

Lesser Slave Lake Sportfishing Regulations for 2022-23

Fisheries Management Zone Northern Boreal 2

Background

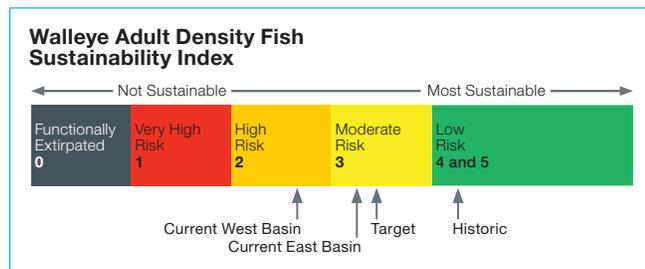
Located 256 km north of Edmonton, Lesser Slave Lake is Alberta's largest managed fishery, and supports a diversity of indigenous, recreational and tournament fishing opportunities. Lesser Slave Lake has experienced the consequences of overfishing, with several population collapses in the last 100 years, including the extirpation of the lake trout population.

- Prior to April 1, 2022, Lesser Slave Lake had been managed with a recreational fisheries management objective (RFMO) of sustainable harvest for walleye to provide anglers with harvest opportunities while maintaining a sustainable and resilient fish population. Northern pike had previously been managed under a liberal harvest objective, which provides anglers the opportunity to harvest with fewer restrictions.
- The fish population has been assessed in 2010, 2014 and 2020 to evaluate the performance of the regulations and the response in fish populations.
- Angler effort has been monitored since the beginning of walleye recovery in the mid 1980's. Angler surveys showed a significant increase in angling effort from 1986 to 2005, although given the size of this lake, angling effort is still considered relatively low. The results of angler surveys completed in 2005-2007 and 2014, showed the annual range of angler trips varied between 80,000 to 120,000 anglers/year in the open water season.

Fisheries Management Considerations

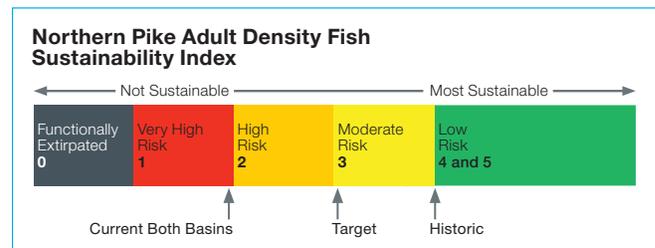
Walleye and Northern pike are assessed through fall index netting (FIN), a standardized technique used by biologists, to measure fish populations. In 2020 a FIN survey was conducted at Lesser Slave Lake. The report can be found [here](#).

Walleye



- The 2020 population survey indicated that the abundance of walleye in the West basin is now consistently lower than abundance in the East basin, and in the high sustainability risk category on the Fish Sustainability Index (FSI). Comparatively, the East basin is at moderate risk, and is reflective of the desired state of the whole lake.
- The overall walleye population has not changed significantly since the sportfishing regulations were established in 2008, as the total population is similar to surveys in 2010 and 2014. Management action is necessary to increase overall abundance to meet the FSI target for sustainable harvest in both basins.

Northern Pike



- The Northern pike population is at very high risk on the Fish Sustainability Index (FSI) in both the East and West basin. As a result, strong conservation-based measures are necessary for the growth and long-term sustainability of the Northern pike population and fishery.
- There has been no improvement in the Northern pike population from 2005 to 2020.

2022-23 Sportfishing Regulation Engagement Results

[Public engagement](#) was conducted between January 10 to February 7, 2022 for Albertans to provide feedback to inform changes to the 2022-2023 sportfishing regulations. The detailed survey results are reported in the [2022-23 sportfishing regulation engagement: what we heard report](#). Lesser Slave Lake had two items included in this engagement, a consultation item where feedback was collected on walleye sportfishing regulations, and a notification item for Northern pike, where the regulations are changing due to a conservation concern.

Consultation: Walleye

The options provided are management options that can be successful in managing a sustainable harvest fisheries management objective in a low effort fishery. Although Lesser Slave Lake supports significant angling effort, it is distributed over a very large area, resulting in the overall angling effort being relative low. The public provided feedback on two key areas around walleye sportfishing regulations:

Walleye Size:

- Fish over 50 cm
- Fish between 45-50 cm
- Fish between 50-55 cm

Possession Limit:

- One fish in open water and winter seasons (May 15 – March 31)
- One fish in open water (March 15 to October 31) and two fish in winter season (November 1 to March 31).

The resulting sportfishing regulation is harvest of one walleye, between 45-50 cm from May 15 to March 31.

This new sportfishing regulation also reflects a change from a recreational fisheries management objective to an Experimental Harvest Fisheries Management Objective, which is reflective of Alberta's current evaluation of harvest slot limits.

How will this regulation work?

- Harvest is focused on medium size fish that are in the first few years of maturity. Low effort and harvest will allow fish to grow in to the protected size range (over 50cm), providing the opportunity to catch larger fish.
- The west basin walleye population would improve slowly, with a moderate risk of overharvest.

- A one fish retention limit reduces the handling and mortality in the winter season, providing a small contribution to the goal of improving abundance of walleye, especially in the west basin.
- Monitoring of the population will occur to support the evaluation of this regulation change.

Notification: Northern Pike

Restoration and recovery of Northern pike from low abundances to support angling and harvest opportunities will require a long term commitment, and may take more than 10 years on Lesser Slave Lake.

The Sportfishing Regulation is now a zero possession limit (catch and release) to pursue a [Sustainable Harvest Objective](#) or [Quality Harvest Objective](#) to support recovery of population.

- Provides fishing opportunity, but suspends harvest opportunity.
- When populations meet the sustainable harvest objective thresholds, engagement would occur on the available harvest regulation options.

Current Sportfishing Regulations

Portion west of a line drawn from Shaw Point to the point of land in 26-74-14-W5 known as Little Grassy Point, including Buffalo Bay and the Grouard Channel, and their tributaries (except East Prairie River, South Heart River and Traverse Creek)

- Open June 15 to March 1
- One walleye, 45-50 cm
- Zero Northern pike (catch and release)
- 15 yellow perch
- 10 lake whitefish
- 10 burbot

Remainder of the lake and outlet (Lesser Slave River) downstream to the weir below Hwy. 88

- Open May 15 to March 31
- One walleye, 45-50 cm
- Zero Northern pike (catch and release)
- 15 yellow perch
- 10 lake whitefish
- 10 burbot