



Summary of Fishery Surveys Bass Lake (Flambeau River State Forest), Price County, 2014

WDNR's Fisheries Management Team from Park Falls completed a hook and line angling survey in 2014 to assess the status of important fish populations in Bass Lake, the largest of five Price County lakes with the same name. Angling effort was targeted towards largemouth bass to evaluate the special regulation intended to provide quality fishing opportunity: only one largemouth or smallmouth bass may be kept and it must be at least 18 inches. We also assessed conditions to launch our boats for traditional netting and electrofishing surveys. 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. "Keeper size" is based on known angler behavior.

Survey Effort

Beginning at 12:20 p.m. on September 9th, 2014, two experienced anglers fished from a canoe on Bass Lake for 2 hours 52 minutes for a total of 5.73 angler-hours focused primarily on largemouth bass and secondarily on panfish. We used spinning tackle with rubber worms for largemouth bass and jigs tipped with worms for panfish. The weather was mostly sunny with a light wind and air temperatures from 65-70°F. Seventeen largemouth bass from 9.0-13.6 inches were kept for age estimation and mercury contaminant analysis.

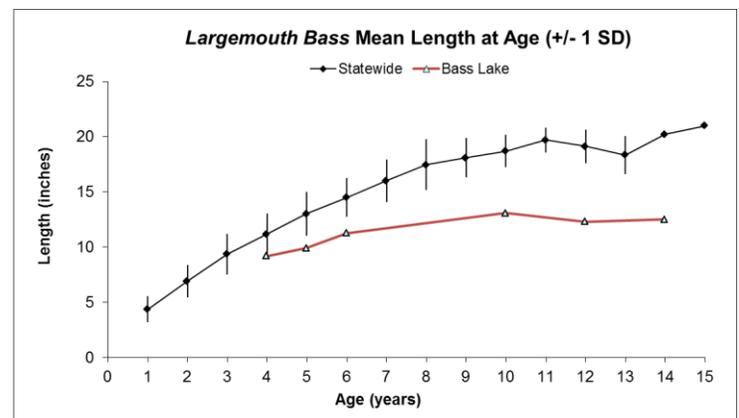
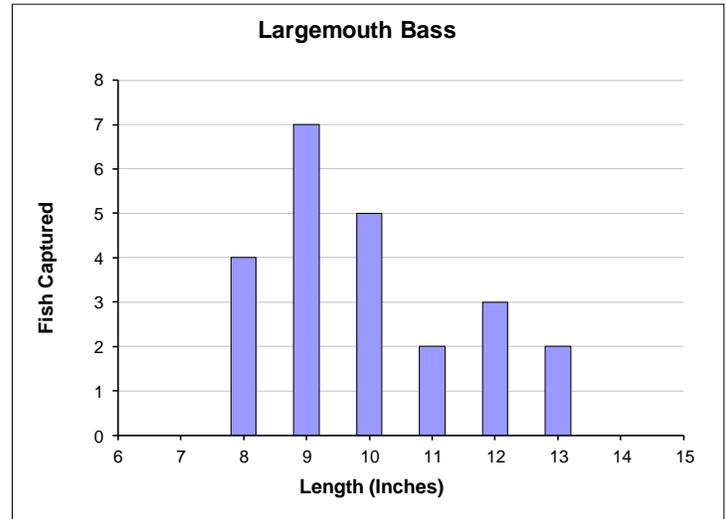
Habitat Characteristics

Bass Lake is a remote 94-acre seepage lake located entirely within the Flambeau River State Forest about 25 miles northwest of Phillips, WI. The average depth is 21 feet, and maximum depth is 45 feet. The water is moderately clear with an average secchi depth of 11 feet. The substrate is composed of 80% gravel, 10% rock, and 10% muck, supporting a moderate density of submergent and emergent vegetation. Submerged woody cover is plentiful along the shorelines. The shoreland vegetation is 40% tamarack-spruce bog and the rest is upland hardwood and pine forest. A gated, half-mile-long trail provides walk-in only access from the end of Tower Hill Road. Bass Lake has a non-motorized boat ordinance to maintain the wild setting.

Largemouth Bass



Captured 4.01 Per Angling Hour	
Quality Size $\geq 12"$	22%
Legal Size $\geq 14"$	0%
Preferred Size $\geq 15"$	0%

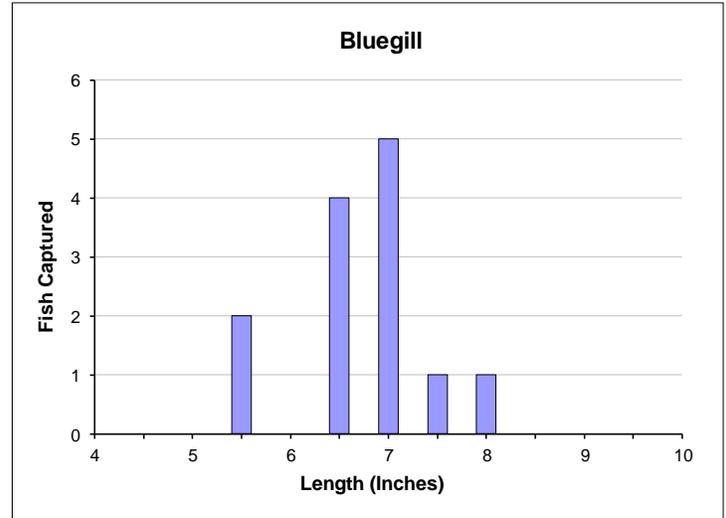


Our angling survey showed that the largemouth bass population had very poor size structure with no fish caught above the 18 inch minimum size limit. Largemouth abundance appeared to be high, and competition among one another was causing very slow growth. Age analysis using otoliths (ear bones) revealed that growth rates were well below the statewide and regional averages. Average length at age 5 was 9.9 inches (range 9.1-10.8; n=9) and only 13.1 inches at age 10 (range 12.7-13.5; n=3). We even aged one 12.5-inch largemouth bass at 14 years old! With the small bass being overabundant and slow growing, the 18 inch minimum length limit is not effective for growing large bass at this time.

Bluegill



Captured 2.27 Per Angling Hour	
Quality Size \geq 6"	85%
Keeper Size \geq 7"	54%
Preferred Size \geq 8"	8%



Bluegill size structure appears to be benefiting from predation by abundant largemouth bass. Predatory pressure seems adequate to control bluegill abundance, reduce competition, and allow bluegills to reach keeper-size. Even though our sample is small and bluegills were not targeted as intensely as largemouth bass were in this survey, the bluegill fishery appears to be doing well and meeting the size objective in the draft Fishery Management Plan (5 – 10% \geq 8"). Plans are being made for an additional survey in 2015 using nets or electrofishing gear to gain more information on Bass Lake.

We also caught four yellow perch from 7.1 to 8.1 inches long.

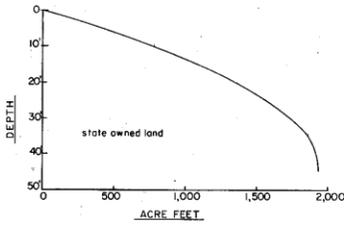
Survey data collected and analyzed by: Chad Leanna and Evan Sniadajewski-WDNR Fishery Team, Park Falls.

Written by: Chad Leanna— Fishery Technician, January 2015

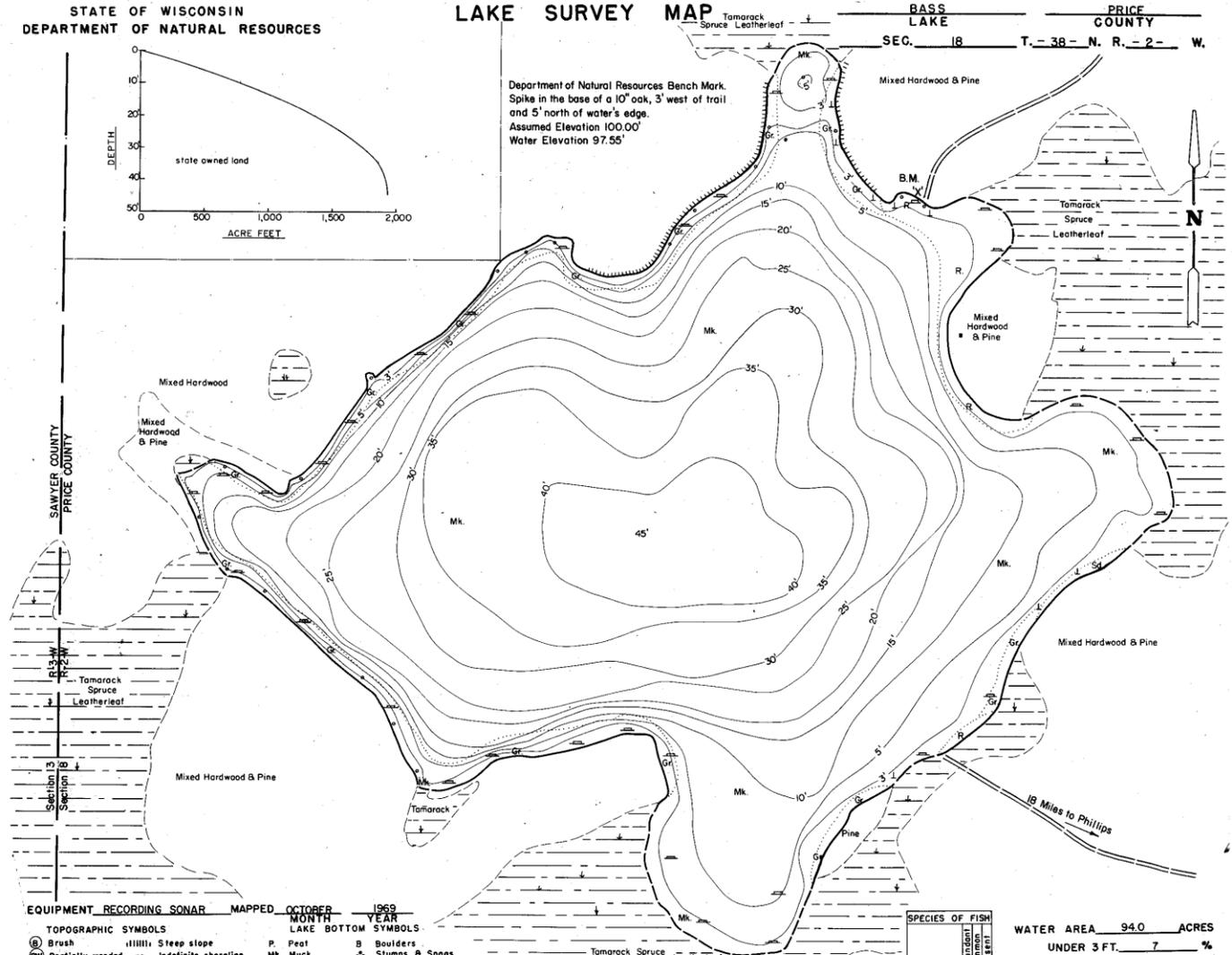
Reviewed by: Jeff Scheirer—Fishery Biologist, January 2015

Approved for web posting by: Mike Vogelsang—acting Hayward Field Unit Supervisor, January 2015

LAKE SURVEY MAP



Department of Natural Resources Bench Mark.
Spike in the base of a 10" oak, 3' west of trail
and 5' north of water's edge.
Assumed Elevation 100.00'
Water Elevation 97.55'



EQUIPMENT RECORDING SONAR MAPPED OCTOBER 1969

- | TOPOGRAPHIC SYMBOLS | | MOUTH LAKE BOTTOM SYMBOLS | |
|---------------------|-------------------------------|---------------------------|-------------------------------|
| (B) Brush | () Steep slope | P. Peat | B. Boulders |
| (PW) Partly wooded | (---) Indefinite shoreline | Mk. Muck | (S) Stumps & Snags |
| (W) Wooded | (---) Marsh | C. Clay | (R) Rock danger to navigation |
| (C) Cleared | (o) Spring | M. Marl | (T) Submergent vegetation |
| (P) Pastured | (---) Intermittent stream | Sd. Sand | (I) Emergent vegetation |
| (A) Agricultural | (---) Permanent inlet | Sl. Silt | (F) Floating vegetation |
| B.M. Bench Mark | (---) Permanent outlet | Gr. Gravel | (BS) Brush shelters |
| (#) Dwelling | (---) Dam | R. Rubble | |
| (R) Resort | (---) D.N.R. State owned land | Bc. Bedrock | |
| (C) Camp | | | |



Access Access with Parking Boat Livery
Drawn by: J. Roth
Field work by: C. Busch, G. Lund, S. Johannes

SPECIES OF FISH	ABUNDANCE	
	RECENT	PAST
Muskie		
N. Pike		
Walleye		
L. M. Bass	X	
S. M. Bass		
Panfish	X	
Trout		

WATER AREA 94.0 ACRES
UNDER 3 FT. 7 %
OVER 20 FT. 52 %
MAX. DEPTH 45 FEET.
TOTAL ALK. 50 P.P.M.
VOLUME 1,934.7 ACRE FT.
SHORELINE 1.97 MILES