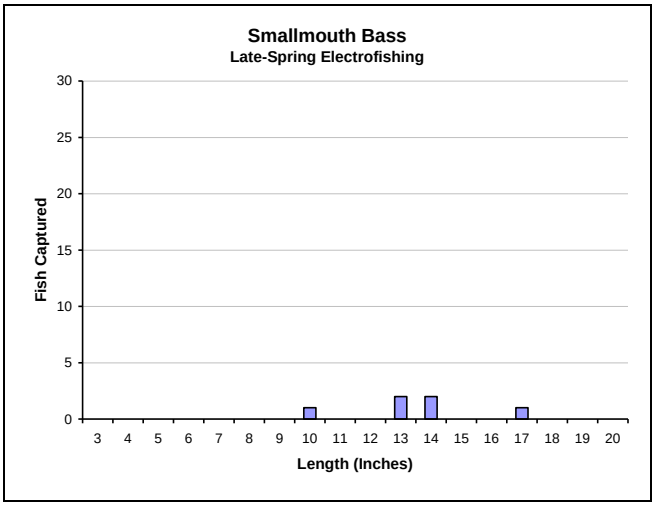
# Late-Spring Electrofishing Survey Summary
# Chippewa Flowage (West Basin), Sawyer County, 2009

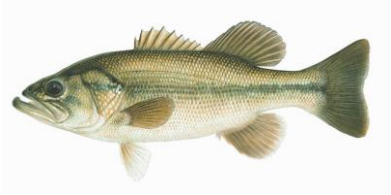
The Hayward DNR Fisheries Management Team conducted an electrofishing survey on the Chippewa Flowage (West Basin) during June 3-5, 2009 as part of our baseline monitoring program. A total of 9.1 miles of shoreline were sampled (2.3 miles sub-sampled for panfish). Primary target species were smallmouth bass, largemouth bass, and bluegill. 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

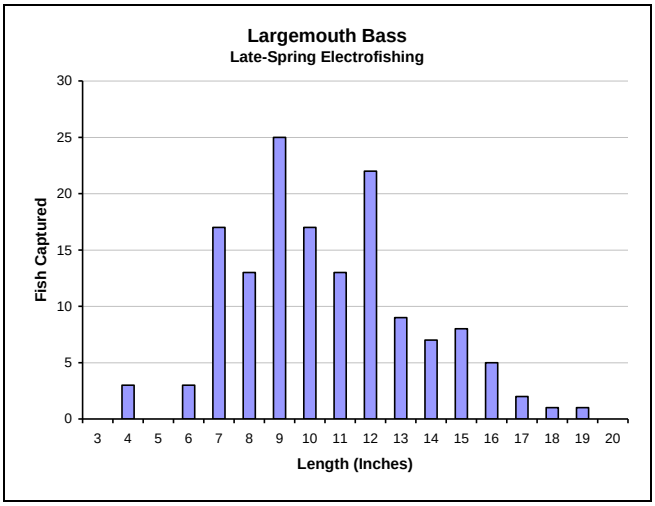
| Captured 0.7 per mile ≥ 7” | |
|---|---|
| Quality Size ≥ 11” | 83% |
| Preferred Size ≥ 14” | 50% |
| Memorable Size ≥ 17” | 17% |




## Largemouth Bass

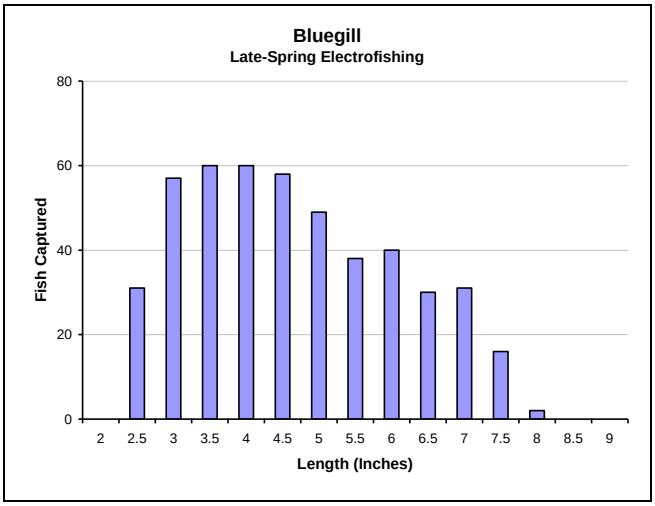


| Captured 14 per mile ≥ 8” | |
|---|---|
| Quality Size ≥ 12” | 45% |
| Preferred Size ≥ 15” | 14% |
| Memorable Size ≥ 20” | 0% |



**Bluegill**

| Captured 205 per mile ≥ 3” | |
|---|---|
| “Keeper” Size ≥ 7” | 11% |
| Preferred Size ≥ 8” | 0.5% |




## A Note on Basin Habitat Characteristics

When interpreting these results, it is important to recognize the differences between the eastern and western basins of the Chippewa Flowage, which are connected by a narrow, navigable channel spanned by the County Highway CC bridge at The Landing.

In general, the East Basin has darker, tannin-stained water, fewer aquatic plants except during times of drought, firmer substrates (more gravel and cobble), and is more heavily influenced by the many rivers and creeks that flow into it. Because of these habitat characteristics, the East Basin provides the best habitat on the Flowage for walleye, smallmouth bass, and muskellunge. In contrast, the West Basin has clearer water, more aquatic plants, and softer substrates (more silt-bottomed bays); and it functions like a group of interconnected lakes. These habitat characteristics provide some advantages to largemouth bass and northern pike. Important panfish species (yellow perch, black crappie, and bluegill) thrive throughout the Flowage.

## Summary of Results

Though water temperatures (mid to upper 60s) were within the general range conducive to sampling black basses adequately; neither weather conditions (cold fronts prior to sampling effort) nor sample site locations allowed for adequate observation of the smallmouth bass population in 2009. Capture rate of smallmouth bass ≥ 7 inches was only 0.7 per mile. Though fewer smallmouth bass were expected in the West Basin than in the East Basin, we believe this survey underestimated the true relative abundance of smallmouth bass. Not much can be inferred about size structure from such a small sample (6 fish captured).

Cold fronts and less than ideal sample locations probably caused us to underestimate the relative abundance of largemouth bass also. Despite these sub-optimal sampling conditions, largemouth bass ≥ 8 inches were captured at a moderate rate of 14 per mile – much higher than during any previous survey effort on the Chippewa Flowage. Only 14% of our catch was of preferred size ≥ 15 inches. Our observations suggest we are developing an overabundant population of slow-growing largemouth bass in areas of the Flowage that will support them (most of the West Basin and parts of the East Basin). We fear this largemouth bass population may adversely affect walleye recruitment by eating young walleyes and competing with the survivors for food. Reproduction of largemouth bass was evident, but seemingly low. Increased largemouth bass abundance is probably more a function of low mortality than of high recruitment.

Bluegills were abundant along 2.3 miles of sub-sampled shoreline (205 per mile ≥ 3 inches). While the proportion of "keeper-size" fish ≥ 7 inches was 11%, only 0.5% was of preferred size ≥ 8 inches, probably due to high, size-selective harvest by anglers participating in this increasingly popular fishery. Our 2007 Management Plan objective is to have 5-15% of bluegills ≥ 3 inches exceeding the preferred size of 8 inches. Achieving that objective may 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.

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December 9, 2011