



**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: BIG ARBOR VITAE

COUNTY: VILAS

YEAR: 2005

The Department of Natural Resources surveyed Big Arbor Vitae Lake, Vilas County, from April 17 through May 26, 2005, to determine the health of its fishery. The survey was designed to take a comprehensive look at the lake's fishery. Big Arbor Vitae Lake is a large, fertile drainage lake with principally gravel and sand substrate and a high-density walleye population. It has a surface area of 1090 acres, 7.8 miles of shoreline and a maximum depth of 41 feet.

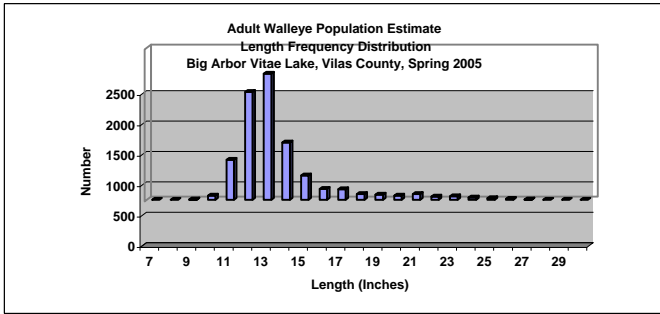


Figure 1. Length frequency distribution of 6860 adult* walleye estimated to be in Big Arbor Vitae Lake, Vilas County, based on a spring 2005 survey.

* Note: Adult walleye are defined as all sexable walleye and walleye of unknown sex ≥ 15 inches long.

Smallmouth Bass

We captured 33 smallmouth bass, 8-inches or larger, during our fyke netting and electro-fishing sampling of Big Arbor Vitae Lake. Approximately 18% (6 of 33) of those smallmouth bass were 14 inches long or larger. The biggest smallmouth bass we captured was 19.7 inches long.

Walleye

We conducted a mark-recapture survey of Big Arbor Vitae Lake's adult* walleye population from April 17-24, 2005. We captured and marked (fin clipped) 2723 adult walleye in seven days of fyke netting. Two crews sampled Big Arbor Vitae Lake with electro-fishing boats on April 24th and captured 814 adult walleye. Approximately 39% (318 of 814) of those walleye bore the fin clip given during fyke netting.

Based on those results, we estimated that Big Arbor Vitae Lake was home to 6860 adult walleye (6.3/acre). Roughly one-third (2270 of 6860) of adult walleye were 14 inches long or larger. The largest walleye we captured was a 27.7-inch female.

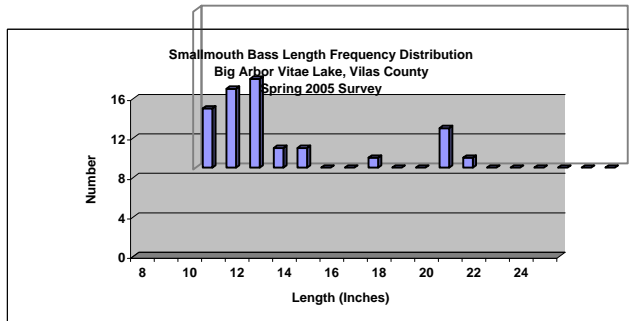


Figure 2. Length frequency distribution of 33 smallmouth bass ≥ 8 " captured during a fisheries survey of Big Arbor Vitae Lake, Vilas County, in spring 2005.

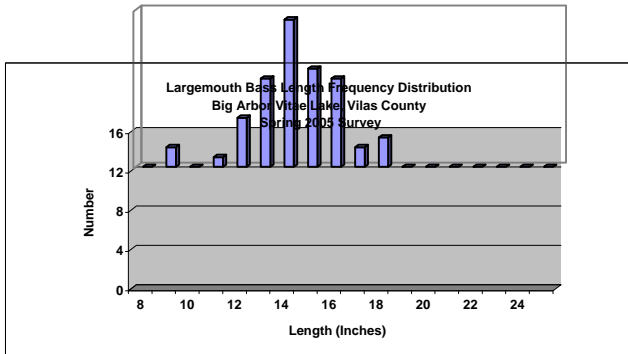


Figure 3. Length frequency distribution of 56 largemouth bass ≥ 8 " captured during a fisheries survey of Big Arbor Vitae Lake, Vilas County, in spring 2005.

Largemouth Bass

We captured 56 largemouth bass, 8-inches or larger, during our fyke netting and electro-fishing sampling of Big Arbor Vitae Lake. Nearly 70% (39 of 56) of those largemouth bass were 14 inches long or larger. The biggest largemouth bass we captured was 18.7 inches long.

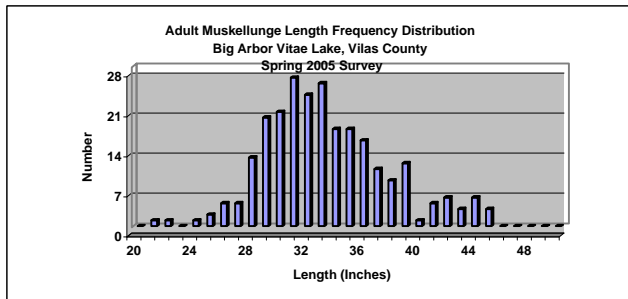


Figure 4. Length frequency distribution of 237 adult* muskellunge captured during a fisheries survey of Big Arbor Vitae Lake, Vilas County, in spring 2005.

Muskellunge

We captured 237 adult* muskellunge during our fyke netting and electro-fishing sampling of Big Arbor Vitae Lake. Nearly 42% of the adult muskellunge (99 of 237) we captured were 34 inches long or larger. Approximately nine percent of adult muskellunge (21 of 237) were 40 inches long or larger. The largest muskellunge we captured was a 45.1-inch female.

* Note: Adult muskellunge are defined as all sexable muskellunge and muskellunge of unknown sex \geq 20 inches long.

Other Species

We captured ten species of fish in our fyke netting and electro-fishing sampling of Big Arbor Vitae Lake in addition to the game fish mentioned above. Yellow perch were abundant in our fyke net catches. Black crappie, bluegill, pumpkinseed and rock bass were common in our catch. We also caught bowfin (dogfish), burbot, golden shiner, northern pike (one 24.3-inch male) and white sucker. Young-of-year walleye will be sampled in fall 2005. Additional sampling with fyke nets is planned for spring 2006 to capture muskellunge and complete a population estimate.

We are also conducting a creel (angler harvest) survey on Big Arbor Vitae Lake this year. Creel clerk Lynn Robinson will count and interview anglers and examine their catch throughout the 2005 open-water fishing season.

Table 1. General Fishing Regulations for Big Arbor Vitae Lake, Vilas County, 2005

FISH SPECIES	OPEN SEASON	DAILY LIMIT	MINIMUM LENGTH
Walleye	May 7 - March 5	3	No minimum, only one over 14"
Largemouth and Smallmouth Bass	May 7 - June 17 (C&R) June 18 - March 5 (Harvest)	None 5 in total	14 inches
Muskellunge	May 28 - Nov. 30	1	34 inches
Northern Pike	May 7 - March 5	5	None

A brief summary of selected fishing regulations for Big Arbor Vitae Lake is included above (Table 1). While the regulatory information provided was current at the time the surveys were conducted, it is not comprehensive and should not be used as a substitute for the current fishing regulation pamphlet. You may obtain a copy of current fishing regulations when you purchase your fishing license, or download a copy from our web site at:

<http://www.dnr.state.wi.us/org/water/fhp/fish/>

This report is interim only; data and findings should not be considered final. Results of creel surveys should be available by June 2006. If you are interested in a summary of the creel survey or want an update on this year's fyke netting and electro-fishing survey results, contact:

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For answers to questions about fisheries management activities and plans for Big Arbor Vitae Lake, Vilas County, contact:

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