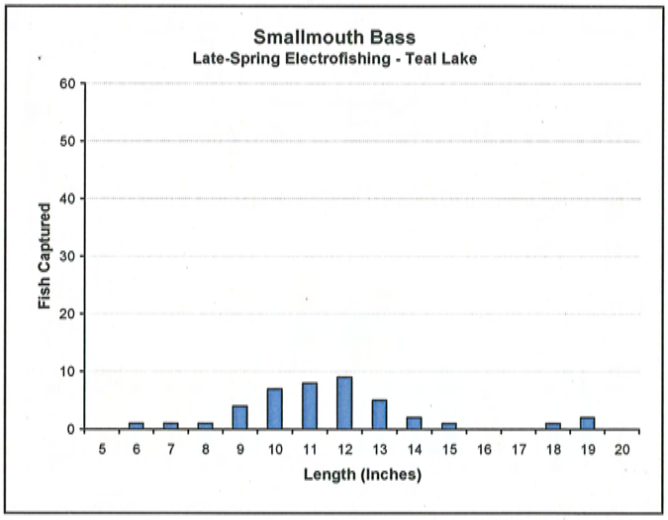
Late-Spring Electrofishing Survey Summary
Teal and Lost Land Lakes, Sawyer County, 2010

The Hayward DNR Fisheries Management Team conducted an electrofishing survey on Teal and Lost Land lakes during May 21-22, 2010 as part of our baseline monitoring program. A total of 4 miles of shoreline was sampled (1 mile sub-sampled for panfish) on each lake. Primary target species were smallmouth bass, largemouth bass and panfish. 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.

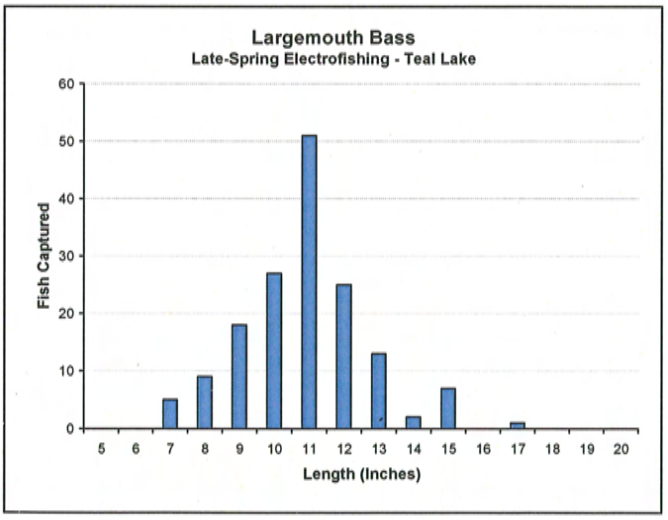
Smallmouth Bass – Teal Lake

Captured 10 per mile ≥ 7”	
Quality Size ≥ 11”	68%
Preferred Size ≥ 14”	15%
Memorable Size ≥ 17”	7.3%



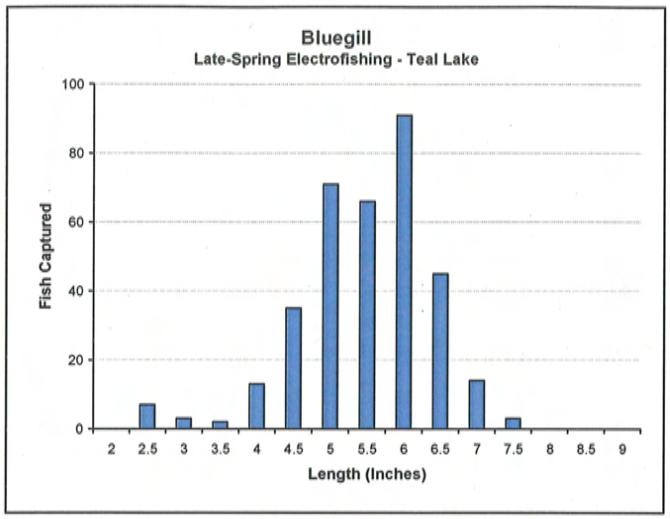
Largemouth Bass – Teal Lake

Captured 38 per mile ≥ 8”	
Quality Size ≥ 12”	31%
Preferred Size ≥ 15”	5.2%



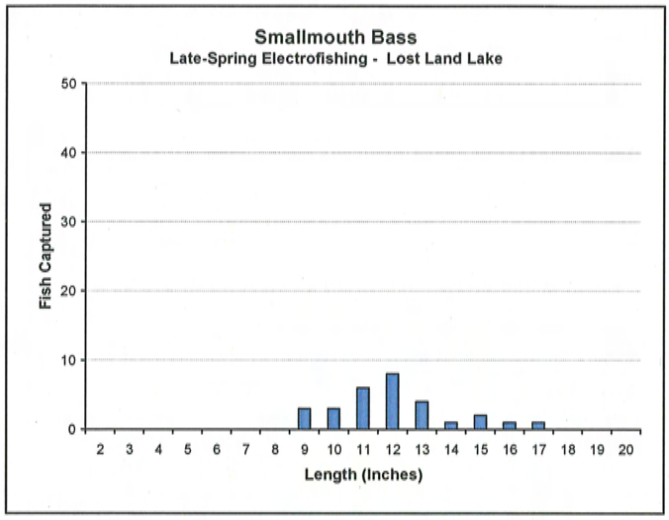
Bluegill – Teal Lake

Captured 343 per mile ≥ 3”	
“Keeper” Size ≥ 7”	5.0%
Preferred Size ≥ 8”	0%

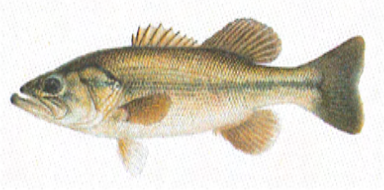


Smallmouth Bass – Lost Land Lake

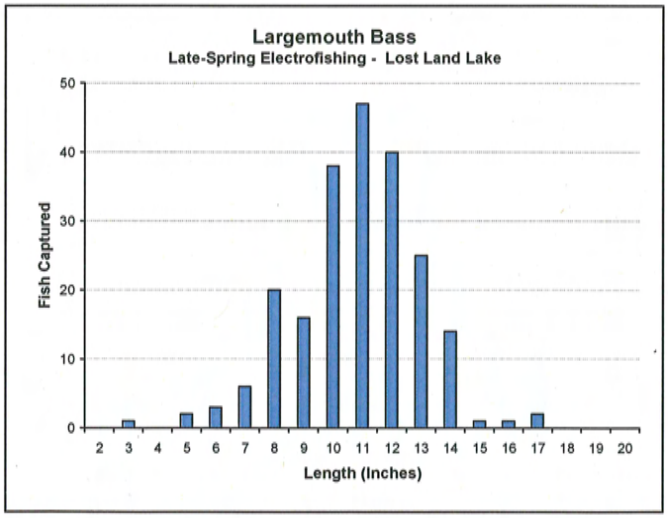
Captured 7.3 per mile ≥ 7”	
Quality Size ≥ 11”	79%
Preferred Size ≥ 14”	17%
Memorable Size ≥ 17”	3.4%



Largemouth Bass – Lost Land Lake

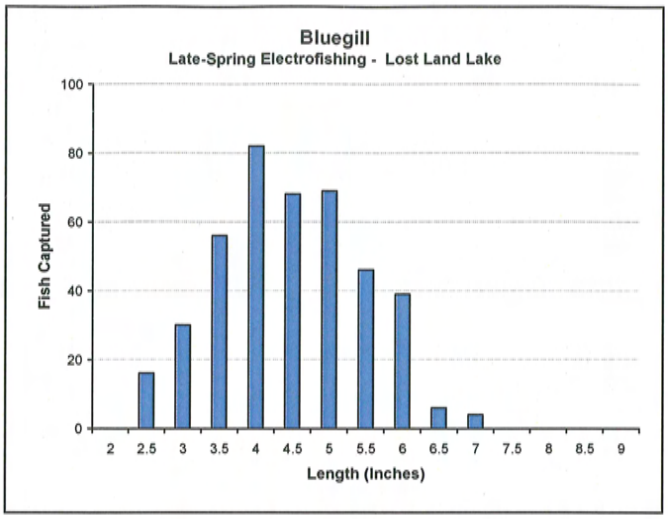


Captured 51 per mile ≥ 8”	
Quality Size ≥ 12”	41%
Preferred Size ≥ 15”	2.0%



Bluegill – Lost Land Lake

Captured 400 per mile ≥ 3”	
“Keeper” Size ≥ 7”	1.0%
Preferred Size ≥ 8”	0%



Summary of Results

With water temperature in the mid-to-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. Capture rates of smallmouth bass ≥ 7 inches in Teal (10 per mile) and Lost Land (7.3 per mile) were near the low end of our target range (10-20 per mile). Teal Lake has more suitable habitat (rocky shoals) for smallmouth bass than Lost Land Lake. The proportion of memorable-size smallmouths ≥ 17 inches was within our 5-10% target range in Teal but not in Lost Land. Continued voluntary release of legal-size smallmouth should sustain desired size structure in Teal and may lead to an acceptable proportion of larger smallmouths in Lost Land. However, low capture rate of smallmouth bass < 9 inches in Teal, and the absence of young fish in Lost Land, raise concerns that recent reproduction and recruitment are too low to sustain desired adult populations. Predation by and/or competition with largemouth bass may become a barrier to achieving objectives for smallmouth bass in both these lakes if largemouth bass remain protected by a 14-inch minimum length limit and early-season harvest prohibition.

Largemouth bass were captured at much higher rates than smallmouth bass. This was not unexpected in the shallow, weedy, clear waters of Lost Land Lake (51 per mile ≥ 8 inches), which has always had a substantial population of largemouth bass; but it was a surprising development at Teal Lake (38 per mile ≥ 8 inches) – a classic walleye water that had only trace numbers of largemouth bass as recently as 2004. Unfortunately, the overwhelming majority of largemouths were < 14 inches in both lakes. An upcoming age and growth analysis of the largemouth bass in both lakes may reveal what we suspect to be slow-growing populations due to intra-specific competition for food. Largemouth bass captured by electrofishing at rates exceeding even 10 per mile are thought to adversely affect recruitment of young walleye due to predation. This may partially explain why Lost Land Lake has never exhibited high survival of young walleyes (stocked or naturally produced), and why Teal Lake has experienced multiple walleye year-class failures in the past five years (see early-spring fyke netting survey summary). Liberalized largemouth bass fishing regulations and high harvest of 10- to 12-inch largemouth bass may be needed to improve both bass and walleye fisheries in Teal and Lost Land lakes.

Bluegills were very abundant along 1 mile of sub-sampled shoreline in each lake (343 bluegill ≥ 3 inches per mile in Teal and 400 per mile in Lost Land). Due to high numbers and competition for limited food resources, these populations fail to produce the sizes of bluegill preferred by anglers. Producing larger bluegill will require a combination of increased predation on young bluegill by higher numbers of better-protected walleye, and decreased exploitation of harvestable-size bluegill by anglers.

Joseph H. Krahn, LTE Fisheries Biologist, Hayward
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Reviewed and Approved By:
David J. Neuswanger, Fisheries Supervisor, Upper Chippewa Basin, Hayward
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