

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

Project Name: Lake Aeration

Fisheries Program Manager: Peter Aku

Project Leaders: Andrew Clough, Troy Furukawa, Brad Hurkett, and Dave Jackson

Primary ACA Staff on Project: Justine Anklam, Meagan Butler, Taylor Dickson, Kevin Fitzsimmons, Marco Fontana, John Hallett, Sabrina Hotton, Tyler Johns, Mike Jokinen, Chad Judd, Kris Kendell, Nikita Lebedynski, Doug Manzer, Lindsay Marley, Kade McCormick, Garret McKen, Stephen Nadworny, Terri Perron, Adam Peters, Sue Peters, Amanda Rezansoff, Mike Rodtka, Ariel Schlereth, Roy Schmelzeisen, Lenore Seward, Scott Seward, and Clayton Temple.

Partnerships

Alberta Wildlife Federation

Aquality Environmental Consulting Ltd.

Clear Hills County

County of Barrhead

County of Northern Lights

Edmonton Trout Fishing Club

Government of Alberta

Mercer Peace River Pulp Ltd.

Mountain View County

Municipal District of Bonnyville

Municipal District of Greenview No. 16

Northern Lights Fly Fishers – Trout

Unlimited Canada

Northern Sunrise County

Parkland County

Saddle Hills County

Thorhild County

West Fraser – Edson Forest Products

Key Findings

- We aerated 22 waterbodies across the province, all of which successfully overwintered stocked trout without any reported fish kills.
- Received increased partnership funding from Mercer Peace River Pulp Ltd. to support aeration operations at Sulphur Lake from 2024 to 2028.

Details

Alberta Conservation Association (ACA) uses lake aeration as a fisheries management technique to provide Albertans with diverse recreational angling opportunities in areas of the province where such fishing opportunities would be otherwise limited. Aerated waterbodies are typically shallow and eutrophic, experience prolonged ice cover, and are susceptible to summer and winter fish kills. Our primary objective is to promote year-round survival of stocked trout in aerated lakes by maintaining dissolved oxygen (DO) concentrations above 3 mg/L. We use three aeration techniques: mechanical surface aeration, diffuser aeration, and fall destratification aeration. During aeration, we monitor water quality in each waterbody by collecting monthly DO and temperature profiles at 1-metre intervals, at the same sampling station at the deepest point. During winter, we visit each site monthly to monitor equipment functionality and record compliance with public safety liability requirements. In 2024/25, we aerated 22 waterbodies across the province, all of which successfully overwintered stocked trout without any reported fish kills. We also collected and mapped bathymetric data for Kerbes Pond, Little Bear Lake, and Peanut Lake, which will be included on new lake aeration site signs for each location.

Photos



Photo 1. Surface aerators running at Figure Eight Lake. Photo: Dave Jackson



Photo 2. ACA staff members installing safety fence at Hasse Lake. Photo: Ariel Schlereth



Photo 3. ACA staff member collecting bathymetric data at Little Bear Lake. Photo: Ariel Schlereth