estimate. Captured burbot ranged in length from 43 to 780 mm and in weight from 2 to 3,705 g with averages of 552 mm and 2001 g respectively. We did not collect any samples for aging due to low catch rates.

An interim project report detailing activities from 2022 to 2024 is available on ACA's website. In summer 2025, we will conduct two more mark-recapture field programs.

## Photos



Photo 1. Otolith extraction from a burbot at Lac Santé, Alberta. Photo: Charmaine Brunes



Photo 2. Cod trap with a burbot being pulled out of the water at Lac Santé, Alberta. Photo: Charmaine Brunes



Photo 3. ACA staff members Ariel Schlereth and Heather Frechette processing a captured burbot at Lac Ste. Anne, Alberta. Photo: Nikita Lebedynski