Lake Trout Removal Efforts Continue in Yellowstone Lake

Philip D. Doepke, Patricia E. Bigelow, Brian D. Ertel, and Todd M. Koel, Aquatic Sciences Section, Yellowstone National Park, P.O. Box 168, Mammoth Hot Springs, WY 82190

Lake trout (*Salvelinus namaycush*) removal efforts in Yellowstone lake began in 1995, the year following documentation of this non-native fish in Yellowstone Lake. The objective of the removal program was to reduce lake trout to the point where they have a negligible effect on native Yellowstone cutthroat trout (*Oncorhynchus clarkii bouvieri*). Lake trout capture techniques have focused on mechanical, mostly gill netting, and more recently electrical methods. The lake trout infestation in Yellowstone Lake continues while fishery managers remove greater numbers of lake trout every year, 76,140 lake trout were removed in 2008, and 348,794 have been removed since 1995. Amount of gill net effort has increased every year with the exception of 2008, total effort is mainly dependent on ice-off dates, and seasonal crew staffing and experience. Removal strategies target both adult and juvenile components of the population. Catch per effort of juvenile lake trout has steadily increased since 2002

with 2008 being the highest on record (5.0 lake trout/100 m gill net set/night) since 1998. However, cutthroat trout have not shown a positive response to lake trout removal efforts. Numbers of spawning cutthroat trout in Clear Creek, a tributary to Yellowstone Lake, are at the lowest levels ever recorded with just 538 counted. Yellowstone cutthroat trout gill net assessment, which averaged over 15 fish/net in 1994, has averaged ~ 9 fish/net over the past 5 yrs. Continued suppression of lake trout is imperative for there to be a healthy Yellowstone Cutthroat trout population in Yellowstone Lake.