

Project: Acquisition of the fish farming rights to Pocket Lake (formerly called Moose Lake) for the return of the lake to public use.

Overview

The purpose of this project was to offer anglers a secondary source for fishing opportunities in the Yukon through the acquisition of privately-held stocking rights to a pothole lake. The acquisition of these rights has allowed for the repatriation of Pocket Lake into the public domain so that it may be made available for recreational fishing and stocking opportunities. This project will re-distribute angling pressure away from nearby lakes where lake trout populations are currently undergoing recovery.

Pocket Lake was formerly known as Moose Lake, however in conversation with the Carmacks RRC, YG staff learned that 'Moose Lake' isn't a locally-used name, and that people in the area have used either 'Hidden Lake' or 'Pocket Lake'. The RRC indicated strong preference for a locally-used name. As there are several other Hidden Lakes in the Stocked Lakes Program already, Pocket Lake was chosen as the best option. The decision was made by YG to retire the name Moose Lake and adopt the locally preferred name, Pocket Lake.

YG staff conducted a field trip to Pocket Lake to determine if it is suitable for the stocked lakes program in the summer of 2018. They contacted the Little Salmon Carmacks First Nation, who joined them to do the field inspection in an effort to ensure they were consulted and onboard before the Trust and YG moved forward with the project.

Pocket Lake, a commercially stocked pothole lake, is situated near both Frenchman and Little Salmon Lake, in central Yukon (62°8'N; 135°15'W). Both of these natural lakes were recently placed under special regulation by Government of Yukon subsequent to population and harvest assessments which indicated that lake trout populations were overharvested and were in a depleted state. While the regulations are designed to encourage the lake recovery, they are only one strategy. A secondary approach was to ease angling pressure away from wild fish populations by providing a secondary source for angling activity in a natural setting. The Government of Yukon established the Stocked Lakes Program for just that purpose. Currently there are 19 pothole lakes that are being stocked in Yukon. Pocket Lake will be the 20th lake once the restocking is completed.

These lakes are biannually stocked with a variety of species including Arctic char, rainbow trout, and kokanee salmon. To date the program has been successful in redistributing angler activity away from wild populations, accounting for approximately 12.5% of the total resident angling pressure (Fisheries and Oceans Canada 2016). Additionally, Government of Yukon reports that anglers will travel large distances to reach a stocked lake destination they consider favourable (Barker and Millar 2011).

In discussions with Government of Yukon we were aware that they wished to build on the success of the program by expanding the Stocked Lakes Program to additional pothole lakes. However, for a pothole lake to be successful it must have key attributes such as isolation from drainages, accessibility, and it must contain key environmental conditions to sustain a healthy fish population. Pocket Lake contains all of these attributes which makes it a perfect addition to the Stocked Lakes Program.

A YESAB proposal was then submitted by YG in the fall of 2018 to request permission for Pocket Lake to be added to the YG list of Stocked Lakes. You will note that the lake was still being called Moose Lake at the time of the YESAB submission so the document refers to the lake as Moose Lake.

Key Project Successes

- A.) The acquisition of the stocking rights to Pocket Lake, thereby returning it to the public domain, has **protected** lake trout and other native stocks by re-directing a portion of the angling pressure to an alternative water body.

- B.) It will **enhance** fishing in the Yukon by providing an additional opportunity in the Territory. This opportunity is situated near two Territorial campgrounds.

- B.) It will aid in the **restoration** of lake trout populations by providing an alternative angling experience within the Territory, diminishing a portion of fishing pressure from lake trout populations that are in recovery.

- D.) Objectives of **Chapter 16 of the UFA** which were met include:
 - 16.1.1.1 To ensure Conservation in the management of all Fish and Wildlife resources and their habitats

Technical soundness

Pocket Lake will work successfully as an alternate fishing destination for anglers due to the Government of Yukon's willingness to incorporate the lake into its Stocked Lakes Program for routine enhancements. Wild Things Harvest Inc has rescinded their rights and aquaculture license to Pocket Lake with Yukon fisheries. An application was submitted by YG (see attachment) subject to a successful YESAB review and a return of the stocking rights to the commons.

Wild Things Harvest Inc. was able to demonstrate that the lake was successfully stocked with Arctic char in 1998 and that these char were able to sustain themselves. The lake was sampled, using small mesh gill nets (1 hour sets) in 2007, during which three large char were sampled from the lake. The char averaged 22 inches and 3.5lbs.

In the past, Yukon Fisheries surveyed the lake to determine if it had attributes suitable for commercial stocking. After several site visits by former Yukon employees it was apparent that the lake has everything needed. The following outlines Pocket Lake's attributes;

Chemical attributes

The lake has been sampled for depth and oxygen content in the winter of 1997. Oxygen levels were not less than 3.0mg/l at the surface to 20ft in depth (range: 3.0 mg/l (6m) to 5.0 mg/l, (1m)). The maximum recorded depth was 16.7 m. Thus the lake has adequate depth to prevent it from freezing to the bottom and has adequate oxygen for a variety of the species used in stocking including, kokanee, rainbow trout and Arctic char.

Biological attributes

Subsequent to a shoreline survey it was determined that the lake has a variety of food items for a the different growth stages of fish including; leeches, snails and amphipods (freshwater shrimp), daphnia (planktonic invertebrates), mayfly larva, caddis fly larva, water boatmen/backswimmers, water beetles and fly larva.

Drainage

Prior to the lake being commercially stocked it was surveyed both by air and through a perimeter walk to determine if it connected to a drainage. The lake is landlocked with no surface inflow or outflow to or from the lake, at any time of the year. Thus fish passage to or from the lake is not possible.

Access

The lake is located close to the existing highway and therefore will not require road construction. In addition there is available parking located near the trail leading to the lake.

Angler Usage

Angler usage of Pocket Lake will not be an issue and due to its ease of access, it has been routinely fished, despite the private nature of past stocking for commercial purposes. We have found evidence for angler usage, including witnessing people fishing from boats and shoreline. Paths to the lake are also well worn, suggesting heavy usage.

Project Deliverables

Deliverables for this project were for Pocket Lake to be successful in the YESAB process (see attachment) and a legal letter from Wild Things Harvest Inc., rescinding any rights to Pocket Lake for commercial stocking. (see attachment)

The current plan is for Pocket Lake to be stocked on late May or early June of 2019. After the lake is stocked, a short update will be provided to the Trust. Once the fish have reached catchable size, likely by the end of the summer of 2020, Pocket Lake will be a new fisheries resource that Yukon anglers can access.

Barker, O. E. and N. Millar. 2011. Stocked Lakes Program: Results from an online survey of Yukon anglers, 2011. Yukon Fish and Wildlife Branch Report MR-11-01, Whitehorse, Yukon, Canada.

Fisheries and Oceans Canada. 2016. National Recreational Fishing Survey 2010; Yukon Additional Questions. <http://www.dfo-mpo.gc.ca/stats/rec/can/2010/qyk-eng.htm>. Accessed 20 Feb 2018.