



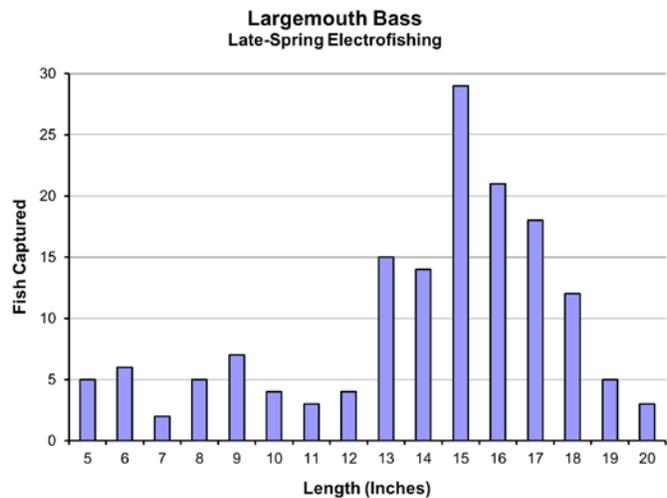
## Late-Spring Electrofishing Survey Summary Spring Lake, Sawyer County, 2012

The Hayward DNR Fisheries Management Team conducted an electrofishing survey on Spring Lake on May 11 as part of our baseline monitoring program. A total of 3.2 miles of shoreline were sampled (1 mile sub-sampled for panfish). Primary target species were largemouth bass and bluegill. A fyke netting survey conducted by our team in late March documented the status of northern pike, yellow perch, and crappie. 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.

### Largemouth Bass



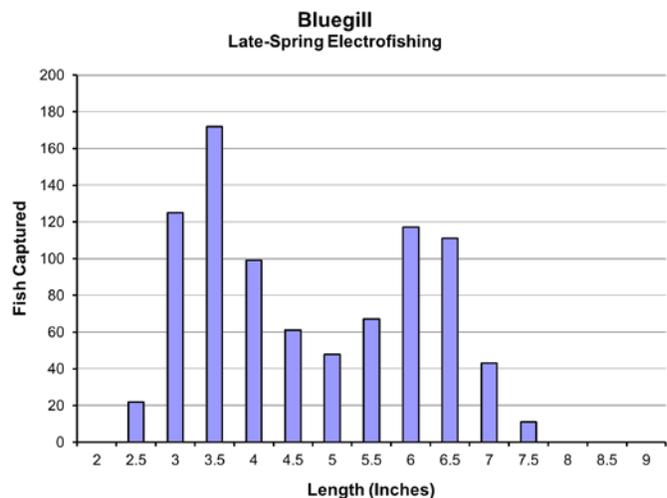
Captured 63 per mile $\geq 8''$	
Quality Size $\geq 12''$	86%
Preferred Size $\geq 15''$	63%



### Bluegill



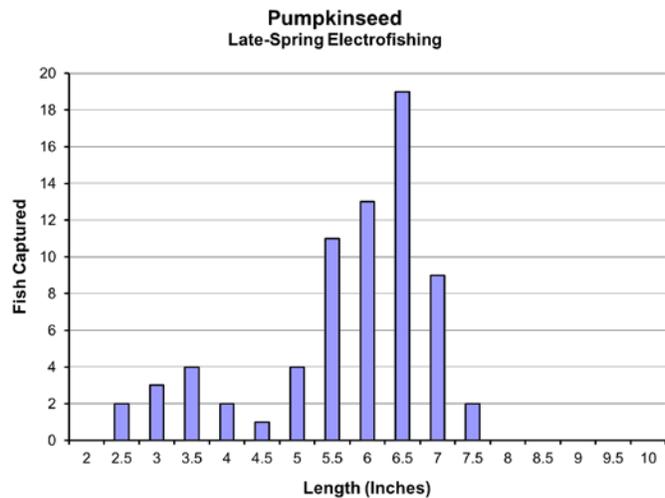
Captured 854 per mile $\geq 3''$	
“Keeper” Size $\geq 7''$	6%
Preferred Size $\geq 8''$	0%



## Pumpkinseed



Captured 68 per mile $\geq 3''$	
“Keeper” Size $\geq 7''$	16%
Preferred Size $\geq 8''$	0%



## Summary of Results

This survey was very well timed to sample adult bass with water temperature at 60°F. Bluegill and pumpkinseed sunfish were also sampled efficiently.

The largemouth bass population in Spring Lake is exceptional by any standard. Bass were captured at very high frequency (63 per mile of shoreline electrofishing), but unlike many other dense populations, size structure was also excellent (see graph). The mixed vegetative and woody habitat combined with a prey base of yellow perch and small bluegills have combined with a high voluntary catch-and-release ethic among bass anglers to create an extraordinary bass population in Spring Lake. Despite likely predation by abundant northern pike (see early-spring fyke-netting survey summary), recruitment of young bass into the population is evident based on our capture of fish 5-10 inches long. But unlike many lakes, recruitment is not overpowering to the point of limiting growth. Efforts should be made to preserve this unique fishery.

Bluegills were captured at a very high frequency. Size structure was poor, with few fish over 7 inches long, likely a result of overabundance and presumably slow growth of this species (not actually measured). While bass and northern pike are abundant, their combined predation pressure does not appear sufficient to control bluegill numbers. This could be related to predator preference for yellow perch, the lakewide abundance of aquatic plants that facilitate bluegill escape from predators, and the relatively low density of small bass (< 12 inches) that typically are most effective in thinning out new year-classes of small bluegills before they overpopulate. Previously, periodic winterkills (low oxygen during periods of extensive ice and snow cover) had kept bluegill numbers in check, resulting a good growth and size attainment. Such winterkills had not occurred in recent years until 2012-2013 when an extremely long winter caused a winterkill through oxygen depletion. It is possible that this winterkill will thin the populations of bluegill and crappie enough to increase size structure of both species.

Pumpkinseed sunfish were also sampled in this survey, and that population exhibited a similar size structure to bluegill.

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