



Youngs Lake 2013 Survey Report

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Introduction: A fisheries survey was conducted on Youngs Lake, Luce County on October 15-17, 2013 in order to evaluate the success of the stocked brook trout.

- **History:** Youngs Lake is a 7-acre lake located approximately 15 miles northwest of Newberry off of County Road 422. The lake is located on Commercial Forest Act (CFA) property which is private land, but allows public access for hunting, trapping, and fishing. Maximum water depth is 40 feet. Drought conditions in the 2000's resulted in a lower lake level limiting the amount of woody debris submerged in the lake and an estimated surface acreage of 5 acres (office files). In 2013, the water level rebounded near normal levels with two consecutive winters of heavy snowfall in 2012 and 2013. The lake historically has been stocked with brook trout dating back to 1948 (Table 1). Prior to the first brook trout stocking, in August 1948 the lake was treated in order to prepare it for trout management. Stocking strategies have varied through the years with use of spring fingerlings, fall fingerlings, and adults. In 1989, spring fingerling brook trout have been primarily used with the occasional stocking of some retired adult broodstock brook trout.

Angler reports of the fishery in Youngs Lake have always been positive and stated as moderate-good for brook trout. Previous netting surveys have shown indications of high angler harvest with few brook trout captured greater than 10 inches (legal size), while anglers report catches of legal fish with regularity. Netting surveys have shown brook trout to be surviving well with growth at statewide average. A total of three Master Angler brook trout have been reported from Youngs Lake (minimum entry 15 inches). Youngs Lake carries a Type-A regulation for trout.

Methods and Materials: This fisheries survey was conducted by the Eastern Lake Superior Management Unit (ELSMU) field crew using 3 large mesh fyke nets (2 nights) and 1 monofilament inland experimental gill net (125 ft, 5-panels, 1 night). Total length from all fish was recorded. Scale samples were collected from 10 brook trout per inch group for age determination. The field crew also conducted a limnological profile on October 15, 2013 of the water column recording dissolved oxygen, pH, and temperature at specific depth intervals. Surface water temperature was collected each day.

Results: A total of 22 brook trout were captured with an average total length of 9.7 inches and a size range of 5-16 inches (Figure 1). Age determination from scale samples revealed fish from 3 year classes (ages 1-3, Figure 2). Brook trout were found to be growing -2.1 inches below statewide average (Figure 3). Also, 5 bluegill were collected in the 3 and 4 inch groups.

Since the limnological profile was conducted in mid-October with lake temperatures cooling just before lake turn-over, the thermocline could not be identified. Dissolved oxygen was found to be suitable down to 25 feet (≥ 5.0 mg/L, Raleigh 1982). Readings for pH were ≥ 6.0 through the entire water column. Surface water temperature collected each day of the survey ranged from 57-54°F.

Discussion: Brook trout in Youngs Lake appear to be surviving well despite growing slowly. The catch from this netting survey found carry-over fish and possibly some of the adult brook trout that were stocked in 2012 (age 3's). Bluegill were found in this survey which is of concern for fisheries managers. Similar to when yellow perch are found in trout lakes, bluegill can out-compete trout for forage and habitat if present in high densities. Many of the brook trout lakes in the ELSMU have received



reclamation treatments which are costly and time consuming to eradicate contaminate species such as yellow perch and bluegill. Although only 5 bluegill were found in this survey, monitoring bluegill densities in relation to the brook trout fishery will be key in successful management for brook trout in Youngs Lake.

Management Recommendations: Brook trout spring fingerlings should continue to be stocked in Youngs Lake. Bluegill densities and the success of the brook trout fishery should be monitored through netting surveys and angler reports. Netting surveys should be scheduled when work plan and staffing allows. No changes in management are recommended at this time. Type-A regulations should remain in place.

References:

- Raleigh, R. F. 1982. Habitat suitability index models: Brook trout. U.S. Dept. Int., Fish and Wildlife Services. FWS/OBS-82/10.24. 42 pp.
- Schneider, J. C., P.W. Laarman, and H. Gowing. 2000. Age and growth methods and state averages. Chapter 9 *in* Schneider, J. C. (editor). 2000. Manual of fisheries survey methods II: with periodic updates. Michigan Department of Natural Resources, Fisheries Special Report 25, Ann Arbor.



Table 1.-Stocking history for Youngs Lake, Luce County, 1979-2013.

Year	Species	Age	Average Length (inches)	Number
1979	Brook Trout	Spring Fingerling	3.9	600
1980	Brook Trout	Spring Fingerling	2.1	600
1981	Brook Trout	Spring Fingerling	2	600
1982	Brook Trout	Spring Fingerling	2	600
1983	Brook Trout	Fall Fingerling	3.4	580
1984	Brook Trout	Fall Fingerling	3.7	600
1985	Brook Trout	Fall Fingerling	3.8	500
1986	Brook Trout	Fall Fingerling	3.7	600
1987	Brook Trout	Fall Fingerling	5.2	600
1989	Brook Trout	Spring Fingerling	1.3	2,900
		Adult	11.5	8
1990	Brook Trout	Spring Fingerling	1.8	600
1991	Brook Trout	Spring Fingerling	2.4	600
1992	Brook Trout	Spring Fingerling	3.1	600
1993	Brook Trout	Spring Fingerling	2.9	600
1994	Brook Trout	Spring Fingerling	2.6	600
1995	Brook Trout	Spring Fingerling	2.3	600
1996	Brook Trout	Spring Fingerling	2.9	600
1997	Brook Trout	Spring Fingerling	1.9	600
1998	Brook Trout	Spring Fingerling	2.1	600
1999	Brook Trout	Spring Fingerling	2.6	600
2000	Brook Trout	Spring Fingerling	1.8	600
2001	Brook Trout	Spring Fingerling	2.4	600
		Adult	10.7	50
2002	Brook Trout	Spring Fingerling	2.5	575
2003	Brook Trout	Spring Fingerling	1.7	575
2004	Brook Trout	Spring Fingerling	1.8	560
2005	Brook Trout	Spring Fingerling	1.9	570
2006	Brook Trout	Spring Fingerling	2	575
2007	Brook Trout	Spring Fingerling	1.9	350
2008	Brook Trout	Spring Fingerling	2.2	575
2009	Brook Trout	Spring Fingerling	2.5	650
2010	Brook Trout	Spring Fingerling	2.9	575
2011	Brook Trout	Spring Fingerling	2.6	575
2012	Brook Trout	Spring Fingerling	2.1	575
		Adult	16.4	25
2013	Brook Trout	Spring Fingerling	0.8	575



Figure 1.-Length frequency distribution for brook trout captured during the netting survey conducted on Youngs Lake on October 15-17, 2013.

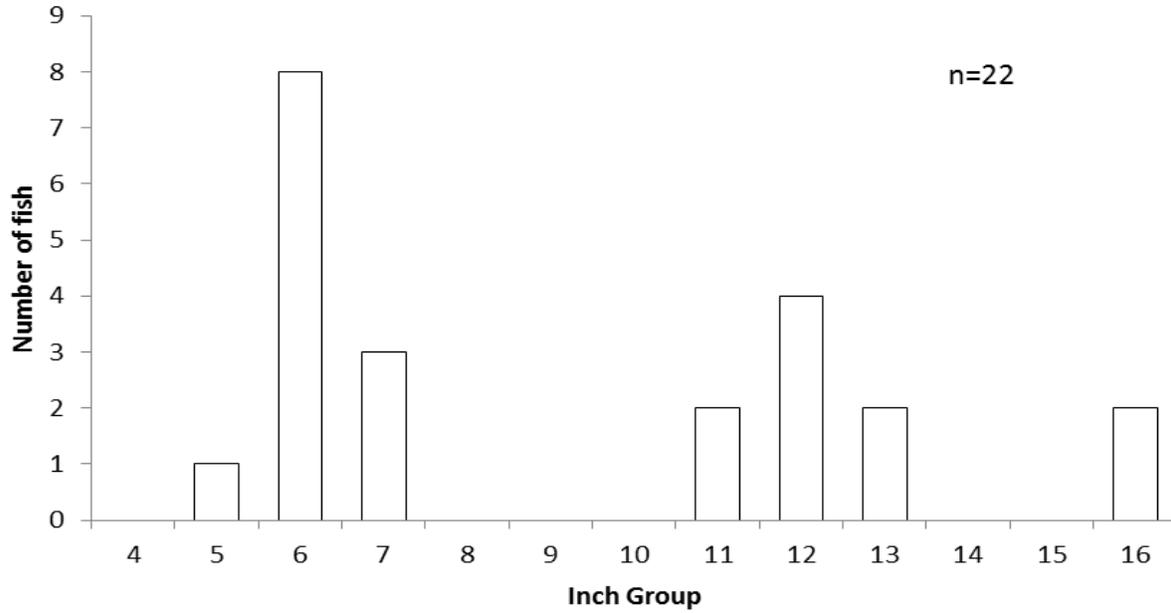


Figure 2.-Age frequency distribution for brook trout captured during the netting survey conducted on Youngs Lake on October 15-17, 2013.

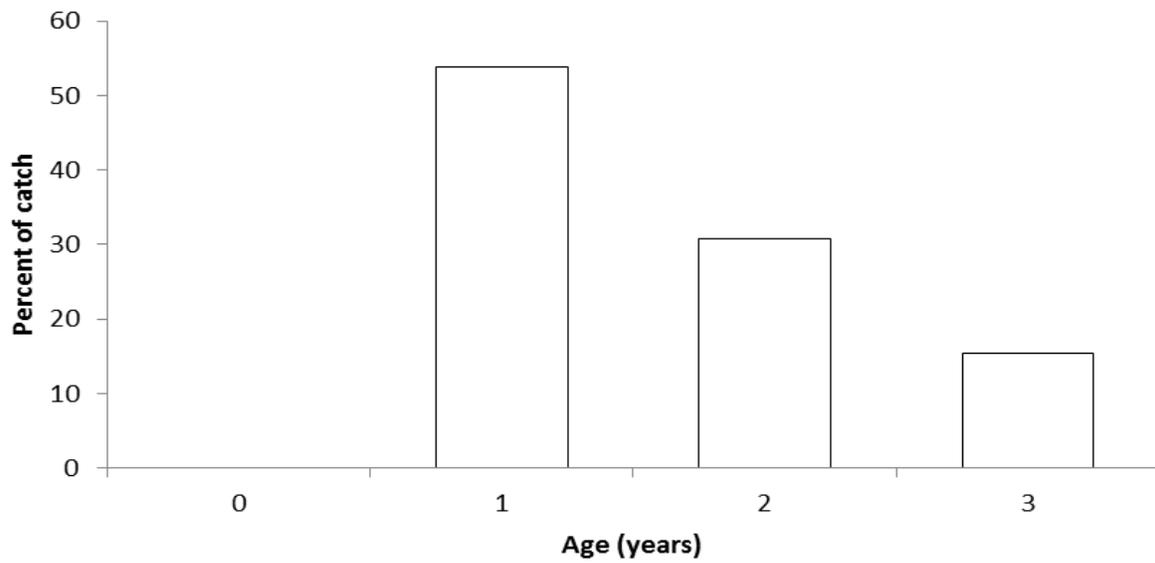




Figure 3.-Mean length at age for brook trout from the netting survey conducted on Youngs Lake on October 15-17, 2013.

