

Summary Information

Version Date: September 2018	Prepared by: Myles Brown	Reviewed by: Kristy Wakeling	Approved by: Norbert Raffael
Waterbody ID: 5350	Surface Area: 913	Hydrologic Unit Code Name (HUC_8):	Hydrologic Unit Code (HUC_8): 17040301
Sport Fish Species: Northern Pike, Yellow Perch			
Indigenous Fishery: No			
Environment and Parks Region: Upper Athabasca Region (UAR)	Fisheries Management Zone: Northern Boreal 2 (NB2)	Fisheries Management Office: Slave Lake	

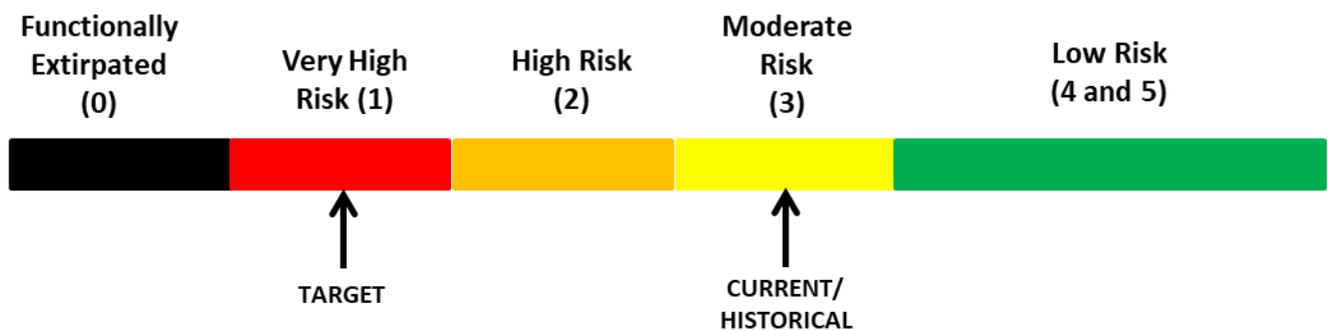
Background

Mitsue Lake is a passively managed lake located approximately 58 km northeast of Slave Lake. The lake is comprised of a single shallow basin with a max depth of 3 m and an average depth of 1.5 m. Historical surveys indicate that due to the shallow depth of the lake, there are low winter dissolved oxygen levels that are likely naturally limiting for overwintering fish populations. Mitsue Lake currently supports a limited recreational fishery. The recreational fishery is focused on northern pike and periodically yellow perch. Mitsue Lake periodically sustains winter fish kills resulting from low dissolved oxygen. This results in periods of low sportfish abundance prior to natural recovery through recruitment and immigration from surrounding river systems. As a result the fish populations in Mitsue Lake are naturally limited from maintaining a sustainable fish populations. In the open water season the lake is accessible by ATV or OHV from a high grade all weather gravel roads to the south and east of the lake. In the winter it can be accessed with OHV and snowmobiles from several locations. There are no designated camping facilities around the lake, however there is one active camping location on the lake shore accessed through a private land lease. Land use activity within the Mitsue Lake area is extensive, including oil and gas exploration, sand and gravel extraction, active logging within several kilometers of the lake and two timber mills which draw and returns water to the lake. Mitsue Lake was last surveyed in 2017.

Fish Population Status

Northern Pike – Adult Abundance

Fish Sustainability Index Adult Density Score



Yellow Perch- FSI Adult Abundance - Undetermined

Recreational Fishery Management Objectives

The **focal species** for recreational management is **Northern Pike**. The secondary species managed for recreational objectives is yellow perch. These sport-fisheries are directly assessed at intervals, and therefore are actively managed. The **Overharvest Protection Need** is assessed as **Low**.

Northern Pike - The current recreational fishery management objective for northern pike is **Sustainable Harvest**. The corresponding FSI score for the current mature density of northern pike was assessed as **Moderate Risk** to sustainability. The northern pike population is currently meeting the status and criteria for the objective of a Sustainable Harvest fishery. The current regulation is 3 fish over 63 cm. The recommended RFMO is **Liberal Harvest**. To align with the Northern Pike Recreational Management framework, the proposed management action is a change in objective and regulation to **1-3 pike any size**. If supported through consultation, the recommended regulation would be a **3 pike any size**.

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

Management Summary

Management Priority	Species	Overharvest Protection Need	Management Action	Sport Fishing Harvest Regulation
1	Northern Pike	Low	Maintenance – Liberal Harvest	3 any size
2	Yellow Perch*	Low	Maintenance – Passive Sustainable Harvest	15 any size

**Recreational management objectives for yellow perch 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 this species within the context of relative abundance, catch rates and trends associated with index netting assessments, in relation to the management of this species at a provincial level.*