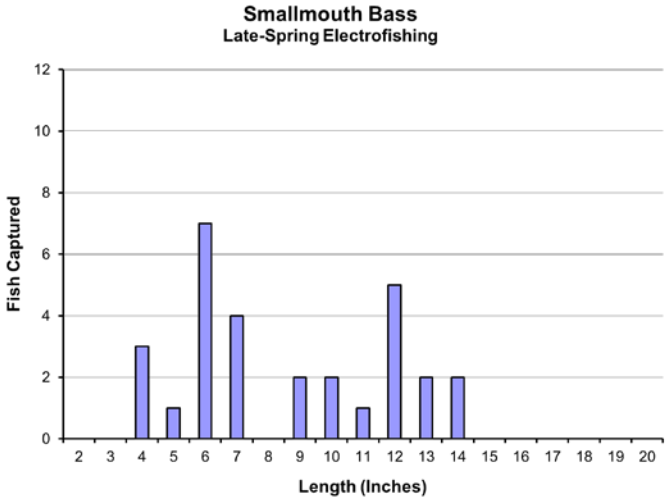
Late-Spring Electrofishing Survey Summary
Spider Chain of Lakes, Sawyer County, 2012

The Hayward DNR Fisheries Management Team conducted an electrofishing survey on the Spider Chain of Lakes during May 29-30 as part of our baseline monitoring program. A total of eight miles of shoreline was sampled (two miles sub-sampled for panfish). Primary target species were largemouth bass, smallmouth bass, and bluegill. We also obtained useful data on the status of juvenile walleye. 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.

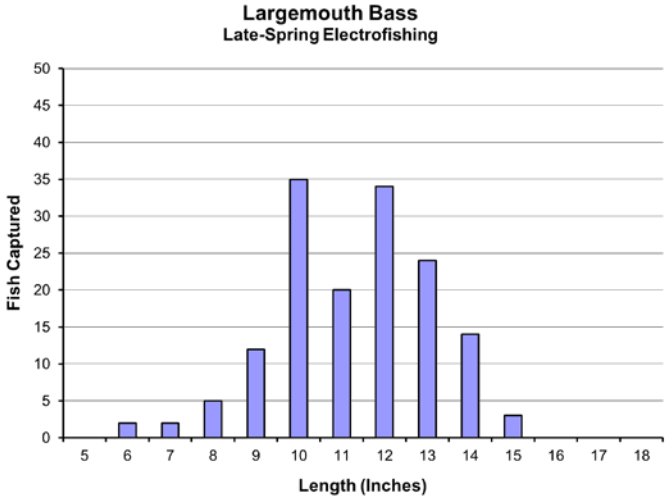
Smallmouth Bass

Captured 3 per mile ≥ 7”	
Quality Size ≥ 11”	56%
Preferred Size ≥ 14”	11%
Memorable Size ≥ 17”	0%



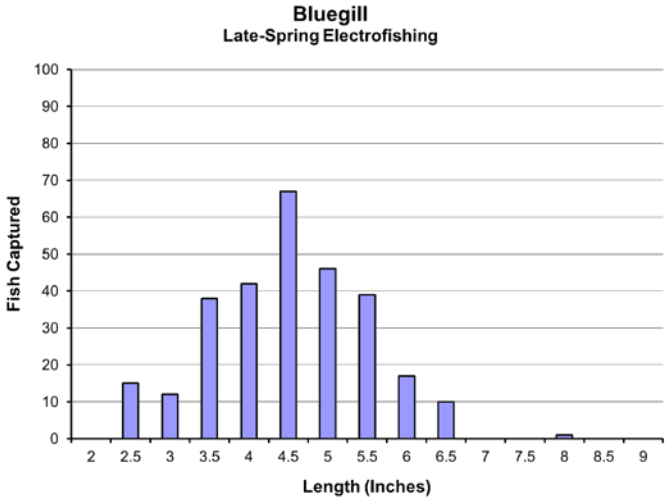
Largemouth Bass

Captured 25 per mile ≥ 8”	
Quality Size ≥ 12”	12%
Preferred Size ≥ 15”	2%



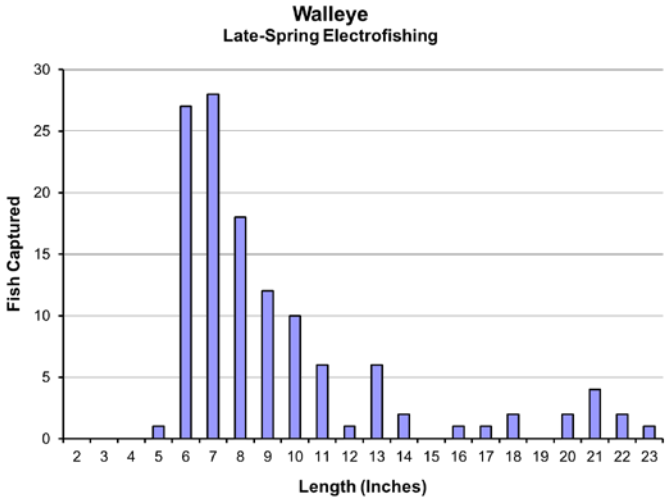
Bluegill

Captured 136 per mile ≥ 3”	
“Keeper” Size ≥ 7”	0%
Preferred Size ≥ 8”	0%



Walleye

Captured 14 per mile <10 ”



Summary of Results

Water temperature at the time of this survey was 65°F – appropriate for sampling bass and bluegills of all sizes that were occupying shallow water habitat in association with ongoing or upcoming spawning activity. Effort was spread throughout the chain with transects in Big Spider, Little Spider, and Clear lakes.

Mostly sub-legal smallmouth bass were captured and at a relatively low frequency. Habitat, forage base, and competition with largemouth bass may all contribute to limiting the abundance of smallmouth bass in the Spider Chain. While there is some rocky habitat that smallmouth bass would prefer, the predominant near-shore habitat is comprised of fine sediments and weeds, particularly in Clear Lake and portions of Big Spider Lake.

Largemouth bass were captured with moderate frequency, but their poor size structure (fish possibly dying before attaining a legal length of 14 inches) suggests that growth rate may be limited by intense competition for prey (mostly bluegills) that effectively take refuge in the over-abundant plants. However, we have not yet assessed the age and growth rate of largemouth bass in the Spider Chain, so the exact mechanism of poor size structure is not known at this time.

Bluegills were captured with moderate frequency, but there were very few fish in our sample that would be considered desirable to anglers. The current density of bluegill is likely limiting growth of that species. Abundant refuge habitat (submersed aquatic plants) makes it difficult for largemouth bass to eat enough bluegills to stimulate satisfactory growth among the survivors. It will be interesting to see how the panfish population responds to an increase in walleye abundance (through stocking), because walleyes have been shown to be a more effective control, capable of limiting numbers and improving size structure of panfish.

Juvenile walleyes were captured with high frequency in this lake. Based on a history of poor natural recruitment, we believe the small walleyes present in the Spider Chain are likely the result of intense efforts by private partners (the Spider Lake Association with help from Walleyes for Northwest Wisconsin) to stock 6- to 8-inch “extended-growth” walleye fingerlings every fall for the past few years. The last couple stockings of these fish appear to be surviving well and are now growing in the lake. Some of the earlier stocked fish are already contributing to a growing walleye fishery in these lakes. We also documented some movement of walleyes into Clear Lake, a location where they were not stocked based on predation concerns.

Report By: Max Wolter – Fisheries Biologist, Sawyer County
Edited By: Dave Neuswanger – Fisheries Supervisor, Hayward Field Unit
Approved for Posting By: Steve Avelallemant – Fisheries Supervisor, Northern District, 12/23/13