

Cold Lake

Fisheries Management Zone NB1



Background

Cold Lake is a large (37,300 hectares), cool, and relatively unproductive lake with a mean depth of 50 m and a maximum depth of 99 m. Approximately 70% of the surface area falls within Alberta, with the remainder in Saskatchewan. The lake supports populations of over 20 species of fish, including lake trout, walleye, Northern pike, burbot, and lake whitefish.

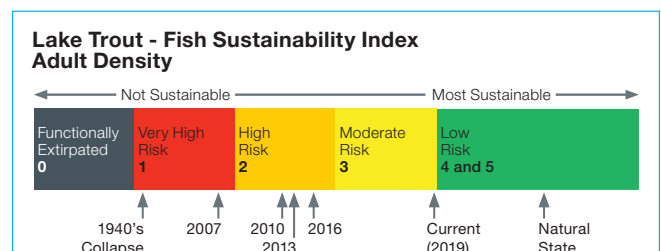
- The lake trout population was virtually collapsed by the late 1940's and catches remained low for decades.
- In order to conserve and recover the collapsed lake trout population, an Interprovincial Allocation Agreement (annual harvest agreement) between Alberta and Saskatchewan was implemented in 1987. Since then, increasingly restrictive harvest limits for lake trout were implemented in order to manage harvest within the allocation agreement. Currently, lake trout harvest is still managed under that agreement with Saskatchewan.
- Monitoring over the last 15 years has shown that the lake trout population has been steadily increasing, to the point where it is at a lower level of risk on the Fish Sustainability Index.
- 2012 winter/summer angler surveys suggest that total angling effort was approximately 130,000 angling hours, with the summer fishery accounting for over 75% of the effort. Summer angling effort had more than tripled since the 1990's. While fishing effort has not been formally assessed since 2012, local expert anglers have reported a large increase in fishing effort since 2012.
- Most lake trout in Cold Lake are mature at approximately 60 cm in size.

Current Sportfishing Regulations

- Open May 15 to March 31
- Lake trout – one fish over 75 cm; zero possession limit (catch and release) from September 15 to November 15
- Walleye – three fish over 50 cm
- Northern pike – one fish over 63 cm
- Yellow perch – 15 fish, no size limit
- Burbot – 10 fish, any size
- Lake whitefish – 10 fish, any size

Fisheries Management Considerations

Lake trout populations are assessed through Summer Profundal Index Netting (SPIN) surveys, a standardized technique used by biologists to measure fish populations. SPIN surveys were conducted in 2007, 2010, 2013, 2016, and 2019 in Cold Lake. The 2019 SPIN survey indicated that the abundance of lake trout in Cold Lake was between the Moderate Risk and Low Risk categories on the draft Fish Sustainability Index (FSI) for lake trout. The current status allows us to explore potential alternative recreational angling regulations.



Disclaimer: This FSI chart is in draft form and the risk categories have not been finalized. Placement of arrows are approximate within some categories.

Provide your Feedback

The options below were developed by a Cold Lake area stakeholder working group ([Lake Trout Working Group](#)), in collaboration with fisheries biologists. An [online survey](#) will be open from January 19 until February 9 at noon to gather public feedback on the options developed by the working group. Please note the zero possession limit (catch and release) from September 15 to November 15 will not change with these proposed regulations.

Option 1: Maintain the current regulation – harvest of one lake trout greater than 75 cm

- Fewer fish available to be harvested compared to the other two options because large lake trout (greater than 75 cm) are relatively rare in Cold Lake.
- Low risk to sustainability—fish are protected from recreational harvest for at least 10 years after reaching maturity.
- Most likely to result in similar or higher densities of fish up to 75 cm in size.

Option 2: Slot size, harvest of one lake trout between 70 and 75 cm

- More fish available to be harvested than the current regulation.
- Low risk to sustainability – fish are protected from recreational harvest for approximately seven years after maturing.
- Some fish may grow larger than 75 cm if they escape harvest while they are within the slot size. Increased angling effort could diminish this protection.

Option 3: Slot size, harvest of one lake trout between 65 and 70 cm

- Highest number of fish available for harvest of the three options.
- Low to moderate risk to sustainability—fish are protected from recreational harvest for approximately two to four years after maturing.
- Some fish may grow larger than 70 cm if they escape harvest while they are within the slot size. Increased angling effort could diminish this protection.

Based on the recommendations of the Lake Trout Working Group, a bait ban is also being considered for Cold Lake. Research has shown that baited lures can significantly increase hooking mortality compared to non-baited lures, especially when used with “still fishing” methods such as tip-ups. Please provide your feedback on these proposed changes through the 2023-2024 Sportfishing Engagement survey from January 19 until February 9 at noon.

Implementation

Cold Lake is an interprovincial waterbody. Alberta and Saskatchewan are committed to consistent sportfishing regulations on both the Alberta and Saskatchewan portions of the lake. We anticipate that the Government of Saskatchewan will also engage with the public on sportfishing regulations for lake trout in Cold Lake this summer. Potential changes in sportfishing regulations for lake trout in Cold Lake would likely be implemented in 2024.

