

Yellowstone Lake – Yellowstone Cutthroat Trout Status 1/3/12

The Problem:

The Yellowstone cutthroat trout (YCT) now occupy less than 43% of their historical range; in addition, they are significantly hybridized in 1/3rd of the remaining.

The Yellowstone Lake/upper Yellowstone River system (YL) was once home to an estimated 4,000,000 YCT. It was considered a stronghold for genetically pure YCT's and was considered relatively safe from the impacts of climate change. In addition, it was considered a Keystone species for the entire ecosystem; 40 other species are dependent on YCT.

Lake trout (LT) were officially discovered in 1994. They are overwhelmingly the most significant threat of the triple threat to YCT subsistence: lake trout, drought, and whirling disease.

The NPS has been employing gill netting since 1995 and currently spend \$1M annually on the effort. To date a total of over 800,000 LT have been netted; 220,000 in 2011 alone. The LT population is now estimated at 3-400,000 adult fish.

The current YCT population is unknown; but is certainly no more than 10% of historical, probably <5%, and may be as low as 1-2%.

The Solution:

The YCT population in this system cannot be lost; and need not be lost. A Scientific Review Panel in 2008 made 4 major recommendations to NPS. These were renewed in June of this year. Basically, these recommendations require increased suppression (netting) of LT, while developing scientific approaches to population estimates of both species, movement patterns of LT, LT spawning site identification by a robust telemetry study, experimentation with alternative technology to target LT eggs, and periodic review by the scientific community.

Major strides have been made in the past few years by the NPS in their approach. Yellowstone Park administration changed over the winter with Daniel Wenk being named Superintendent. A comprehensive fisheries management EA was published which sets benchmarks for LT removal and YCT recovery. The NPS netting effort was significantly increased by the hiring of a commercial fishing crew from Wisconsin. The NPS has formed an alliance with outside governmental agencies and with NGO's (Trout Unlimited, Greater Yellowstone Coalition, National Parks Conservation Association) to tackle the problem, including the acceptance of financial support and input. The USGS began a major research effort in 2008 to identify alternative suppression technology – targeting recruitment. Some of that technology is now ready to scale-up. Electro-shocking of LT eggs was used this past fall for the first time on Lake Pend Oreille. Results of that study are due this winter. The most significant advancement has been the start of a three year hydro-acoustic telemetry study as a joint effort of all parties to identify lake trout movement patterns and spawning beds.

Future Direction:

The key to YCT recovery is major suppression of LT (they will probably never be eliminated) while at the same time, cutting off recruitment into the LT population. Central to this goal, is to know the location of their spawning beds and movement patterns, thus a hydro-acoustic study was initiated on August 16, 2011. A total of 141 hydro-acoustic tags were surgically implanted into lake trout. The movements of these fish are being monitored by 40 receivers strategically located around the lake. Data from these fish will be analyzed this winter and reported February 15th at a meeting of the Yellowstone Lake working group. This 3 year telemetry effort requires a significant NPS, USGS and NGO commitment of money, research time, and support. The NGO's have committed to raising, as a minimum, an additional \$85,000 by spring 2012 to support year 2 of the study. The money will be spent to buy an additional 100 of the standard hydro-acoustic tags at \$400 each, 50 depth recording hydro-acoustic tags at \$750 each, and the needed supplies. The NGO's have already donated \$40,000 to get the project started in 2011. The NPS has committed to assisting with this study and to

continuing the expanded LT suppression program. The USGS has committed to research staffing and project coordination.

Fundraising Status:

Trout Unlimited in Wyoming, Montana, Idaho and the National organization have cooperatively accepted a major part of this fundraising goal. Already, these groups have raised over \$26,000 through donations from TU councils, chapters, members, and concerned individuals from across the nation. GYC and NPCA have joined in to raise an additional \$20,000. Together we are over 50% of the way to our goal. However, we need your help. We are still around \$39,000 from our short term goal of \$85,000. And, the goal may have to be increased if the current receivers are not available in 2012 and beyond. Won't you please join us by contributing today?

Tax deductible donations are being accepted at:

Save the Yellowstone Cutthroat or
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