



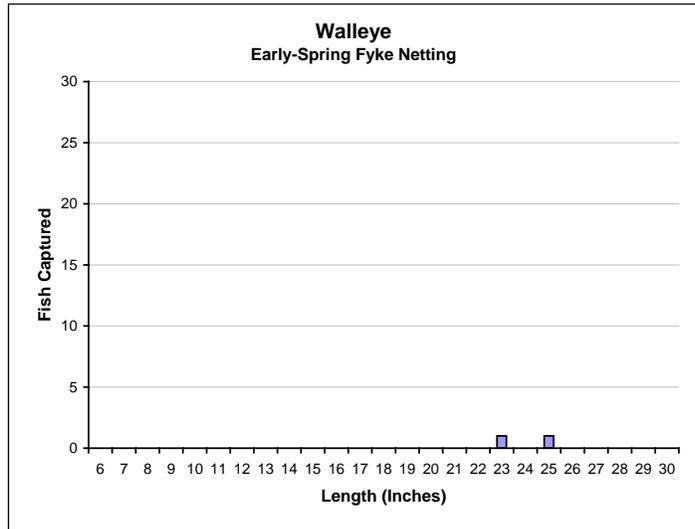
## Early-Spring Fyke Netting Survey Summary Smith Lake, Sawyer County, 2010

The Hayward DNR Fisheries Management Team conducted a fyke netting survey on Smith Lake during April 1-2, 2010 as part of our baseline monitoring program. Five nets were set overnight for two nights, resulting in 10 net-nights of effort. Primary target species were northern pike, walleye, black crappie, and yellow perch. An electrofishing survey conducted by our team in May documented the status of 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



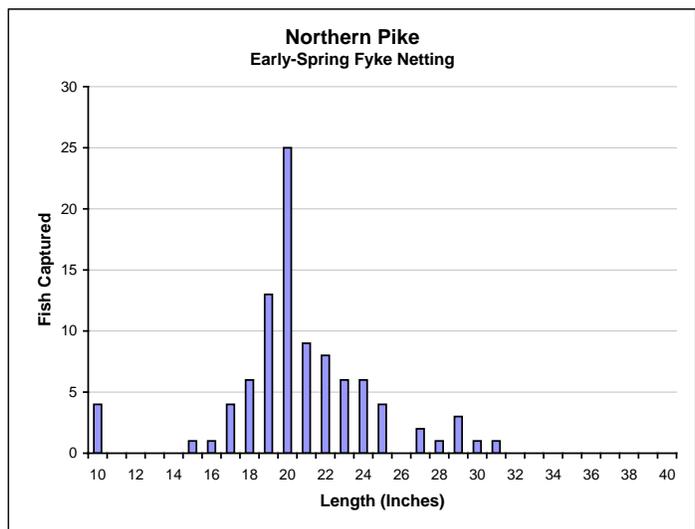
Captured 0.2 per net-night $\geq 10''$	
Quality Size $\geq 15''$	100%
Preferred Size $\geq 20''$	100%



### Northern Pike



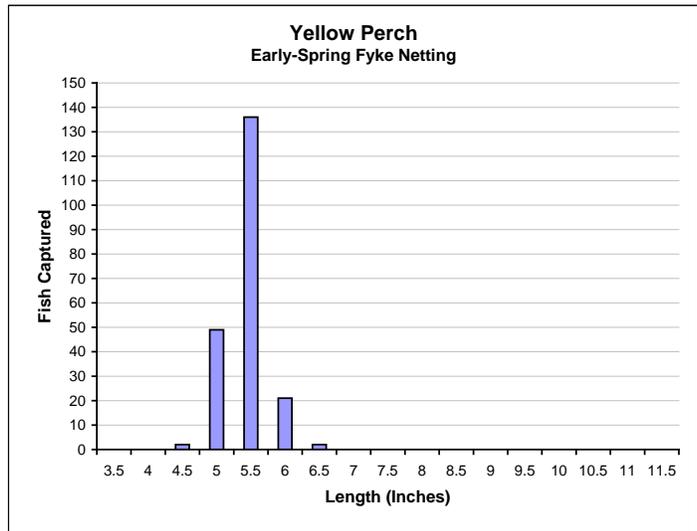
Captured 10 per net-night $\geq 14''$	
Quality Size $\geq 21''$	45%
Preferred Size $\geq 28''$	7%



### Yellow Perch



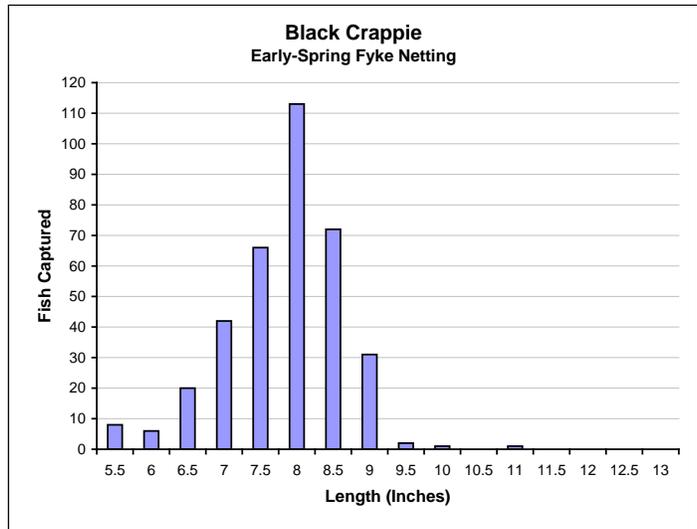
Captured 21 per net-night $\geq 5''$	
Quality Size $\geq 8''$	0%
Preferred Size $\geq 10''$	0%



### Black Crappie



Captured 37 per net-night $\geq 5''$	
Quality Size $\geq 8''$	60%
Preferred Size $\geq 10''$	1%



## Summary of Results

Water temperature was 46°F at the time of this survey, allowing for a good assessment of the northern pike, perch, and walleye populations in Smith Lake. Pre-spawn black crappies were also captured at a high rate that allowed us to characterize their status as well.

Only two walleye were captured in 10 fyke net sets during this survey. The low abundance of walleye in general and absence of small walleye in this survey suggests that natural recruitment is severely limited and recent stockings of small fingerlings has not been successful in creating a walleye fishery in Smith Lake. Competition with and predation by abundant northern pike and largemouth bass may be limiting walleye recruitment and small fingerling stocking success. There was no indication in this survey and the accompanying electrofishing survey that forage is a limiting factor for walleye success in Smith Lake. Many perch and bluegill were sampled that would be the appropriate size for walleye forage. In 2012 and 2013 large fingerling walleye were stocked and fall electrofishing showed that these fish appear to be surviving at a higher rate. A couple decades ago, Smith Lake had a walleye-dominated fish community.

Northern pike were captured in high numbers during this survey (10 per net-night). Size structure of pike was fair with many fish over 21" and some approaching 30". Some additional harvest of abundant pike under our liberal statewide regulations (5 fish daily, no length limit) may benefit pike growth rate and allow more perch to reach quality size.

Yellow perch and black crappie were captured in moderate to high numbers but had very poor size structure (no perch over 8 inches, very few crappies over 10 inches). Predation by abundant northern pike on the largest yellow perch is probably limiting the proportion of quality-size perch. Slow growth rate due to high density and size-selective harvest by anglers is probably the most influential factor contributing to the scarcity of preferred-size crappies in Smith Lake. A 10-fish daily bag limit was applied to panfish in this lake to limit harvest at a time when walleye density was high and panfish recruitment and density was correspondingly low. The lack of success of this regulation in creating quality panfishing is probably related more to size-selective predation by pike on perch and excessive recruitment of crappies and bluegill in the near absence of walleyes than to angler over-harvest.

Golden shiner, white sucker, and yellow bullhead were also captured during this survey.

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