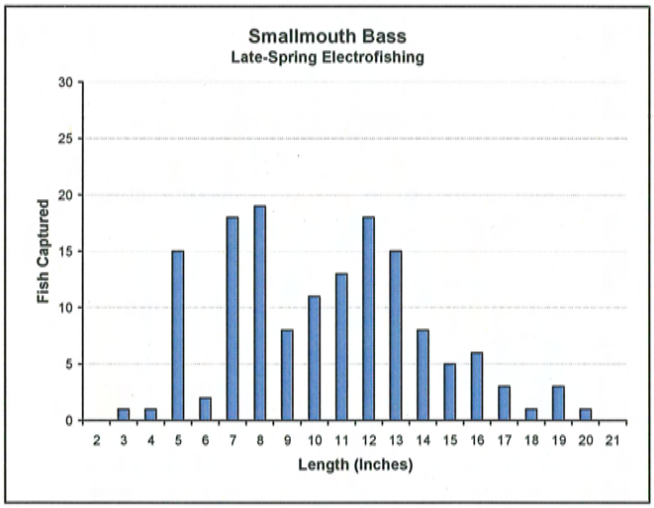
Late-Spring Electrofishing Survey Summary
Lac Courte Oreilles, Sawyer County, 2010

The Hayward DNR Fisheries Management Team conducted an electrofishing survey on the Lac Courte Oreilles during May 26-28, 2010 as part of our baseline monitoring program. A total of 8 miles of shoreline were sampled (2 miles sub-sampled for panfish). Primary target species were smallmouth bass, largemouth bass and panfish. We also obtained useful data on the status of juvenile walleye. A fyke netting survey conducted by our team in early April documented the status of the adult walleye, muskellunge, northern pike, yellow perch and black crappie populations. Those results are presented in a separate survey summary. 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.

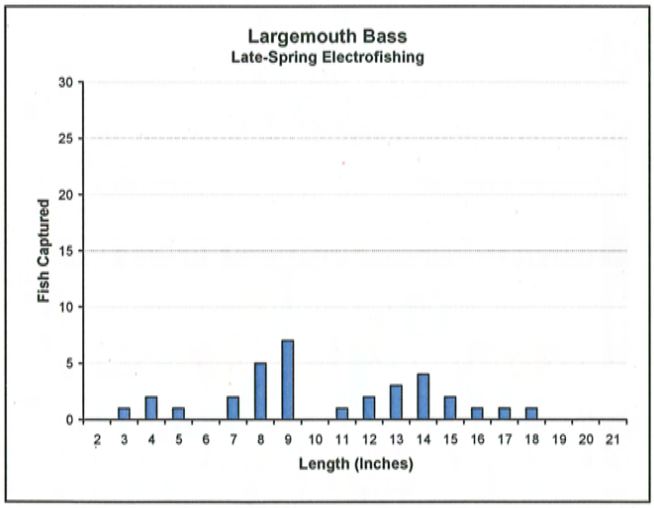
Smallmouth Bass

Captured 16 per mile ≥ 7”	
Quality Size ≥ 11”	57%
Preferred Size ≥ 14”	21%
Memorable Size ≥ 17”	6.2%



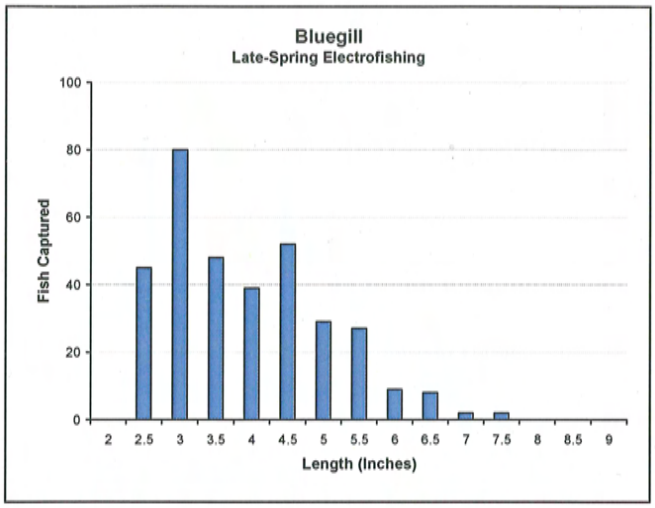
Largemouth Bass

Captured 3.4 per mile ≥ 8”	
Quality Size ≥ 12”	52%
Preferred Size ≥ 15”	19%



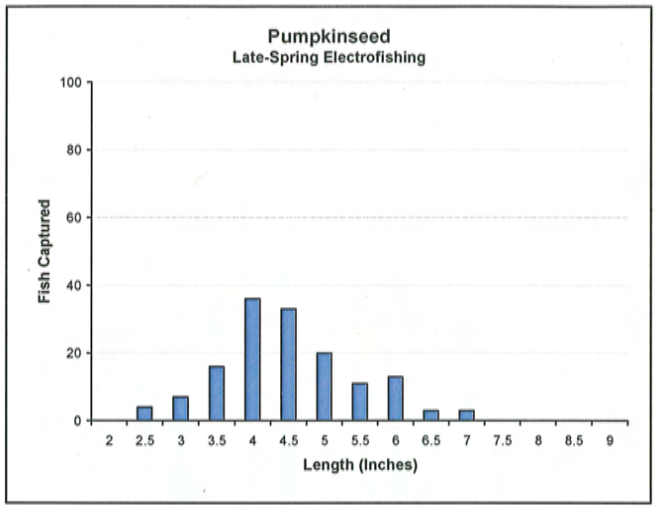
Bluegill

Captured 148 per mile ≥ 3”	
“Keeper” Size ≥ 7”	1.4%
Preferred Size ≥ 8”	0%

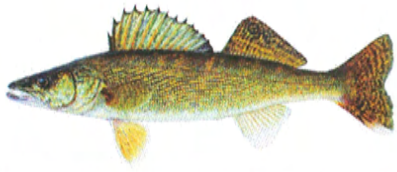


Pumpkinseed

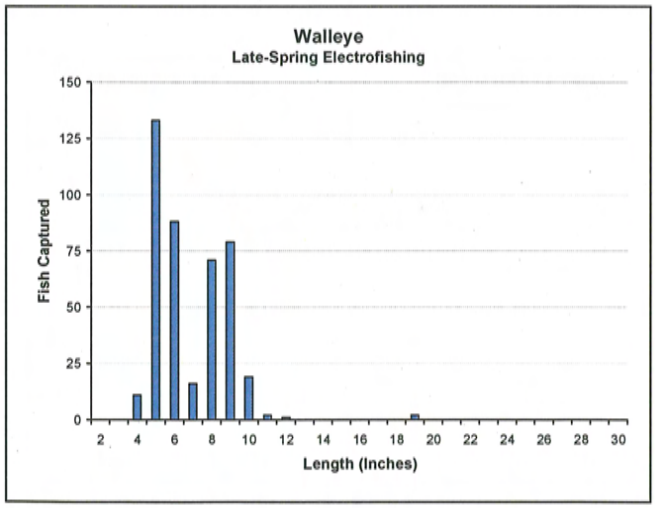
Captured 71 per mile ≥ 3”	
“Keeper” Size ≥ 7”	2.1%
Preferred Size ≥ 8”	0%



Walleye



Captured 50 per mile < 10”



Summary of Results

In late spring of 2010 Lac Courte Oreilles was still a foot or two below normal, yet an abundance of high-quality smallmouth bass and sunfish spawning habitat was available. With water temperature in the upper 60s, our survey was well-timed for purposes of obtaining a representative sample of all sizes of target species in likely near-shore spawning areas.

Smallmouth bass were just beginning to spawn at the time of our survey (eroded fins observed and some nesting). Our capture rate of smallmouth bass ≥ 7 inches increased from 5.6 per mile in 2008 to 16 per mile in 2010. This change is probably due to major logistical changes (areas sampled and boat speed) from the 2008 trial run of this sampling protocol. On a time basis, smallmouth bass capture rate was unchanged from 2008 (21/hour ≥ 7") to 2010 (22/hour ≥ 7"). Capture rates have remained below the 2006 Management Plan* target range of 40-60 per hour. The proportion of preferred-size fish ≥ 14 inches decreased from 33% in 2008 to 21% in 2010; and the proportion of memorable-size fish ≥ 17 inches decreased from 12% in 2008 to 6.2% in 2010 – well below our 2006 Management Plan target range of 30-50% at memorable size. Recruitment of a relatively large year class (probably 2007) of 7- to 8-inch smallmouth bass in 2010 has significantly influenced population size structure by reducing the relative numbers of larger fish. Continued compliance with the 14-inch minimum length limit and voluntary release of legal-size smallmouth bass may lead to attainment of our 2006 Management Plan objectives, but a higher minimum length limit may be necessary to ensure the desired outcome.

Largemouth bass ≥ 8 inches were captured at a relatively low rate of 3.4 per mile in 2010, similar to 2008 (3.2 per mile). Concurrent with a noteworthy expansion of submersed aquatic plants in portions of the lake, the relative number of juvenile largemouth bass (18% of our sample in 2010) seems to be increasing (none sampled in 2008). Much of the near-shore area of Lac Courte Oreilles is sub-optimal habitat for largemouth bass (rock cobble or sandy substrate without plants or woody structure); but an increase in survival of young fish facilitated by an increase in aquatic plants could lead to development of a significant largemouth bass population.

Bluegills were abundant along 2 miles of sub-sampled shoreline (148 per mile ≥ 3 inches), reflecting insufficient predation. Because of high numbers and limited food resources, the proportion of "keeper-size" bluegill ≥ 7 inches was only 1.4%. Pumpkinseeds also were captured at a high rate (71 per mile) and failed to achieve desirable sizes. Reducing the number of panfish would allow the remaining panfish to grow faster and attain sizes desirable to anglers. Lac Courte Oreilles currently has a moderate population of adult walleyes (see early-spring fyke-netting summary 2010). Fortunately, high numbers of juvenile walleyes born in 2008 (~9 inches in 2010) and 2009 (~6 inches in 2010) appeared in our late-spring electrofishing survey – a combination of naturally produced and stocked fish that should soon recruit to the adult population. If that happens, a relatively high-density population of adult walleye may exert greater control over overabundant, small panfish.

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November 18, 2010

*Available online at: http://dnr.wi.gov/water/basin/upchip/documents/LacCourteOreilles.pdf