

# Smoke Lake

## Recreational Fisheries Management Objectives

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<b>Waterbody ID:</b> 5833	<b>Surface Area:</b> 938ha	<b>Hydrologic Unit Code Name (HUC_8):</b> Upper Little Smoky River	<b>Hydrologic Unit Code (HUC_8):</b> 18020701
<b>Sport Fish Species:</b> Burbot, Lake Whitefish, Northern Pike, Walleye, Yellow Perch			
<b>Indigenous Fishery:</b> Minimum mesh size=152mm, Closed: April 01-May 14			
<b>Environment and Parks Region:</b> Upper Peace Region	<b>Fisheries Management Zone:</b> East Slopes 4 (ES4)	<b>Fisheries Management Office:</b> Grande Prairie	

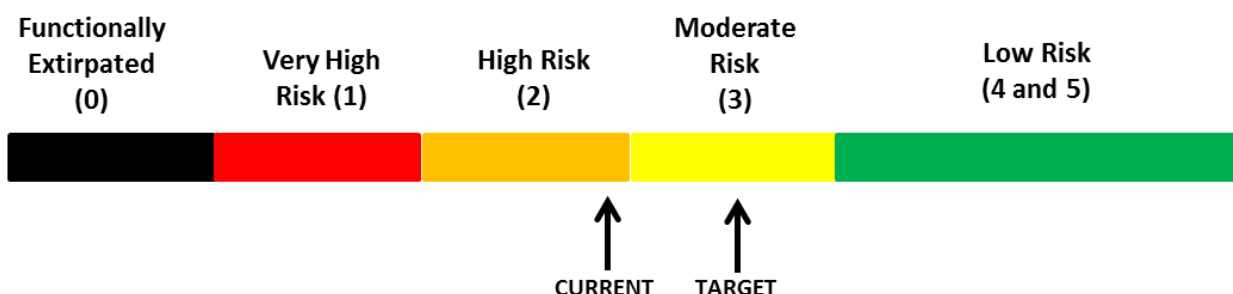
## Background

Smoke Lake is located approximately 8 km west of Fox Creek and is one of a few native walleye fisheries in northwestern Alberta. The eutrophic lake has a surface area of 959 ha with an average depth of 5.1 m. Smoke Lake once supported a commercial fishery predominantly composed of lake whitefish. While commercial fishing has been closed since 2014, the lake continues to support a domestic gillnet fishery focused on lake whitefish. Smoke Lake is a popular fishing destination with recreational anglers, as walleye and northern pike can be caught within close proximity to Fox Creek and Highway 43. A Provincial Recreation Area is operated by the Town of Fox Creek on the east side of the lake allowing for boat access and overnight camping. Walleye sportfishing regulations on Smoke Lake have been managed through a Special Harvest licensing system since 2012, which allocates a certain number of walleye within a size category based on the estimated number in the population. Alternative options for walleye harvest are limited due to fishing pressure, and walleye tags were implemented to provide the most opportunity for sustainable walleye harvest, however recent surveys indicate a declining trend in adult walleye, even with the SHL system in place. Northern pike adult density continues to be low. Additional game fish species present in Smoke Lake include tullibee (cisco), yellow perch, and burbot

## Section 1. Fish Population Status

### Walleye – Adult Abundance

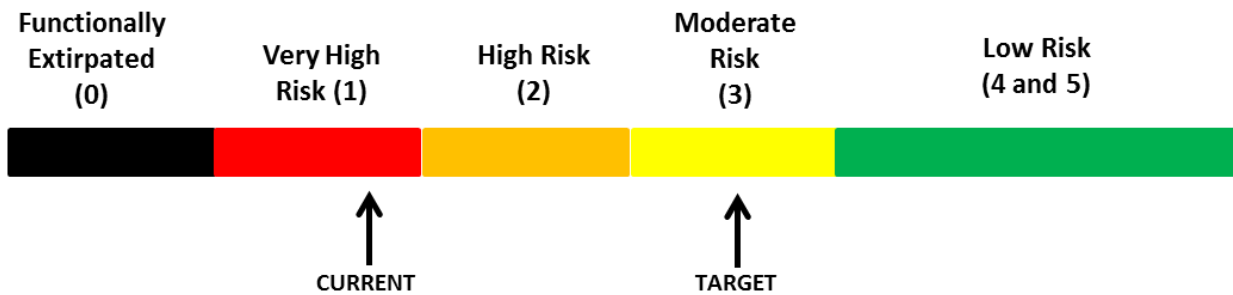
#### Fish Sustainability Index Adult Density Score



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## Northern Pike – Adult Abundance

### Fish Sustainability Index Adult Density Score



Lake Whitefish/Cisco – Undetermined  
Yellow Perch – Undetermined  
Burbot – Undetermined

## Section 2. Recreational Fishery Management Objectives and Management Summary

The **focal species** for recreational management is walleye. The secondary species managed for recreational objectives are northern pike, yellow perch, lake whitefish and burbot. The **Overharvest Protection Need** is assessed as **High**.

**Walleye** – The recreational management objective for walleye is a **Sustainable Harvest** fishery. The corresponding Fish Sustainability Index score for the current adult density of walleye was assessed at **High Risk** to sustainability. The walleye population is currently not meeting the status and criteria for the objective of sustainable harvest fishery. The required management action is **to promote recovery through the use of catch and release** until such time the population increases into the moderate risk category (yellow) where alternative options can be explored (e.g. returning to special harvest licenses). This is a change from the current regulation of harvest through SHL.

**Northern Pike** – The recreational management objective for northern pike is a **Sustainable Harvest** fishery. The corresponding FSI score for the current adult density of northern pike was assessed at **Very High Risk** to sustainability (Figure 1). The northern pike population is currently not meeting the status and criteria for the objective of sustainable harvest fishery. The required management action is **to promote recovery through the use of catch and release** until such time the population increases into the moderate risk (yellow) category where alternative options can be explored (e.g. special harvest licenses, open harvest). This is a change from the current regulation of 3 pike over 63cm.

**Yellow Perch** – The recreational fishery management objective being applied is the provincial default (**Sustainable Harvest**). The status of the Yellow Perch population has not been assessed. The current management action is a regulation of 15 Yellow Perch, any size.

**Lake Whitefish** – The recreational management objective for lake whitefish is a **Sustainable Harvest** fishery. Although there is no FSI completed for lake whitefish the current adult density of lake whitefish is estimated to be at **Very High Risk** to sustainability as a result of a large drop in catch rates between 2003 and 2016 (figure 1). The lake whitefish population is currently not meeting the status and criteria for the objective of sustainable harvest fishery. The required management action is **to promote recovery through the use of catch and release** until such time the population increases into the moderate risk category (yellow) where alternative options can be explored. This is a change from the current regulation of 10 lake whitefish of any size.

**Burbot** – The recreational fishery management objective being applied is the provincial default (**Sustainable Harvest**). The status of the Burbot population has not been assessed. The current management action is a regulation of 10 Burbot, any size.

### Management Summary

Management Priority	Species	Overharvest Protection Need	Management Action	Sport Fishing Harvest Regulation
1	Walleye	High	Recovery-Sustainable Harvest	<ul style="list-style-type: none"> <li>• SHL (2017-18)</li> <li>• <b>Catch and Release (implementation April 1<sup>st</sup> of 2018-19)</b></li> </ul>
2	Northern Pike	High	Recovery-Sustainable Harvest	<ul style="list-style-type: none"> <li>• 3 &gt; 63cm (2017-18)</li> <li>• <b>Catch and Release (implementation April 1<sup>st</sup> of 2018-19)</b></li> </ul>
3	Yellow Perch*	High	Maintenance-Sustainable Harvest	15 any size
4	Lake Whitefish*	High	Recovery-Sustainable Harvest	<ul style="list-style-type: none"> <li>• 10 any size (2017-18)</li> <li>• <b>Catch and Release (implementation April 1<sup>st</sup> of 2018-19)</b></li> </ul>
5	Burbot*	High	Maintenance-Sustainable Harvest	10 any size

\*Recreational management objectives for Lake Whitefish, Yellow Perch, and Burbot have not been fully developed into management frameworks, and will be subject to change pending on-going work and development. However, general action statements have been listed for these species within the context of relative abundance, catch rates and trends associated with index netting assessments, in relation to the management of these species at a provincial level.