



Camp Eight Lake, Luce County

Introduction: A fisheries survey was conducted on Camp Eight Lake from May 21-23, 2012 to evaluate the smallmouth bass and rainbow trout populations.

- **History:** The sport fishery of Camp Eight Lake has been known to consist of rainbow trout for some time. In the early 2000's smallmouth bass were stocked to lower abundances of yellow perch. This action was successful in limiting yellow perch abundances and has created a popular smallmouth bass fishery. Rainbow trout are stocked annually as yearlings in the spring. Stocking rates have varied from 30-50 per acre.
- **Physical features:** Camp Eight Lake is located within the proposed Pretty Lakes Quiet Area in a series of lakes which may be portaged to via canoe or other carry-in boat. A camping area is located on the eastern shore which is accessed via portage through Pretty and Brush Lakes. Surface acreage of Camp Eight Lake is 66 acres and has a maximum depth of 74 feet. Bottom substrate is primarily sand with sparse organic matter located throughout. Lake levels are down from historical levels, but are relatively normal compared to some of the other lakes located in the area.
- **Biological features:** Aquatic vegetation is sparse throughout the lake with sparse bulrushes along the southern shoreline. Water clarity is extremely clear with visibilities down to about 20+ feet.

Methods and Materials: The survey was conducted using standard mesh fyke (4), experimental mesh gill (1), and trap (1) nets. Nets were set for 2 nights and pulled on the third day.

Results: Smallmouth bass dominated the catch with 71 total captured. No young of year smallmouth bass were captured possibly due to the gear types used. In addition, the 2010 cohort represented 57% of the total smallmouth bass catch. Age and growth analysis showed below state average growth for smallmouth bass (-2.6 mean growth index). With the exception of the 2011 cohort, year classes were represented from every year since 2004. Rainbow trout total catch was 27 with 18.5% at legal size (≥ 12 inches). Stocked fish from 2012 were captured, but the exact number could not be determined by age and growth analysis. However, age and growth analysis did show survival from the 2008, 2009, and 2010 stocking. Other species captured were white suckers (N=11), largemouth bass (N=1), and yellow perch (N=2).

Discussion: The low numbers of white suckers and yellow perch were a positive outcome from this survey. The smallmouth bass were stocked initially because of the growing numbers of yellow perch. Following the 2012 survey, yellow perch densities appear to be controlled. White suckers are not numerous enough to be concerned about, especially with the total biomass still below 50% of the total catch (white sucker biomass 48%). Smallmouth bass appear to be doing well despite their poor growth. Recruitment is good with representation from every year class. Smallmouth bass growth may be affected by their high densities and the high densities of rainbow trout combined with the lower densities of yellow perch (their primary forage). Comparing mean length at age for smallmouth bass showed a decline in growth across all age classes in 2012 when yellow perch densities are probably lower than in 2006 (Figure 1). Rainbow trout densities in this survey were higher (~2x) than densities in the 2006 survey. Catch per unit effort for the 2006 and 2012 surveys were 1.27 and 2.25, respectively. Comparing mean length at age for rainbow trout in the 2006 and 2012 surveys found growth not significantly different ($\alpha=0.05$) (Figure 2). Mean growth index could not be calculated, but visual analysis suggests growth for rainbow trout to be below state average in every inch class, similar to growth in 2006. The stocking rate for rainbow trout was increased from 30/acre to 50/acre in 2009. The increase in stocking did not improve growth for rainbow trout, but did increase their densities. Length frequency suggests that harvest may be high at Camp Eight Lake with the absence of fish between 10 and 15 inches (Figure 3). The minimum size limit is 12 inches suggesting some illegal harvest may be occurring, but in general harvest appears to be high between 10-15 inches.

Management Recommendations: The smallmouth bass population should continue to provide a good fishery and control of the yellow perch densities. Smallmouth bass densities are high enough that any consideration for a chemical treatment for yellow perch is not necessary. Monitoring the growth of smallmouth bass needs to continue



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in order know that they are not stunting due to lack of forage. The rainbow trout densities are good for the amount of harvest taking place. Stocking rates would be considered high if this level of harvest was not occurring in this type of fishery. Monitoring of the rainbow trout will be needed to maintain that multi-year survival is continuing and compliance to the regulation is being adhered to. Current management and stocking rates of rainbow trout should continue. The prescription for Camp Eight Lake expires in 2015. At that time a general survey should be scheduled to take another look at the smallmouth bass and rainbow trout population dynamics.

Figure 1: Comparison of mean length at age for smallmouth bass from surveys in 2006 and 2012 at Camp Eight Lake.

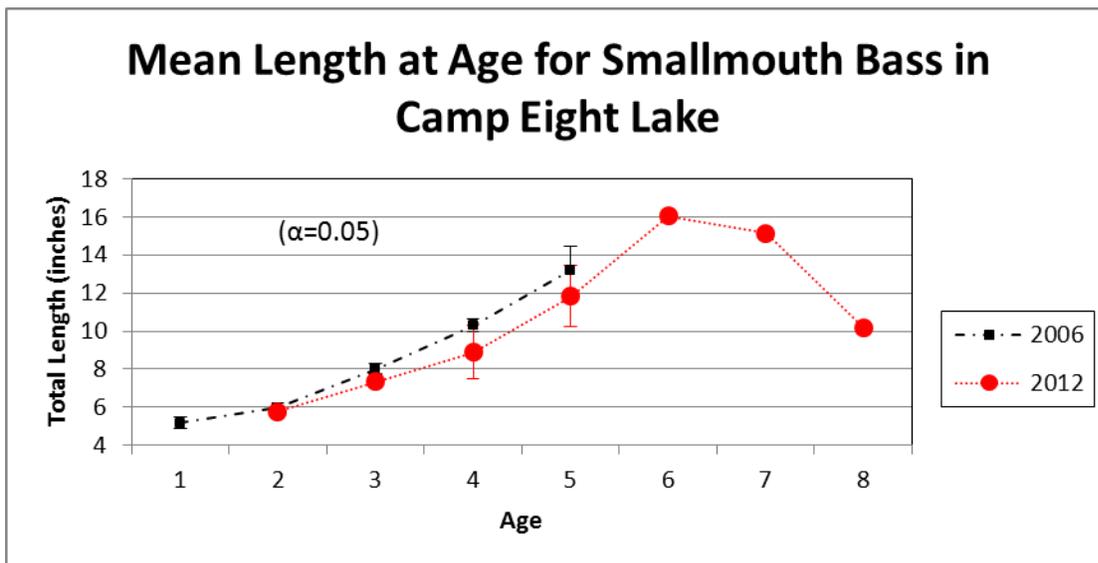
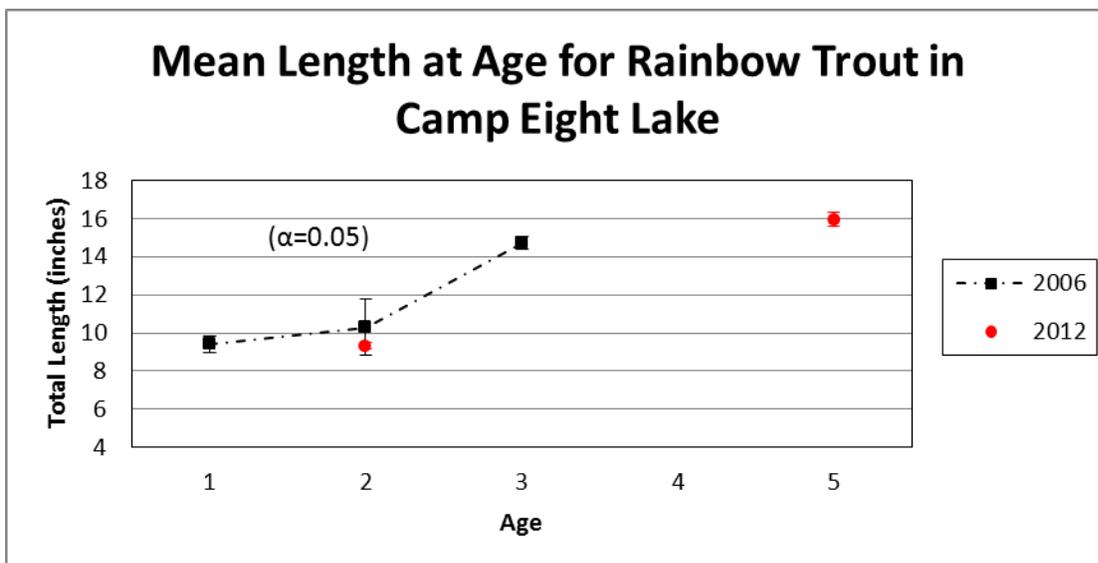


Figure 2: Comparison of mean length at age for rainbow trout from surveys in 2006 and 2012 at Camp Eight Lake.





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Figure 3: Length frequency of rainbow trout from surveys in 2006 and 2012 at Camp Eight Lake.

