Belleville Lake
Wayne County, T3S R8E Sec 19-24
Huron River Watershed, Last Surveyed May 2012

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Environment

Belleville Lake is a 1,270-acre impoundment of the lower Huron River in western Wayne County, Van Buren Township. The City of Belleville is located centrally along its southern shore and the City of Ann Arbor is about 10 miles to the northwest further upstream along the Huron River. The impoundment was created by installation of a hydroelectric dam on the river just west of Haggerty Road in the early 1900's. Named the French Landing Dam, this structure continues to be operated as an electricity-generating facility and is subject to federal regulations. The impoundment begins at Rawsonville Road about 1 mile downstream of the Ford Lake dam. It extends approximately 8 miles eastward to the French Landing Dam just upstream of Huron River Drive and west of Haggerty Road (Figure 1). The Huron River exits to the east through the French Landing Dam, and eventually discharges into Lake Erie about 28.5 miles downstream. The Flatrock Dam, located about 18 miles below the French Landing Dam, is the only significant dam between Belleville Lake and Lake Erie. A denil-style fish passage structure at the Flatrock Dam allows many fish species access from Lake Erie upstream to the French Landing Dam.

Belleville Lake is located in the lower portion of the Huron River watershed on the Lake Erie lake plain. The watershed above the lake is geologically composed of approximately equal parts moraine and outwash/alluvium/fluvial morphology. Land use is roughly 32% urban, 26% agricultural, 22% forested, and 16% wetland. This "upper watershed" of approximately 750 square miles contains a multi-branching pattern of tributaries, small pothole lakes, and numerous swampy areas (Hay-Chmielewski et al 1995).

The lake is divided into two major basins by Belleville Road (Figure 1). There is a small, minor basin immediately west of Belleville Road with the main western basin upstream (west) of that. The eastern basin is downstream (east) of Belleville Road. The western basin is mostly less than 10 feet deep with a maximum depth just over 20 feet. The old river channel winding through the western basin provides most of the deeper water. Numerous stumps and debris are found in the westernmost portion of this basin and boaters must be careful. Slightly deeper water is found in the eastern basin with maximum depths of over 30 feet, and much of the basin is in the 10-20 feet depth range. The deepest areas in the eastern basin coincide with the old river channel as well as the area just upstream of the dam.

A shoreline habitat survey conducted in July and September of 2012 estimated approximately 57,000 feet (10.8 miles) of shoreline around the western basin with 266 houses and 268 docks of various sizes. About 55% of the shoreline around this basin was armored with a total of 269 submerged trees or about one tree per 212 feet of shoreline. The eastern basin had about 41,000 feet (7.8 miles) of shoreline with 286 houses and 218 docks. About 88% of the shoreline in this basin was armored with a total of only 80 submerged trees or one tree per 512 feet of shoreline. Research indicates that development of more than about 25% of a lake's shoreline has detrimental effects on a fish community through nearshore habitat degradation associated with the development and a reduction in woody

material recruitment into the water (Neal and Soulliere 2006). Both of the basins on this lake have 2-3 times this recommended maximum development level. The amount of submerged, nearshore woody material is very low in the western basin and even lower to almost nonexistent in the more highly developed eastern basin.

There is a DNR boat launch located in roughly the center of Belleville Lake's eastern basin and another has been developed at the extreme western end of the lake off of Rawsonville Road (Figure 1). Shore fishing occurs at both boat launch locations with two fishing docks installed at the Rawsonville Road site. Boat launching is also available at a private marina near the eastern end of the lake. There is a township park (French Landing Park) with shore fishing access and a fishing pier off Haggerty Road at the extreme eastern end of the lake near the dam.

Limnological samples were collected on September 13, 2012, and oxygen/temperature/pH profiles were taken in both the east and west basins that same day. Neither basin was thermally stratified at the time of this sampling (Figure 2). Temperatures ranged from 73.4 F at the surface down to 72.9 F near the bottom in the western basin and from 75.8 F at the surface down to 73.2 F near the bottom of the eastern basin. The eastern basin was also not stratified with respect to dissolved oxygen levels, but the levels did begin dropping steadily below about 9 feet, dropped below the level acceptable to fish of 4.0 ppm at about 16 feet, and reached the lowest levels of less than 0.5 ppm near the bottom at 27 feet. Dissolved oxygen levels were stratified in the western basin despite it being the shallower of the two major basins. They dropped sharply from 6.0 ppm at 11 feet down to 3.7 ppm at 15 feet and continued to decrease to 2.5 ppm near the bottom at 18 feet. Both basins were similar in that dissolved oxygen levels dropped below that level normally acceptable to fish (4.0 ppm) by 15-16 feet of depth.

History

This impoundment was treated with rotenone in 1973 to eliminate the excessive carp population. To achieve this goal, all other fish had to be removed also. It was then restocked with gamefish. Subsequently, one of the best fisheries in the area for walleye, bass, tiger musky, bluegill, and crappies quickly developed. Surveys from 1988 through 1992 continued to show good walleye, bass, and crappie populations. The lake received regular stockings of tiger musky through 1991 (when the tiger musky program was halted statewide) and walleye through 1983. Regular walleye stocking was restarted in 1993 due to a significant drop in catch noted during the 1992 survey. This stocking program has continued on a regular basis and is currently every other year (Table 1). Yearling channel catfish have also been stocked for several years. These stockings, in addition to providing a fishery, were also meant to bolster predator populations to control the white perch and gizzard shad whose numbers seemed to be rapidly rising with potential effects on the desirable panfish such as crappie and bluegills. Muskellunge stocking was restarted in 1998 using pure strain northern musky (fall fingerlings) in an attempt to re-establish an inland muskellunge fishery in Southeast Michigan. This was halted after 2003 when it was discovered the muskies migrated downstream through the dam and could potentially mix with the Great Lakes strain muskellunge that migrate upstream from Lake Erie in spring. Subsequently, Great Lakes strain muskellunge have been requested for stocking in Belleville Lake and the first stocking of 2,500 fall fingerlings occurred in fall of 2012.

The last general fish survey of Belleville Lake was in 1999 using trap and gill nets. Bluegill size structure was average to good with about 10% over 8 inches and growth rates above average. Black

crappie numbers were very low, but with excellent growth rates. Channel catfish comprised more than a third of the catch with growth above average. White bass and walleye were common, but not too abundant, with the walleye growth rates 2 inches above the state average. The walleye CPE of 2.3 fish per trap net lift was slightly better than other lakes in Southeastern Michigan with acceptable walleye fisheries. Carp, gizzard shad, and white sucker also comprised a significant portion of the survey catch.

An angler creel survey was conducted from April through October of 2005 (Braunscheidel 2009). Total boat effort was estimated at 45,875 angler hours and 11,531 trips. Shore fishing was estimated as 24,409 angler hours and 10,370 trips for a total angling effort of over 70,000 angler hours with almost 22,000 angler trips. A study of creel surveys conducted from 2000 through 2006 on 20 large, inland Michigan lakes showed Belleville Lake to have the highest fishing pressure per acre of any lake in the study. Fish catch rates were comparable to many of the lakes in the study, 0.62 fish/hr or 34.7 fish/acre for Belleville Lake compared to an average of 1.17 fish/hr or 27.5 fish/acre for the other lakes. Major fish species caught by anglers during this creel survey (from highest to lowest numbers) included smallmouth bass, bluegill, walleye, largemouth bass, white bass, and channel catfish for a total estimated catch of over 43,000 fish.

Current Status

A fish community survey was conducted on Belleville Lake in May and June of 2012 by DNR Fisheries Division as part of the statewide, random lakes, Status & Trend program. According to the protocols of this program, a variety of sampling gear was used including 3 large-mesh fyke nets, 1 standard inland trap net, 2 experimental gill nets, a boomshocker, and a 25-foot minnow seine. During the weeks of May 14-18 and May 21-25, 2012, the trap, fyke, and gill nets were each set for up to four nights in each of the two major lake basins. Due to the large size of the basins and staff limitations only one basin could be sampled each week. The west basin was sampled the first week and the east basin during the second week. All nets were set in one of the two lake basins during each week. Six seine hauls were conducted during the netting period (three in each basin) and four electroshocking stations (two in each basin) were sampled during the night of June 7, 2012. The goal of this survey included evaluating the current fish community and determining future management needs for the fishery.

All gear combined caught a total of 4,009 fish for an estimated total weight of 1,752 pounds and was comprised of 28 species (Table 2). Panfish such as bluegill, black and white crappie, pumpkinseed, rock bass, and yellow perch were the most numerous accounting for 68% of the total catch by number and 23% by weight. Gizzard shad made up 18% of the total catch by number and over 16% by weight. Large sport fish species such as channel catfish, largemouth and smallmouth bass, walleye, and white bass comprised only 7% of the catch by number, but 30% by weight. Large, non-sport fish species such as carp, bowfin, white sucker, and longnose gar made up 3.5% of the total by number and 29% by weight. There was also a variety of small, forage fish species collected including brook silverside, emerald shiner, golden shiner, logperch, spotfin shiner, and spottail shiner. Other fish species caught included black and brown bullhead, hybrid sunfish, round goby, and white perch.

Bluegill were the most abundant sport fish caught accounting for over 61% of the total catch by number and 19% by weight (Table 2). They averaged 5.9 inches with 45% of the catch exceeding the minimum size acceptable to anglers of 6 inches and 1.5% (30 fish) over 8 inches (Table 3). Growth

was good with the mean growth index 0.8 inches above the state average based on length-at-age data (Table 4). The bluegill population was also evaluated using Schneider's Index (Schneider 1990). This index provides a relative measure of the quality of the bluegill fishery in a lake based on a scale of 1-7, with 7 being the best. The bluegill in Belleville Lake received an index of 4.0 which equates to a "satisfactory" rating.

Black crappie was the next most abundant sport fish with the 101 individuals collected accounting for 2.5% of the total catch by number and 2.4% by weight (Table 2). They averaged 8.8 inches with 87% exceeding the minimum size acceptable to anglers of 7 inches, but only 15 fish exceeded 10 inches in length (Table 3). Their mean growth index of +0.1 (Table 4) indicated growth was reduced from the last survey in 1999 (+2.1), but still about equal to the state average.

Other panfish species with a significant presence included pumpkinseed (61 fish), rock bass (20 fish), and yellow perch (19 fish). These species averaged only 6-7 inches with few large individuals and overall low numbers.

Channel catfish was by far the most abundant of the larger sport fish species. They comprised 3% of the total catch by number and 22% by weight with an average length of 20 inches and ranged in size from 7 to 27 inches (Table 2 and Table 3). Based on length-at-age data (Table 4), they were growing just slightly below the state average with a -0.6 mean growth index.

Only two other large sport species were collected in significant numbers. The 81smallmouth bass caught ranged from 1 to 17 inches with an average length of 10.8 inches, and 13 fish exceeding the minimum legal size limit of 14 inches (Table 3). Growth rates were slightly below the state average with a -0.8 mean growth index (Table 4). The 41 walleye caught ranged from 6 to over 25 inches with an average length of 16.6 inches, and 30 fish exceeding the minimum legal size limit of 15 inches (Table 3). Walleye growth was slightly better than the state average with a +0.8 mean growth index (Table 4).

Other large sport fish collected included 12 white bass (6-16 inches), and 5 largemouth bass (9-15 inches) (Table 2). Anglers regularly report good numbers of largemouth bass in the lake despite the low catch in this survey. This species is known to exhibit strong net avoidance and it is not unusual for them to be under-represented in surveys.

Larger, non-sport species caught included 65 carp (15-28 inches), 43 white sucker (6-15 inches), 30 longnose gar (24-36 inches), 3 bowfin, and 1 white perch (Table 2). Overall these species accounted for 2.6% of the total catch by number and 29% by weight.

A diverse range of forage fish species was also observed. Those species collected in significant numbers included gizzard shad (732 fish), emerald shiner (27), spotfin shiner (23), brook silverside (21), logperch (14), golden shiner (13), and spottail shiner (7) (Table 2). The majority of the gizzard shad captured (98%) were over 9 inches long at which point they become unavailable to all but the largest predator fish. Gear selectivity and the timing of this survey tends to under represent smaller sizes of this species. Large schools of smaller gizzard shad (<4 inches) are frequently observed around the shore of the lake.

Belleville Lake is one of the few inland lakes in southeastern Michigan with an established population of the invasive round goby. These fish have become very abundant in the lake and gear used to capture smaller size fish collected 36 individuals 1-5 inches long (Table 2).

Analysis and Discussion

Similar to previous surveys, bluegill continue to be the most abundant fish in the catch, but catch rates in 2012 were much higher than previous surveys (Table 5). The trap/fyke net catch per unit effort (CPE) of 105 fish per net night was more than 5 times that from the 1992 survey and ten times the 1999 survey. This high abundance was also reflected in the 2005 creel survey that showed the total catch of bluegill (13,500 fish or 31% of the total catch) was among the highest of any fish species (Braunscheidel 2009).

The average lenth of bluegill (5.9 inches) was a half inch less than in 1999 and more than an inch less than in 1992 (Table 5). The steady decrease in average length correlates with the Schneider Index steadily decreasing from 5.8 in 1992, to 4.3 in 1999, and down to 4.0 in 2012. Growth has remained good over this same period (Table 5), so most of this decrease in the overall bluegill size is due to the smaller percentage of larger (>8 inches) and older (>5 years old) fish in the population. Only 30 of the 2,461 bluegill captured in the 2012 survey exceeded 8 inches (6 years old) (Table 3).

Black crappie size and abundance were very similar to the 1999 survey, but well below the 1992 survey (Table 5). Growth decreased compared to 1999 (+0.1 mean growth index vs. +2.1 in 1999), but was still slightly above the state average. Historically, crappie were much more abundant and were the most frequently caught panfish in Belleville Lake. Creel surveys from 1976-1978 reported an annual estimated catch of over 110,000 crappie (71% of the total catch) (Laarman 1979) compared to the 2005 creel survey total catch of just 565 fish (1.3% of the total catch) (Braunscheidel 2009).

Channel catfish continue to be a popular sport fish species in Belleville Lake with good numbers of decent size fish (Table 3). Catch rates have declined from the 1999 survey (Table 5), but average sizes are larger and they comprise a large portion of the fish biomass in the lake (over 20%) helping to keep the fishery's predator-prey relationship in balance. The age composition analysis (Table 4) shows all age classes from age 2 through age 12 are present in good numbers even though catfish were only stocked 3 times since 1998 (Table 1). There appears to be significant natural reproduction of channel catfish occurring in Belleville Lake. Of particular interest to anglers, according to the 2011-2012 Fish Consumption Advisories issued by the Michigan Department of Community Health, there are currently no restrictions on consumption of channel catfish from this lake. However, recent changes in how consumption advisories are determined may result in reduced consumption recommendations for this species in Belleville Lake.

Smallmouth bass are also a very popular sport fish as shown from the 2005 angler creel survey (Braunscheidel 2009). The estimated 2005 total catch of over 13,500 smallmouth bass (31% of the total catch) was equal to the total bluegill catch as the most caught species in that survey. This 2012 survey shows that fair numbers of legal-size smallmouth bass are present (16% of fish caught) with growth that is typical for this part of the state. Although the size of the lake can make it difficult for the average angler to find fish meeting the minimum size limit, legal size smallmouth bass are present and the lake supports a good fishery for this species.

The walleye population, established through the stocking program, also draws a good number of anglers with over 7,000 walleye estimated caught in 2005 according to the creel survey. With good growth rates and a consistent stocking program, this lake serves as a more accessible alternate to Lake Erie for smaller boat owners desiring to pursue walleye in southeastern Michigan. The age composition analysis also shows there are several year classes present from non-stocking years (Tables 1 and 4). While there may be some natural reproduction occurring in the short stretch of river at the upper end of the lake, most likely these fish have come down from Ford Lake where high levels of natural reproduction ahve been documented. Catch rates from the 2012 netting are somewhat lower than in 1999 (Table 5) which tends to indicate a smaller walleye population. However, catch rates from these two surveys cannot be compared directly since different net types were used and the net locations were determined using different methodologies. The catch rates from the randomly placed fyke nets in the 2012 sampling are comparable with other area lakes that support fishable populations of walleye.

This is one of only a few inland lakes with an established population of white bass. While not very abundant (only 12 fish were caught), a few white bass were large enough for anglers to harvest (11-16 inches) (Table 3). Another sport fish species, largemouth bass, is also present in moderate numbers. Only five largemouth bass were captured during the 2012 survey, but this species exhibits strong net avoidance and is often under-represented in typical surveys. Knowledgeable anglers targeting them are able to regularly catch legal-size fish up to 3-5 pounds.

There is an excellent population of forage fish in the lake including large numbers of gizzard shad as well as several native minnows and shiners. While young shad (2-5 inches) provide food for all sizes of predators, there is also an abundant supply of larger shad (9-10 inches) for those predators needing large prey items such as the older catfish, walleye, and bass. The recently initiated stocking program of Great Lakes Muskellunge should also benefit from these larger shad.

Also present in Belleville Lake is a significant population of larger, non-game fish species. Carp, white sucker, and longnose gar comprise almost a third of the fish biomass collected in the 2012 survey. Previous efforts to reduce the populations of these fish (see 1973 rotenone treatment in history section), especially the carp, have been unsuccessful and they will continue to be a major part of the fish community.

While not found in the Huron River system upstream of the lake, round gobies have become established in Belleville Lake. Whatever the pathway was that brought them into the lake, they are now a part of the system. They are present in large numbers and while a nuisance to bait anglers, they are also part of the forage base of the lake. Their presence here will likely result in them eventually becoming established in the Huron River below Belleville Lake as well.

Management Direction

The decline in the overall quality of the bluegill fishery over the past few surveys is a concern since they are one of the most targeted sport fish species in the lake. One of the factors likely contributing to this decline could be the large percentage of the fish biomass comprised of predator species. Channel catfish are efficient predators that consume large quantities of smaller fish such as bluegill and channel catfish made up the largest portion of the predator biomass captured during the 2012 survey. In an effort to reduce the amount of catfish in the lake, and since they appear to be naturally reproducing, the

stocking program for this species has been halted. This action will allow catfish numbers to gradually drop to a somewhat lower, self-sustaining level and reduce the predation pressure on forage species such as the bluegill. Future monitoring of Belleville Lake's fish community will include evaluating this change in the fishery management program.

Declining numbers and size of black crappie in Belleville Lake have also been observed compared to historical conditions. This seems to be part of a general decline in crappie fisheries throughout this part of the state. Efforts have been initiated to look into the overall status of crappie populations in Southern Michigan and hopefully this will result in some answers as to how to reverse this trend.

A very popular walleye fishery has developed as a result of the stocking program that was reinstated in 1993. The 2012 survey found good numbers of walleye in excellent health and with good growth rates. The 2005 creel survey shows how popular this fishery has become. Although some scheduled stocking was missed due to disease issues, reinstating and continuing the alternate year stocking program should restore and maintain this fishery.

The bass population in Belleville Lake appears to be healthy and supports a popular fishery. No further management actions directed at the largemouth and smallmouth bass populations are necessary at this time.

Historically this lake supported an excellent muskellunge fishery through the tiger muskellunge stocking program. This fishery disappeared when the program was discontinued statewide in 1991. Stockings of northern muskellunge in 1998 and 2000 showed good survival and growth, but the discovery that these fish migrated downstream through the dam resulted in stopping this stocking program so they did not mix with the Great Lakes Muskellunge that seasonally migrate up the Huron River from Lake Erie. With the state initiating a Great Lakes Muskellunge rearing program in 2011, Belleville Lake was proposed as a candidate for creating an inland fishery for this species due to its excellent forage base of gizzard shad and the successful survival and growth of the northern muskellunge previously placed here. Since bluegills are not a favored forage species for muskellunge, the development of a muskellunge population will not increase the predation pressure on this important sport species. A Great Lakes Muskellunge stocking program was initiated in Belleville Lake in 2012 with the stocking of 2,500 fall fingerlings. Monitoring of these fish and any subsequent stockings will be a part of the fishery management for Belleville Lake.

References

Braunscheidel, J. 2009. Angler Creel Survey of Belleville Lake, Wayne County, 2005. Michigan Department of Natural Resources, Fisheries Division.

Laarman, P. 1979. Evaluation of a Chemical Reclamation and Restocking Program on the Huron River in the Detroit Metropolitan Area. Michigan Department of Natural Resources, Fisheries Research Report No. 1866. June 21, 1979.

O'Neal, R.P., and G.J. Soulliere. 2006. Conservation guidelines for Michigan lakes and associated natural resources. Michigan Department of Natural Resources, Fisheries Special Report 38,

Ann Arbor.

Schneider, J.C. 1990. Classifying bluegill populations from lake survey data. Michigan Department of Natural Resources, Fisheries Technical Report 90-10, Ann Arbor, MI.

Figure 1. Map of Belleville Lake, Wayne County.

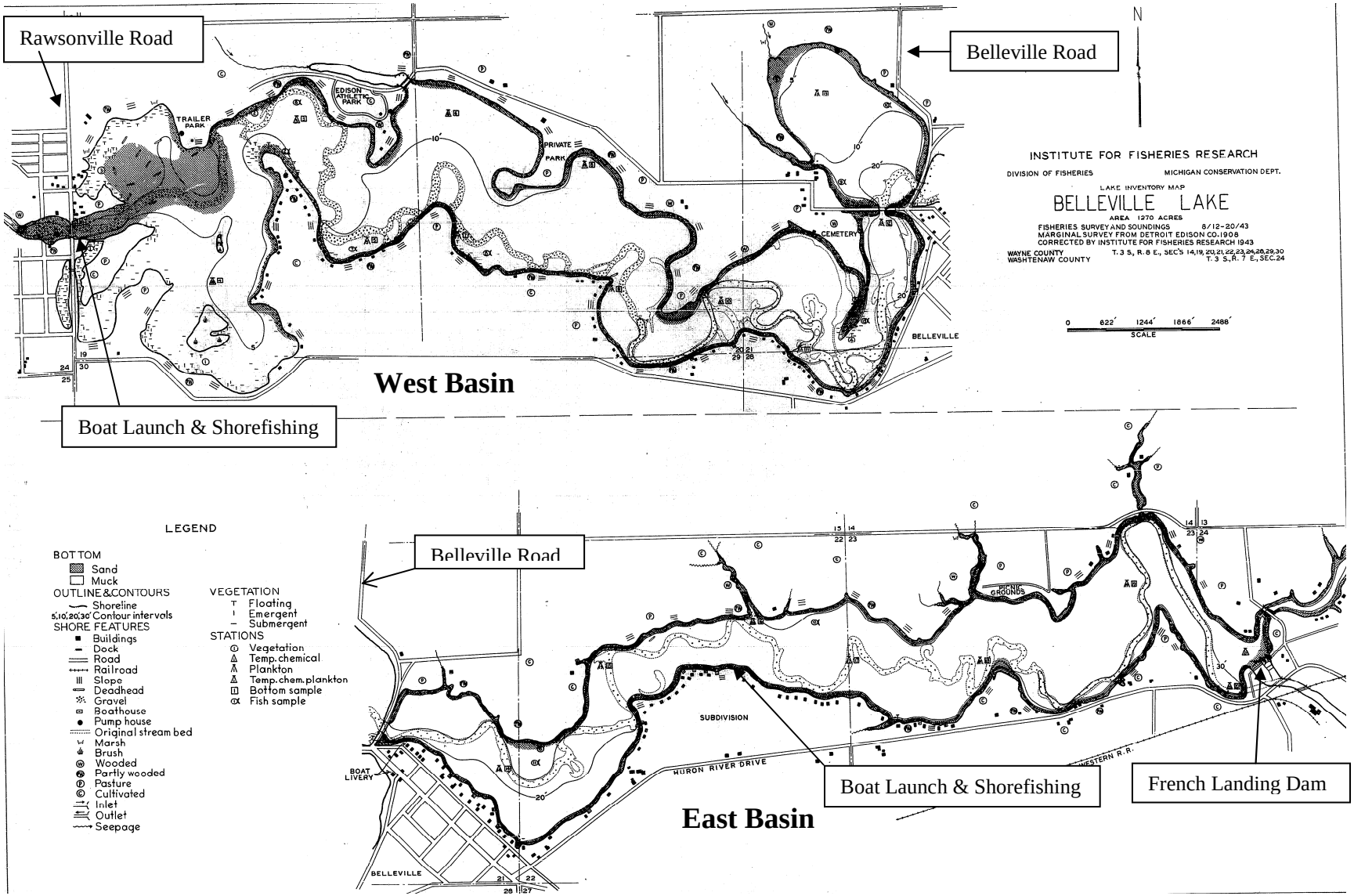
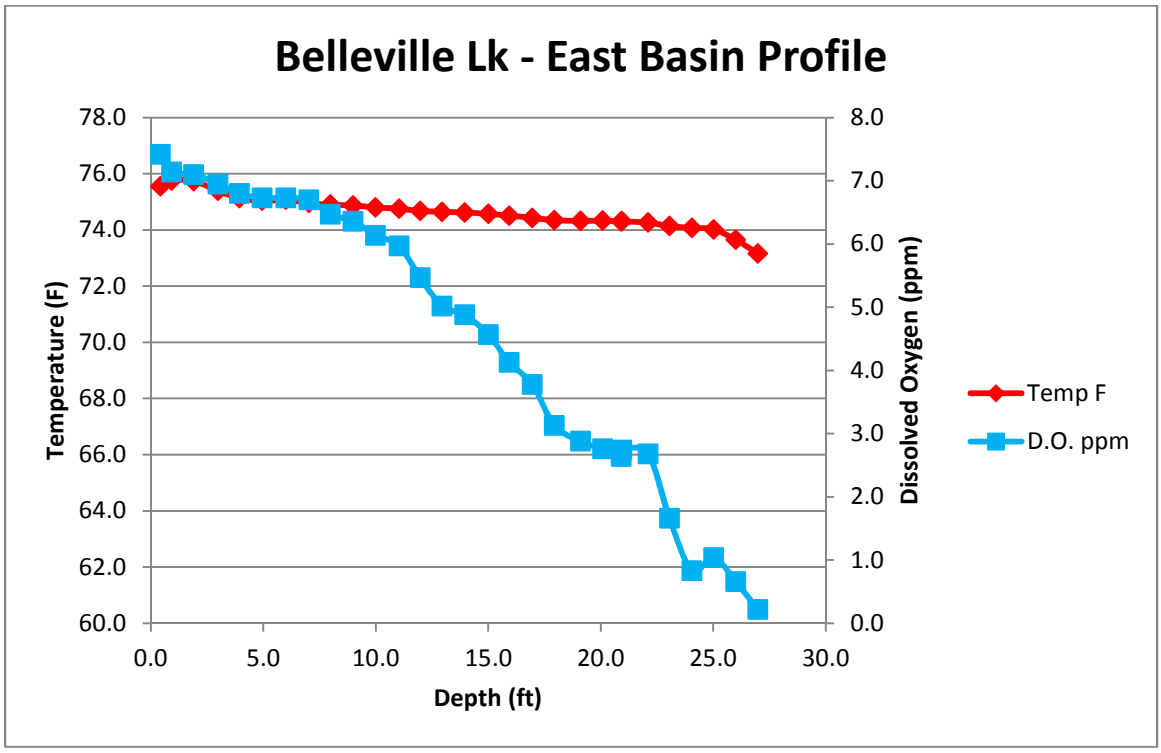


Figure 2. Belleville Lake East and West Basin Temperature and Dissolved Oxygen Profiles, September 13, 2012.



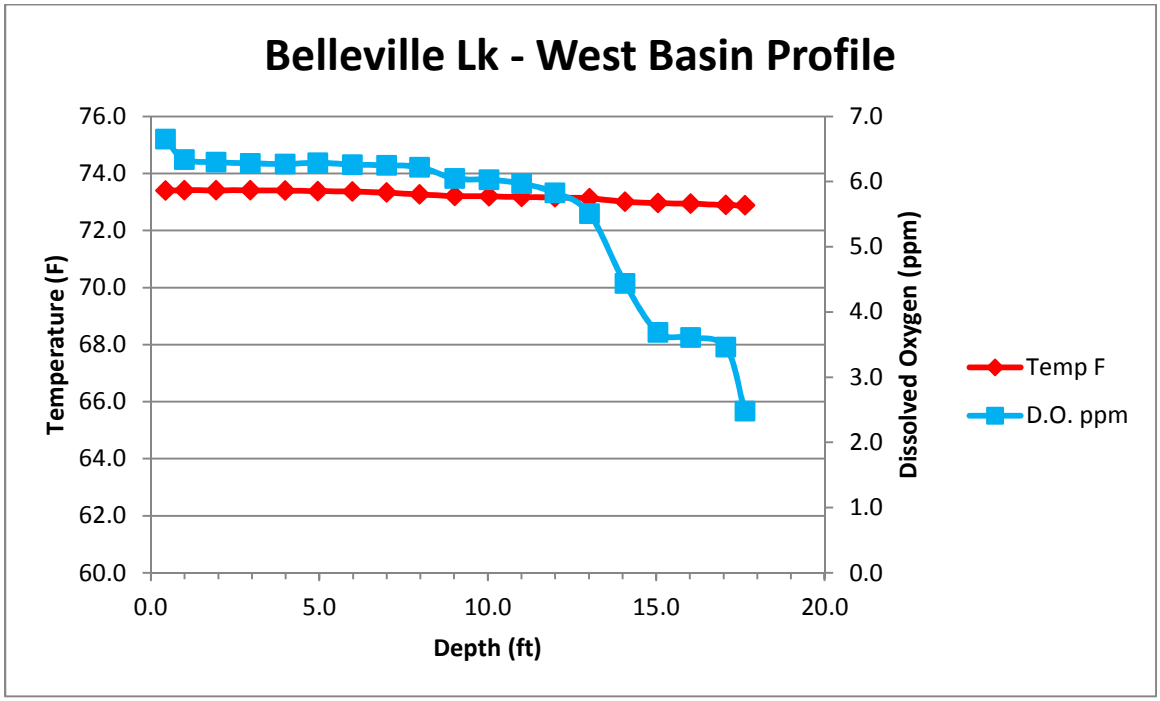


Table 1. Belleville Lake Stocking History

Species	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Walleye	12,740	47,463	37,999	127,657		61,698		59,248		64,517
Channel catfish		26,000			8,000	4,549			9906	
Northern Muskellunge						4,281		1,900		

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Walleye fingerlings		78,097		78,071			69,879	63,991		
Channel catfish		8,017						6,024		
Northern Muskellunge	459									
Great Lakes Muskellunge										2,500

Table 2. Species catch and relative abundance of fishes collected with all gear types combined during the Belleville Lake Status & Trends survey, May 14 - June 7, 2012.

Species	Number	Percent by number	Weight (lb.)	Percent by weight	Length Range (in.)	Average Length (in.)	Percent legal size*
Bluegill	2,461	61.4	334.6	19.1	1-8	5.4	38
Gizzard shad	732	18.3	290.3	16.6	4-16	10.2	100
Channel catfish	126	3.1	380.5	21.7	7-27	19.6	96
Black crappie	101	2.5	42.8	2.4	3-13	8.4	87
Smallmouth bass	81	2	66.7	3.8	0-17	10	16
Common carp	65	1.6	389.8	22.2	15-28	24.6	100
Pumpkinseed	61	1.5	11.5	0.7	2-7	5.6	52
White sucker	43	1.1	41.4	2.4	6-15	13.2	100
Walleye	41	1	70.8	4	6-25	17.1	73
Round goby	36	0.9	0	0	1-5	3	100
Green sunfish	33	0.8	4.7	0.3	1-7	5.3	39
Longnose gar	30	0.7	70.7	4	24-36	28.7	100
Emerald shiner	27	0.7	0.3	0	2-4	3.5	100
Spotfin shiner	23	0.6	0.3	0	2-4	3.2	100
Brook silverside	21	0.5	0	0	3-4	3.7	100
Rock bass	20	0.5	6.5	0.4	2-10	6.3	70
Yellow Perch	19	0.5	3.5	0.2	5-9	7.5	58
Brown bullhead	15	0.4	7	0.4	6-12	9.6	87
Logperch	14	0.3	0.1	0	2-3	3	100
Golden shiner	13	0.3	2.1	0.1	6-9	7.9	100
Hybrid Sunfish	12	0.3	1.7	0.1	2-7	5.4	33
White bass	12	0.3	6.3	0.4	6-16	10.3	92
Spottail shiner	7	0.2	0.1	0	2-3	3.4	100
Black bullhead	5	0.1	3.9	0.2	7-13	11.1	100
Largemouth bass	5	0.1	4.5	0.3	9-15	11.2	20
Bowfin	3	0.1	10.6	0.6	20-22	21.5	100
White crappie	2	0	1.3	0.1	10-11	11	100
White perch	1	0	0.4	0	9	9.5	100
All species totals:	4,009	100	1,752.20	100			

Table 3. Number per inch group of important sport fish collected with all gear types combined during the 2012 Belleville Lake fish survey.

Length (in)	Black Crappie	Bluegill	Channel Catfish	Gizzard Shad	Smallmouth Bass	Walleye	White Bass
0					1		
1		6					
2		131					
3	5	83			5		
4	3	621		3	3		
5		688		11	1		
6	5	584			3	1	1
7	12	318	1		1		3
8	17	30	2	1	6		3
9	44		1	260	7	1	1
10	8			403	8	2	
11	3		1	47	12		1
12	3		2	4	12		1
13	1		9	1	9	1	
14			6		8	6	1
15			1	1	3	6	
16			5	1	1	5	1
17			7		1	7	
18			9			6	
19			10			2	
20			8				
21			14			1	
22			7				
23			15				
24			10			1	
25			12			2	
26			5				
27			1				
Total	101	2461	126	732	81	41	12

Table 4. Weighted mean length and age composition of selected fish species collected in Belleville Lake, May 14-June 7, 2012.

Species	Age	No. Aged	Length Range (in)	Weighted Mean Length (in)	State Avg. Length (in)	Mean Growth Index
Black Crappie	I	8	3.3-4.5	3.9	4.2	+0.1
	II	4	6.3-6.9	6.6	6	
	III	10	6.7-7.9	7.5	7.5	
	IV	17	8.2-9.7	9.1	8.6	
	V	12	8.9-10.5	9.6	9.4	
	VI	4	10.7-12.5	11.4	10.2	
	VII	3	11.6-12.5	12	10.8	
	IX	1	13.1	13.1	11.9	
Bluegill	I	15	1.7-2.5	2.3	1.8	+0.8
	II	21	2.6-5.1	4.4	3.8	
	III	18	4.7-6.9	5.9	5	
	IV	9	6.9-7.3	7	5.9	
	V	3	7.5-7.8	7.7	6.7	
	VI	6	8-8.5	8.2	7.3	
	VII	3	8-8.8	8.3	7.8	
	VIII	1	8.2	8.2	8.2	
Channel Catfish	II	3	7.5-8.3	8	11.2	-0.6
	III	10	11.4-13.9	13	13.6	
	IV	8	13.7-15.9	14.4	15.8	
	V	3	14.5-16.4	15.7	17.7	
	VI	24	16.5-21.4	18.5	19.3	
	VII	4	17.1-20.6	19.5	20.6	
	VIII	8	19.5-26.3	21.9	22	
	IX	32	17.2-26.5	23.1	23.2	
	X	4	21.5-25.8	23	23.8	
	XI	4	20-27.2	24.5		
	XII	10	22.7-26.2	24.5		
Smallmouth Bass	I	7	3-4.9	3.8	3.8	-0.8
	II	5	5.8-7.4	6.3	7.5	
	III	23	8.6-11.3	9.9	10.8	
	IV	22	10.8-13.8	12.2	12.6	
	V	15	12-15.8	13.8	14.4	
	VI	4	14.7-15.6	15.1	15.3	
	VII	1	16.9	16.9	16.3	
	IX	1	17.3	17.3	18.1	
Walleye	I	3	9.7-10.1	9.9	7.1	+0.8
	II	7	13-14.5	14.1	10.4	
	III	3	15.1-15.8	15.4	13.9	
	IV	6	15.2-16.2	15.8	15.8	
	V	5	16.4-18.1	17.3	17.6	
	VI	14	16.6-21.4	18.3	19.2	
	VII	1	24.3	24.3	20.6	
	X	2	25.3	25.3	23.1	

Table 5. Belleville Lake Historical Survey Comparisons (Trap/Fyke Nets Only) for Selected Species

Species	Year	Catch per Net Night	Avg Length (in)	% of Catch (by no.)	Percent > 7"	Mean Growth Index	Schneider Index
Bluegill	2012	105	5.9	69	18	+0.8	4.0
	1999	9	6.4	12	26	+1.0	4.3
	1992	20	7.2	6	71	+1.1	5.8
Black Crappie	2012	5	9.1	3	93	+0.1	
	1999	2	8.9	2.6	79	+2.1	
	1992	86	8	31	93	+0.3	
					% >12"		
Channel Catfish	2012	4	23	2.7	100	-0.6	
	1999	23	19	32	95	+0.7	
	1992	0.1	20	0.3			
					% >15"		
Walleye	2012	0.6	19	0.4	73	+0.8	
	1999	2.3	17	4.5	47	+2.0	
	1992	0.9	22	1	100		