Pennsylvania Fish & Boat Commission Biologist Report

Quemahoning Reservoir

Somerset County

May 2011 Trap Net, Gill Net and Electrofishing Survey

Quemahoning Reservoir is an 899 acre impoundment located in Somerset County off of PA Route 219, just a few miles east of Boswell, PA. The impoundment is owned by the Cambria-Somerset Authority (CSA) and was opened to public fishing and other recreational activities in 2000. Boats are restricted to electric motors only and ice fishing is not permitted. Quemahoning Reservoir is a rural lake surrounded by scenic woodland. The reservoir has a park area with picnic, camping, and swimming available. Quemahoning has most every type of shoreline habitat structure available to fish. The Pennsylvania Fish and Boat Commission's Division of Habitat Management has also installed numerous additional fish holding structures. The reservoir has very low turbidity and moderate productivity (alkalinity 21 parts per million in 2011). Productivity increased compared to 14 parts per million alkalinity measured in spring 1999. Currently Quemahoning Reservoir is managed with Big Bass and Panfish Enhancement regulations for sunfish, crappie, and perch. The Fish and Boat Commission also annually stocks Quemahoning Reservoir with fingerling walleye and brown trout.

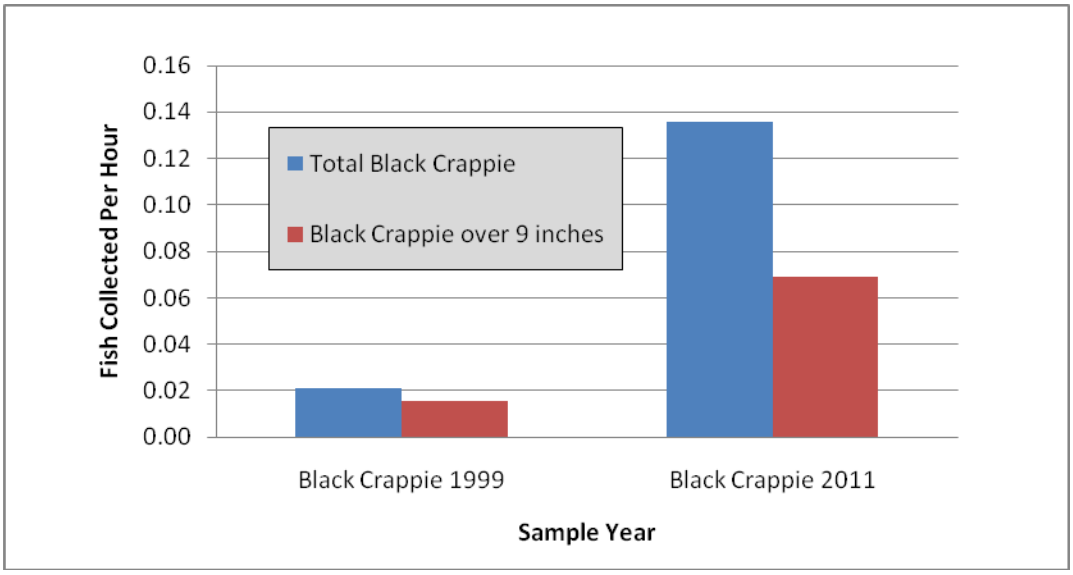
Two beautiful brown trout captured during our survey

The primary purpose of our 2011 surveys was to measure the size structure and quality of the lake's resident gamefish, panfish, and forage fish populations and utilize these data to update the fisheries management strategies where necessary. The highest individual numbers of fish we collected during our trap net and gill net surveys were northern pike, rock bass, bluegill, and black crappie, with many of quality size. We summarized the field catch data from our 2011 trap net and gill net survey (Table 1).

Table 1. 2011 Survey Gear: 12 Trap Net Sets & 9 Gill Net Sets			
Fish Species	Number	Size (Inches)	Comments
Walleye	24	13 - 26	95% ≥ 15 inches 25% ≥ 20 inches
Brown Trout	9	22 - 25	All Quality Fish
Rainbow Trout, hatchery	1	19	
Black Crappie	65	3 - 12	51% Quality Size Fish
Rock Bass	72	5 - 10	38% Quality Size Fish
Bluegill	90	1 - 10	30% Quality Size Fish
Pumpkinseed	5	3 - 4	
Yellow Perch	6	4 - 13	66% Quality Size Fish
Channel Catfish	1	20	
Brown Bullhead	12	10 - 16	All Quality Fish
Yellow Bullhead	19	4 - 13	63% Quality Size Fish
Northern Pike	71	10 - 33	35% Quality Size Fish
Golden Shiner	1	-	-
Largemouth Bass	11	15 - 17	All Quality Fish
Smallmouth Bass	22	7 - 18	64% Quality Size Fish
White Sucker	29	-	All Quality Fish
Common Carp	2	-	Both Quality Fish
Bluntnose Minnow	3	-	-

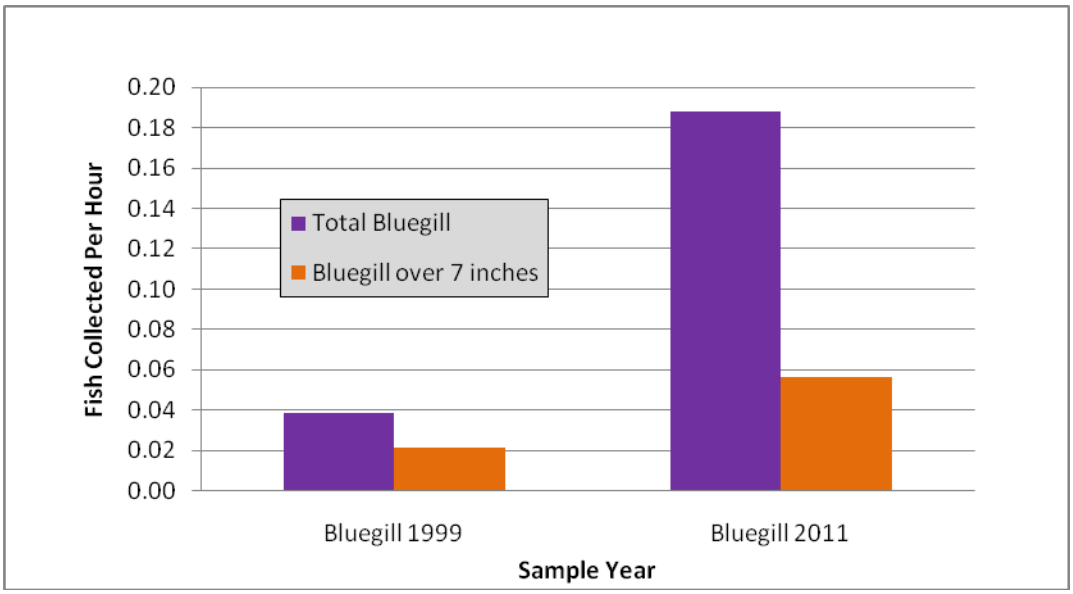
Black crappie species catch rates increased since the last survey in 1999. Figure 1 shows that over 50% of our 2011 catch were quality fish over 9 inches in length. The catch rate for black crappie over 9 inches was .07 fish per hour (State guideline is .25 fish per hour). It is possible that the 9 inch length limit for crappie and water productivity increase served to improve the fishery available for crappie.

Figure 1. Black Crappie Collected in Trap Nets and Gill Nets at Quemahoning Reservoir.



Bluegill catch rates have also increased since the last survey; total numbers were up, more than triple previous values. Figure 2 compares catch rates between the two survey years. The catch rate for bluegill over 7 inches was 0.19 fish per hour (State guideline is .51 fish per hour). It is possible that the 7 inch length limit for bluegill and water productivity increase served to improve the size structure and density of bluegill. We handled several bluegills that were over 10 inches.

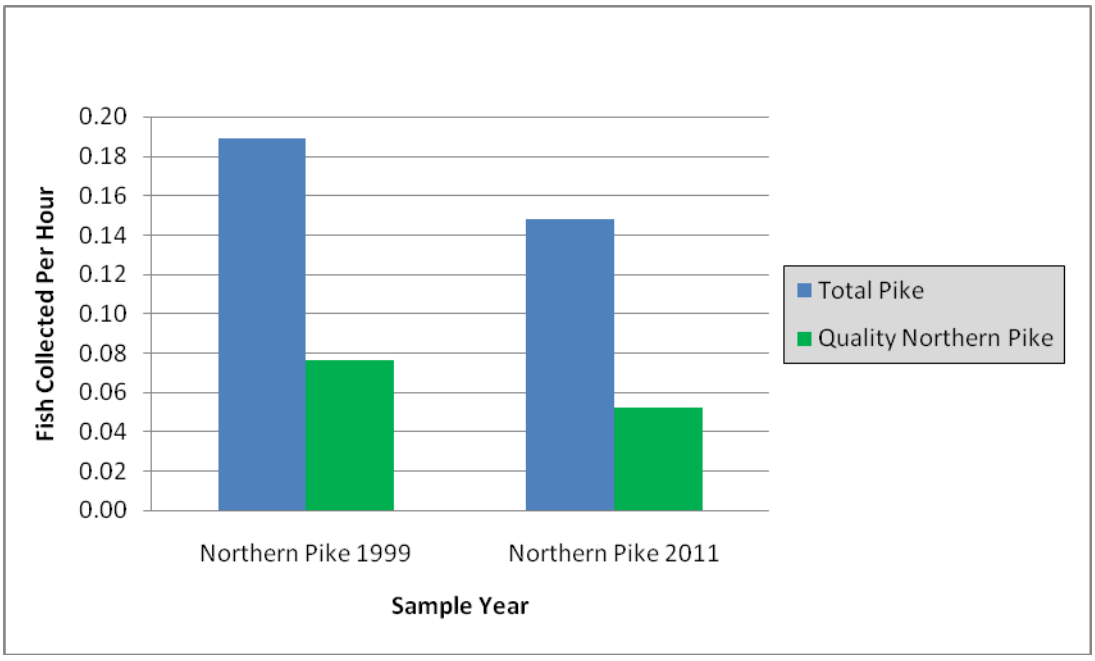
Figure 2. Bluegill Collected in Trap Nets and Gill Nets at Quemahoning Reservoir.



Fisheries Biologist Aide Joe Cocco with two 9 inch bluegill

Northern pike were caught in plentiful numbers. Figure 3 compares catch rate of all sizes and legal size (over 24 inches) fish between surveys.

Figure 3. Northern Pike Collected in Trap Nets and Gill Nets at Quemahoning Reservoir.



Rock bass catch rates have increased since the last survey, numbers of 7 inch fish exhibited a dramatic increase. Figure 5 compares catch rates of 7 inch or larger rock bass between the two survey years. It is possible that the water productivity increase served to improve density of rock bass.

Figure 5. Rock Bass Collected in Trap Nets and Gill Nets at Quemahoning Reservoir.

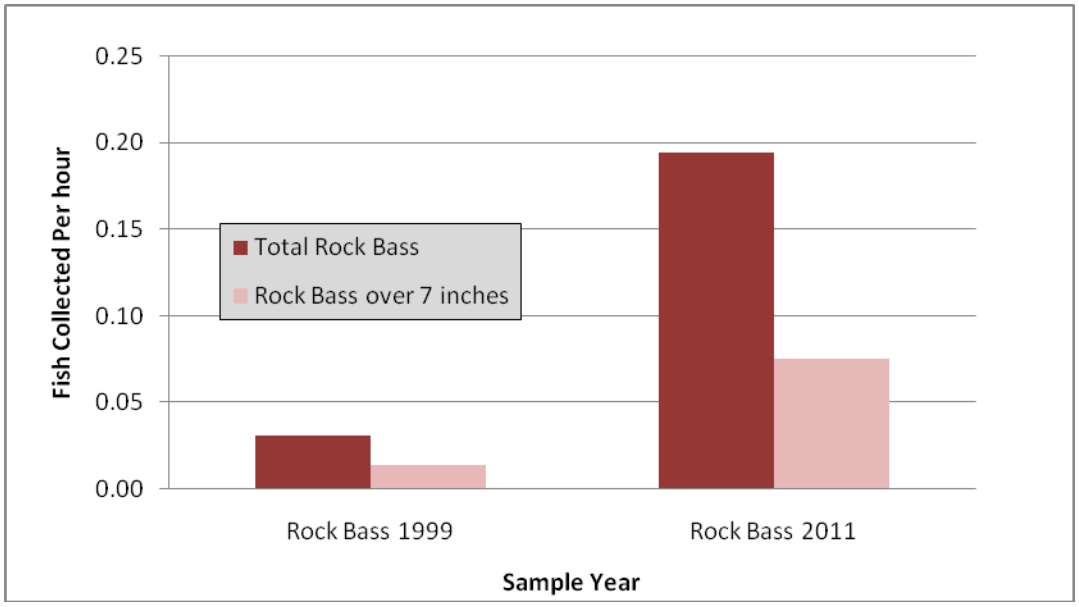
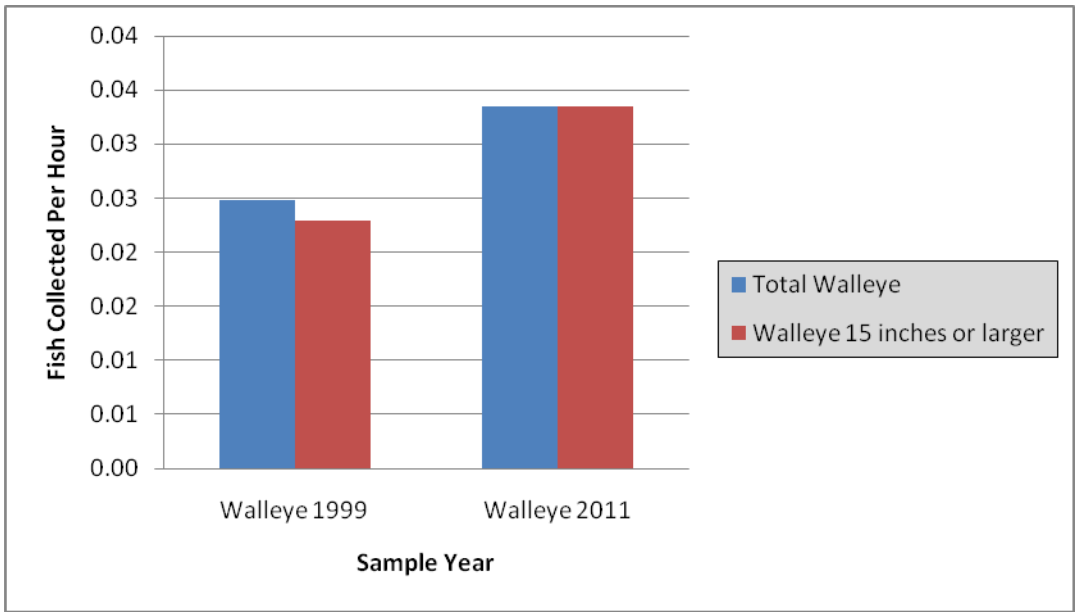


Figure 6 compares catch efforts for walleye in Quemahoning Reservoir. Over all the amount of fish captured increased slightly between years. Although fingerling stocking did not appreciably increase our walleye catch, Quemahoning Reservoir is another destination lake in southwest PA providing walleye.

Figure 6. Walleye Collected in Trap Nets at Quemahoning Reservoir.

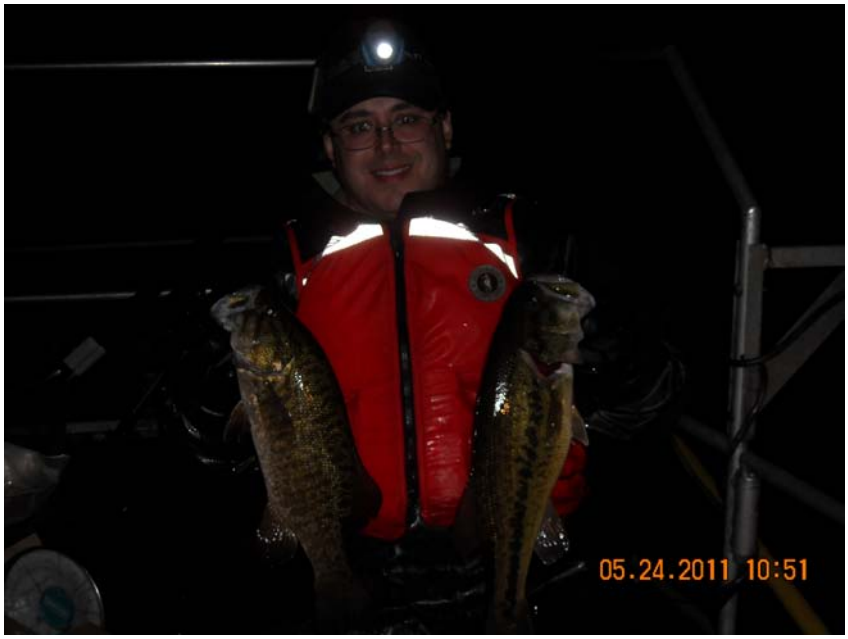


Area Fisheries Manager Rick Lorson with two beautiful 15+ inch walleye

During the nighttime electrofishing survey we found that the number and size structure of largemouth decreased slightly; however smallmouth bass have made their way into the reservoir. Table 2 below summarizes the catch data from our 2011 electrofishing survey.

Table 2. 2011 Survey Gear: 3 Nighttime Boat Electrofishing Runs.

Fish Species	Number	Size (Inches)	Comments
Largemouth Bass	113	4 - 19	63% 12 inches or larger 27% 15 inches or larger
Smallmouth Bass	65	4 -18	38% 12 inches or larger 15% 15 inches or larger



Fisheries Biologist Aide Joe Cocco holding a 15 inch smallmouth bass (left) and a 15 inch largemouth bass

Figure 7 shows catch rates for both Largemouth and smallmouth bass. No smallmouth bass were captured in 1999. Smallmouth have likely migrated downstream from Quemahoning Creek, where they were reintroduced by the PFBC in 1993 following the creek's recovery from acid mine drainage. Smallmouth bass now comprise a significant portion of the black bass fishery at Quemahoning Reservoir. As you can see the captured amount fell slightly for largemouth bass which maybe a result of the smallmouth bass competition. Total catches are still quite Impressive.

Figure 7. Largemouth Bass Collected during Nighttime Electrofishing at Quemahoning Reservoir.

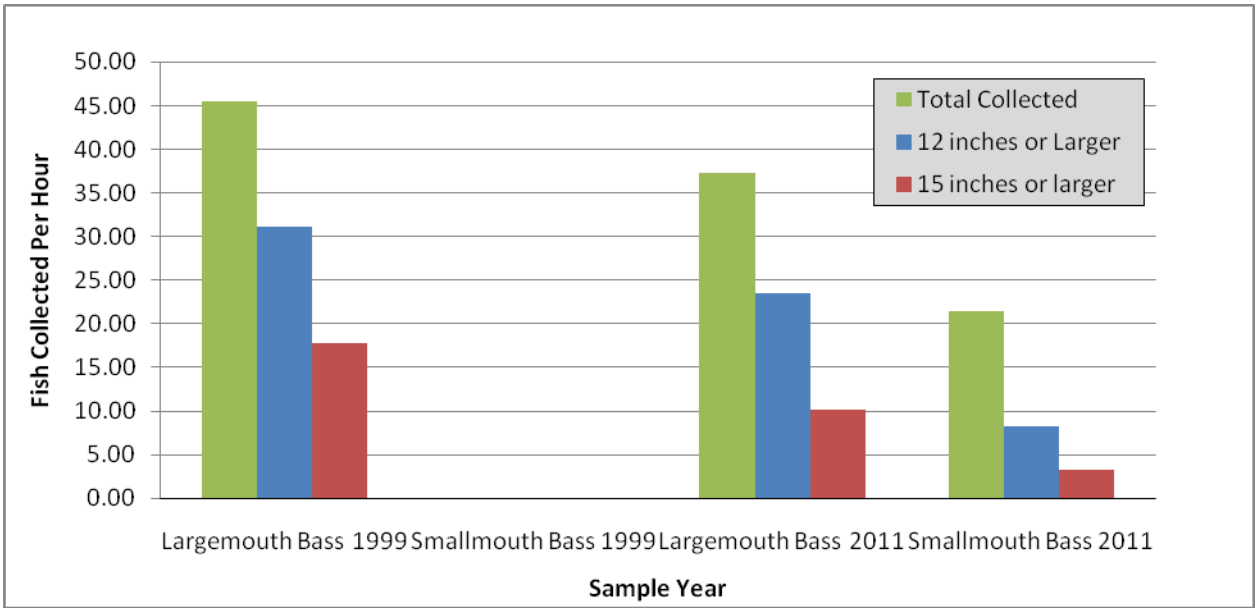
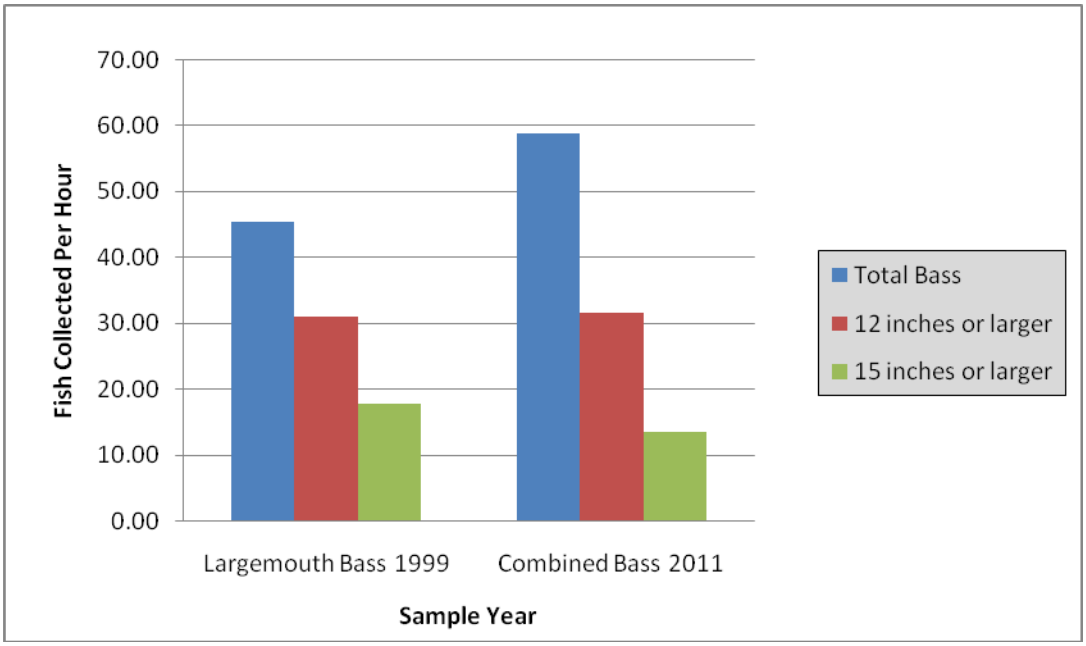


Figure 8 compares catch rates for largemouth bass in 1999 and combined bass in 2011. All Big Bass Program guidelines were exceeded at Quemahoning Reservoir. Total combined bass were caught at 59 fish per hour (state guideline = 35 per hour), combined bass over 12 inches were caught at a rate of 32 fish per hour (state guideline = 7 per hour) and combined bass over 15 inches at 14 fish per hour (state guideline = 2 per hour).

Figure 8. Combined Bass Collected during Nighttime Electrofishing at Quemahoning Reservoir.



In conclusion, Quemahoning Reservoir has excellent opportunities for crappie, bluegill, northern pike, rock bass, large brown trout, smallmouth bass and largemouth bass. Fishing opportunities are also available for some quality size brown bullhead, carp, and yellow perch but in low abundance. Its scenic rural setting and picnic area make it an ideal destination for fishing. We at the Fish and Boat Commission would like to extend our thanks on behalf of all fishermen to the Cambria Somerset Authority for making this lake public and such a great place to enjoy.

Joseph Cocco and Mike Depew
Area 8 Fisheries Biologist Aide and Fisheries Biologist