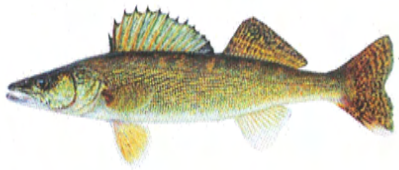
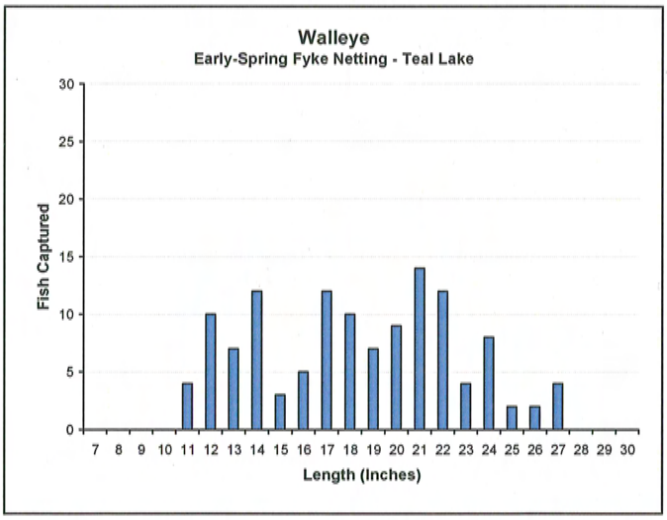
Early-Spring Fyke Netting Survey Summary
Teal and Lost Land Lakes, Sawyer County, 2010

The Hayward DNR Fisheries Management Team conducted a fyke netting survey on Teal and Lost Land lakes during April 5-7, 2010 as part of our baseline monitoring program. Five nets were set overnight for two nights on each lake, resulting in 10 net-nights of effort per lake. Primary target species were walleye, muskellunge, northern pike and yellow perch, but we also obtained useful data on the status of black crappie. An electrofishing survey conducted by our team in mid May documented the status of smallmouth bass, largemouth bass, bluegill and other species. Those results are summarized in a separate survey report. 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.

Walleye – Teal Lake

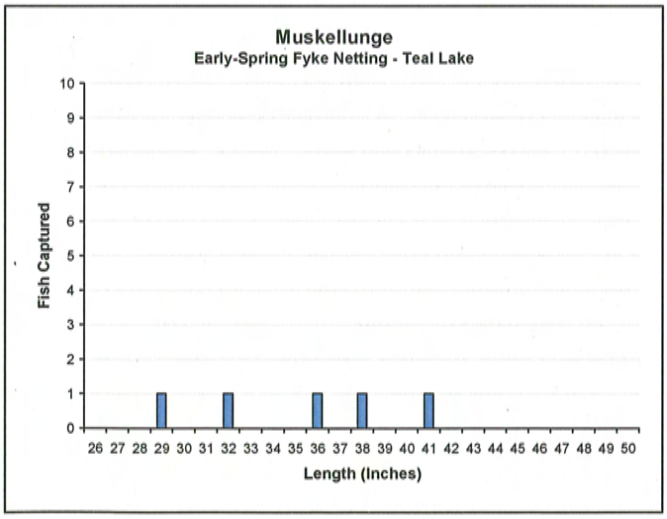


Captured 13 per net-night ≥ 10”	
Quality Size ≥ 15”	74%
Preferred Size ≥ 20”	44%



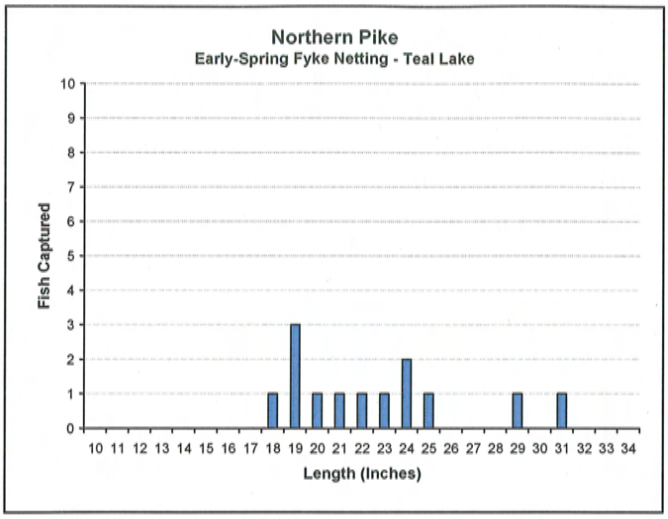
Muskellunge – Teal Lake

Captured 0.5 per net-night ≥ 20”	
Quality Size ≥ 30”	80%
Memorable Size ≥ 42”	0%



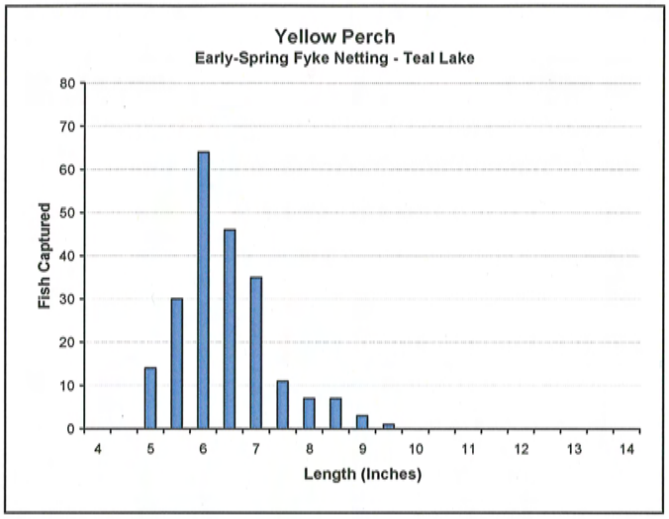
Northern Pike – Teal Lake

Captured 1.3 per net-night ≥ 14”	
Quality Size ≥ 21”	62%
Preferred Size ≥ 28”	15%

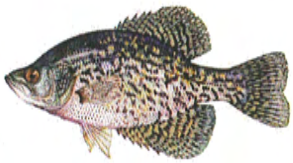


Yellow Perch - Teal Lake

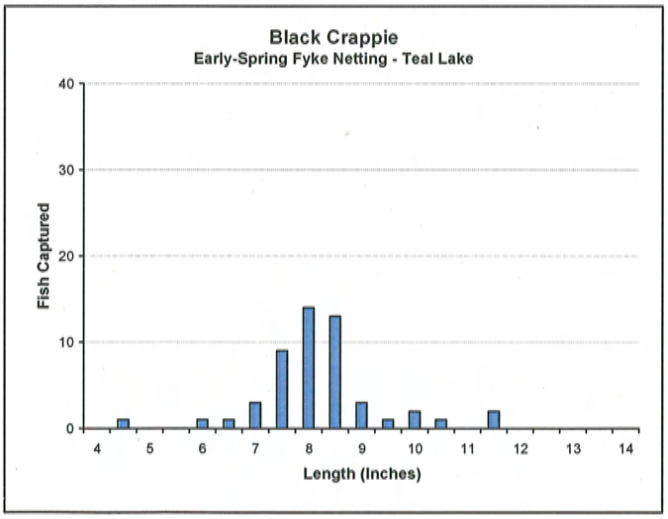
Captured 130 per net-night ≥ 5”	
Quality Size ≥ 8”	8.3%
Preferred Size ≥ 10”	0%



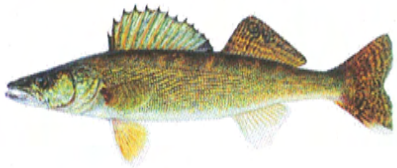
Black Crappie – Teal Lake



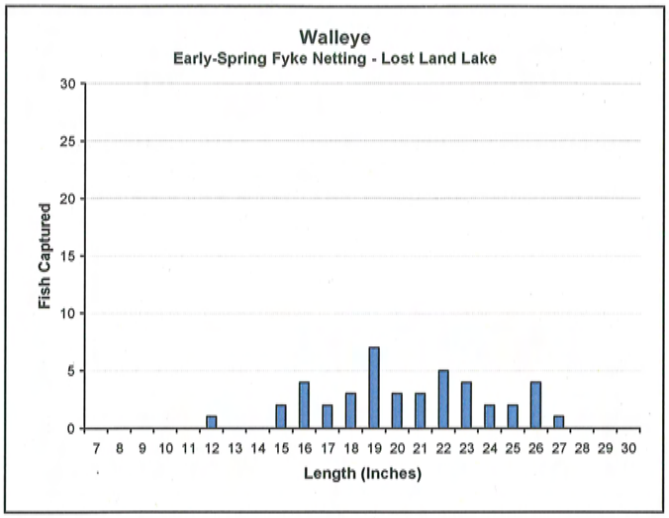
Captured 21 per net-night ≥ 5”	
Quality Size ≥ 8”	72%
Preferred Size ≥ 10”	10%



Walleye – Lost Land Lake

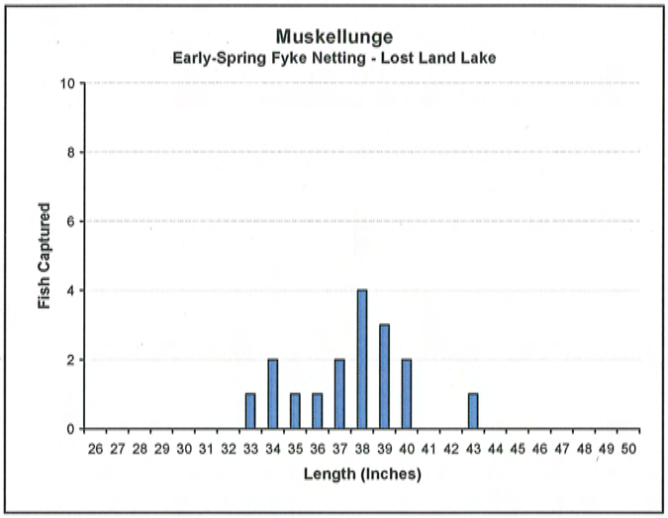


Captured 4.3 per net-night ≥ 10”	
Quality Size ≥ 15”	98%
Preferred Size ≥ 20”	56%



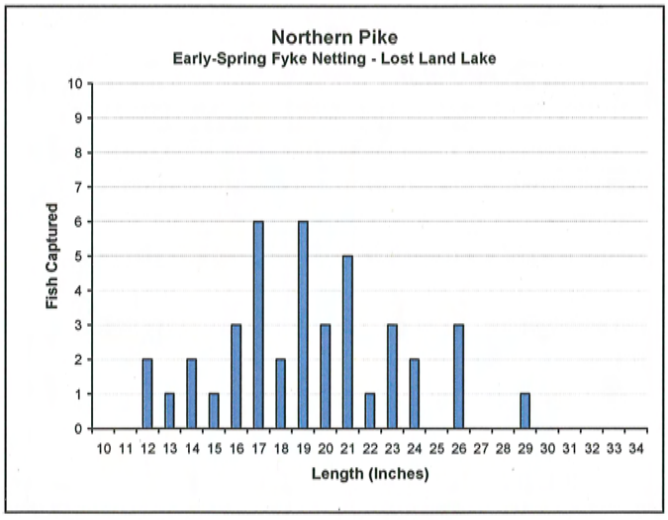
Muskellunge – Lost Land Lake

Captured 1.7 per net-night ≥ 20”	
Quality Size ≥ 30”	100%
Memorable Size ≥ 42”	5.9%



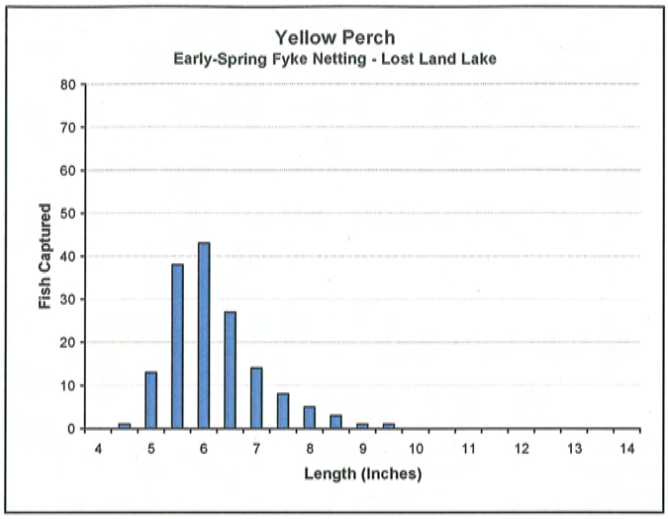
Northern Pike – Lost Land Lake

Captured 3.8 per net-night ≥ 14”	
Quality Size ≥ 21”	39%
Preferred Size ≥ 28”	2.6%



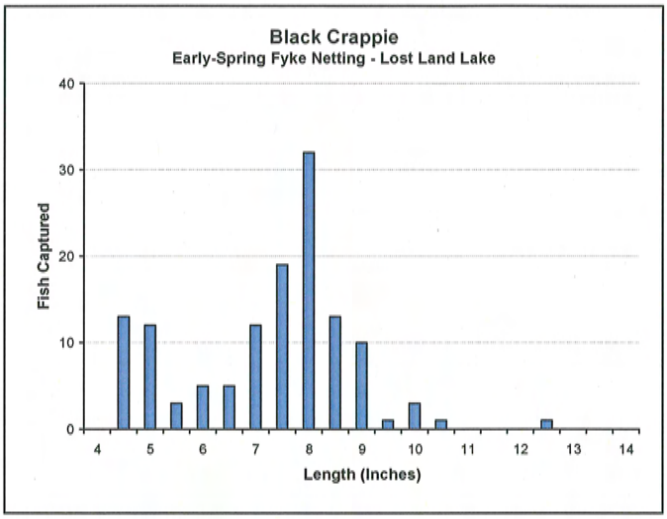
Yellow Perch – Lost Land Lake

Captured 69 per net-night ≥ 5”	
Quality Size ≥ 8”	6.5%
Preferred Size ≥ 10”	0%



Black Crappie – Lost Land Lake

Captured 26 per net-night ≥ 5”	
Quality Size ≥ 8”	52%
Preferred Size ≥ 10”	4.3%



Summary of Results

In early spring of 2010 the water level in Teal and Lost Land lakes was slightly below normal due to prolonged drought throughout the region. However, plenty of high-quality walleye spawning habitat (clean gravel and cobble) was still available. With water temperature at 50°F, our survey was well-timed for purposes of obtaining a representative sample of target species adults in likely near-shore spawning areas. Walleyes were captured at the peak of spawning activity (eggs easily released, with some females already spent). We captured many more females than males.

Our capture rates of walleye ≥ 10 inches in Teal (13 per net-night) and Lost Land (4.3 per net-night) were moderate and low, respectively. The proportions of quality-size fish ≥ 15 inches (target ranges 10-20% in Teal and 20-40% in Lost Land) were way too high in both lakes (particularly Lost Land), reflecting low recruitment of young walleyes to these populations in recent years. Low walleye recruitment and reduced predation by walleye probably contributed to our high capture rate of 5-7” yellow perch in both lakes.

Results of late spring electrofishing surveys (reported elsewhere) revealed high numbers of largemouth bass in Lost Land (traditionally dominated by largemouth bass) and Teal (very recently over-populated by largemouth bass). Because largemouth bass are thought to be effective predators on young walleyes and competitors with adult walleyes for food, their abundance is the likely cause of traditionally low walleye recruitment in Lost Land Lake and the recent decline in walleye recruitment in Teal Lake.

Our capture rate of muskellunge was relatively high in Lost Land Lake (1.7 per net-night) when compared to the average for northern Wisconsin (0.95 per net-night). Our moderate capture rate in Teal Lake (0.6 per net-night) probably underestimates the true relative abundance of muskellunge in Teal Lake, because net locations were biased toward capturing walleye. Except for a single fish in Lost Land Lake, no memorable-size muskellunge $\geq$ 42 inches were caught, perhaps indicating that our survey was a week or two early for purposes of capturing the largest females in the system. But we are reasonably confident the size distributions in our samples accurately reflect the actual size composition of muskellunge in these lakes, particularly for the more abundant males.

Capture rate of northern pike $\geq$ 14 inches was moderate (1.3 per net-night) in Teal Lake and moderately high (3.8 per net-night) in Lost Land Lake. Again, underestimation of Teal Lake northern pike relative abundance is likely due to bias in sampling locations. Neither lake had many preferred-size pike $\geq$ 28 inches, but the number of pike large enough to selectively feed on large yellow perch may contribute to low proportions (less than 10%) of quality-size perch $\geq$ 8 inches in both lakes. Neither yellow perch nor northern pike were particularly important to local stakeholders at our 2006 fishery visioning session, but a perch population capable of generating more angler interest might require more aggressive angler harvest of northern pike

In Teal and Lost Land lakes, capture rates of black crappie $\geq$ 5 inches were moderately high (21 and 26 per net-night, respectively), reflecting a high level of recruitment characteristic of lakes with low to moderate numbers of predatory walleye. Most of the crappies in both lakes were 7 to 9 inches long. Size-selective harvest by anglers may remove most crappies before they reach the preferred size $\geq$ 10 inches (only 10% in Teal and 4.3% in Lost Land, with a target range of 20-40% in both lakes).

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December 1, 2010

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December 3, 2010