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Spring Fisheries Survey Summary
Moose Lake, Sawyer County, 2016

The Hayward DNR Fisheries Management Team conducted a fyke netting survey on Moose Lake from June 5-10 to assess the bluegill and black crappie populations in the lake. Eight nets were set overnight for five nights which resulted in 40 total net-nights of effort. The purpose of this special netting effort was to obtain information on recently stocked bluegill (which were given a fin clip) as well as information about the existing natural populations of bluegill and black crappie in Moose Lake. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society.

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Summary of Results

This survey was specifically designed to survey panfish in Moose Lake, namely, bluegill. The Moose Lake bluegill population has an interesting history. Bluegill have never been abundant in Moose Lake as a result of consistently low recruitment. Field transfers of small bluegill (3-6 inches) from nearby lakes where they are abundant into Moose Lake were done repeatedly in the past. These transfers were believed to be moderately successful but were never evaluated.

With the help of volunteers from the Moose Lake area and private funds we marked 2,000 bluegill (average length 3.6 inches) from a private hatchery that were stocked in the fall of 2014 and over 5,100 bluegill (average length 4.2 inches) that were field transferred from Ghost Lake in summer of 2015. The fish from 2014 were given a left ventral (LV) fin clip and the fish in 2015 were given a right ventral (RV) fin clip.

During our 2016 netting survey we captured 44 total bluegill and 1 pumpkinseed x bluegill hybrid. Of the 44 bluegill captured, 10 had a RV clip (23%, average length 6.6 inches), and none had a LV clip. Most bluegill captured (77%) did not have a fin clip, suggesting they are the result of natural reproduction or other migration into Moose Lake. Some unclipped bluegill that we captured were well over 8 inches, demonstrating that Moose Lake can produce large bluegill. All bluegill found with a RV clip were between 5.5 and 7.5 inches in length.

It is not possible to determine at this time if the RV clipped bluegill we recaptured are growing quickly (difference in mean length between stocking and recapture one year later is 2.4 inches which would be fast growth), or if we are just seeing the largest fish from the stocking event (a small proportion were near 6 inches in length when transferred) survive at a higher rate which would give an inflated estimate of growth. Regardless, some bluegill from the 2015 field transfer from Ghost Lake are already up to the size that would be attractive to anglers, and based on the sizes of other bluegill in the lake it is not unreasonable to expect these fish to reach preferred size. The overall contribution of the 5,100 bluegill from the 2015 field transfer appears to be about a 20-25% increase in the bluegill population of Moose Lake. While that could be considered to be a meaningful increase, even with the transferred fish the Moose Lake bluegill population remains extremely low density in comparison to other lakes in the area. Decisions about further field transfers will need to consider if contributions of this extent are a meaningful improvement in the fishery and be weighed against cost and time demands.

Black crappie in Moose Lake continue to exist at a low to moderate density but demonstrate good size. There were definite differences in size structure throughout the lake, with fish in the basin near the dam typically being 8-10 inches in length and fish closer to the Little Moose and Moose River inlets typically being over 10 inches in length. It is not clear why that pattern exists, though it may be related to higher harvest in the more populated section of the lake.

The underside of a bluegill with a partially regrown right ventral fin clip. This fish was captured in Ghost Lake and transferred into Moose Lake in 2015.

Report by Max Wolter – Fisheries Biologist, Sawyer County
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