

POINT A RESERVOIR MANAGEMENT REPORT

SPRING 2011

Prepared by

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Introduction

Point A Reservoir (Figure 1) is a 700-acre impoundment located on the Conecuh River in Covington County, Alabama. Largemouth bass, bluegill sunfish, and redear sunfish were sampled during the spring of 2011 according to the guidelines established by the Alabama Reservoir Management Manual (Cook 1999). Point A Reservoir had previously been sampled in 2007, 2005, 2001, 1997, and 1987. Currently the only size restriction at Point A is a 9-inch minimum length limit for crappie. Gantt and Point A dams are both very old and require frequent maintenance by Power-South Energy Cooperative (PSEC). The dam and powerhouse were built in the 1920's and require frequent maintenance which results in large draw-downs of the reservoir. The last such major drawdown occurred in 2005.

Methods

Largemouth bass, redear sunfish, and bluegill sunfish were collected by electrofishing as described in the 1987 Management Report (Newman et al. 1987). Nine fixed sites throughout the lake were sampled by electrofishing during the period of April 12 – April 21, 2011 (Figure 1). Otoliths were collected from a maximum of 10 bass from each 25 mm group. Of the 183 bass collected, 98 were aged using whole otoliths. All other bass were released after lengths and weights were recorded, with ages assigned to un-aged fish using the ADWFF Utilities Application. The von Bertalanffy growth equation with L_{inf} constrained to 570 mm (the length of the largest bass observed in the sample) was used to calculate growth rates (Ricker 1975).

Results and Discussion

Largemouth bass

Largemouth bass (N = 183) were captured at a rate of 45.8 fish per hour, similar to the lake average catch rate of 44.1 fish per hour. Bass ranged in size from 88 to 560 mm TL (mode = 300 mm), and from 1 to 10 years old (Figure 2). Just as in 2007, approximately 38% of the bass collected were 3 years old or older, compared to 60 % in 2005 (Table 4; Weathers et al. 2007; Weathers et al. 2005). The RSD analysis (Anderson and Neumann 1996) also indicates that the bass population is mostly smaller fish, with only 11% RSD P-M and 3% RSD M-T (Table 3, Figure 3). This is better than the lake average for larger bass, but RSD P-M and RSD M-T are still below the state-wide averages (Figure 3). Growth rates also improved for the bass population, with bass requiring 2.6 years to reach 12 inches and 4.5 years to reach 16 inches in length (Figure 4). Condition factors were about the same as the lake average, ranging from the low 90's for RSD S-Q to the mid-80's for RSD P-M (Table 3). Criteria in the Reservoir Manual (Cook 1999) were not met for a decent mortality estimate. However, mortality was calculated to be 48% for bass ages 3-8 years old ($r^2 = 0.85$) (Figure 5). Low fishing mortality would be expected since the 2007 spring creel survey indicated a voluntary release rate of 95.6% (Weathers et al. 2007). The biggest change noted when comparing the 2011 sample with previous collections is a slight increase in the growth rates (Table 4), although this is not evident in better condition factors (Table 3). The largemouth bass population in Point A Reservoir has improved with respect to an increase in the number of larger fish in the overall bass population structure compared to previous samples, but condition factors and overall abundance are still low compared with state-wide reservoir averages (Table 3).

Bluegill

Bluegill sunfish (N = 115) were captured at a rate of 92.0 fish per hour, higher than the lake average catch rate of 81.3 fish per hour. Bluegill ranged in size from 80 to 228 mm TL (mode = 100 mm, Figure 6). Bluegill exhibited a PSD of 19, as compared with 7 in 2007. RSD groups were very close the lake averages (Figure 7). Condition factors for all RSD groups ranged from the high 80's to mid-90's, just as the lake averages (Table 3). Point A and Gantt both have reputations for quality bream fishing, but this reputation is based more on quality shellcracker populations than bluegill. The 2007 sample indicated a shift towards smaller bluegill in the overall bluegill population probably resulting from heavy mortality and spawning following the 2005 draw-down. The 2011 sample indicates the bluegill population has reverted to pre-draw-down bluegill population structure, with mostly small fish but still enough large bluegill to maintain the fishery.

Redear sunfish

Redear sunfish (N = 102) were captured at a rate of 68.0 fish per hour, similar to the lake average catch rate of 69.1 fish per hour. Redear ranged in size from 100 to 277 mm TL (mode = 180 mm, Figure 8). Redear exhibited a PSD of 54, as compared with 29 observed in 2007. Condition factors remained high for all RSD groups, ranging from 120 to 123. Overall, the redear population demonstrated good population size structure for a reservoir fishery, and continues to reinforce why Point A Reservoir is known for quality redear fishing.

Summary

Point A Reservoir is a shallow body of water with a substantial amount of aquatic macrophytes. Much of the nutrient load is trapped by Gantt Reservoir located directly upstream, and water quality data is generally indicative of a moderately soft water reservoir. The water quality data for 2008 through 2010 provided by personal communication with ADEM indicate that Point A Reservoir would be classified as a mesotrophic reservoir based on Secchi disk depths and chlorophyll-a measurements. In a fishery such as this where bass are mainly consuming sunfish and fertility is fairly low, bass would not be expected to grow very fast after their first year. Another factor in the moderate bass growth and density levels is the abundance of other predators, such as bowfin, spotted gar, and chain pickerel. Flathead catfish are available at Point A, and have been caught in the 40 to 50 pound range. In addition to these species, threadfin and gizzard shad, common carp, golden redhorse, spotted suckers, blacktail redhorse, blacktail shiners, golden shiners, channel catfish, warmouth sunfish, redbreast sunfish, longear sunfish, white crappie, and white bass were also observed during the 2011 collection. The 22-foot reservoir draw-down during the fall of 2005 was noted to be responsible for the increase in bass mortality rates and the decline of large bluegill from the 2007 sample; however, the negative impact of the draw-down can not be detected in the 2011 sample. The largemouth bass, bluegill, and redear sunfish populations appear to have stabilized near the historic lake averages for most population parameter estimates. The Reservoir Fact Sheet and General Reconnaissance Survey have been updated in the 2011 Point A Reservoir Report (Appendix B).

Conclusions

1. Communication and cooperation between PSEC and the Alabama Wildlife and Freshwater Fisheries Division (AWFF) is important to maintain the sport fisheries for the full benefit of the angling public and to protect federally protected mollusks. Point A Dam requires frequent maintenance since the facilities are over 75 years old, but water level reductions should be conducted in late fall/winter when possible. Reservoir draw-downs should be coordinated between PSEC and AWFF to serve as opportunities for habitat improvement projects.

2. Restrictions on bass size limits would not be beneficial for this reservoir and are not recommended.

3. Encourage more participation in the B.A.I.T. Program by leaving literature at local bait and tackle stores around Point A Reservoir.

4. Supplemental channel catfish stocked by AWFF in 2010 were very well received by anglers. The abundant number of predators in this reservoir seems to limit channel catfish natural recruitment, so Point A Reservoir should be considered a high priority site for supplemental catfish stocking when possible.

Literature Cited

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Appendix A

Tables and Figures

Table 1. Point A Reservoir morphometric, physical, and chemical characteristics.

Surface area	700 acres
Drainage area	1344 square miles
Full pool elevation	170 feet-msl
Mean annual fluctuation	1 foot
Shoreline distance	19 miles
Shoreline development index	5.6 (Welch 1948)
Mean depth	3.3 feet
Outlet depth	35 feet
Total dissolved solids	61.6 mg/l (ADEM, personal communication)
Chlorophyl-a	5.35 ugl (ADEM, personal communication)
Secchi average (March - September)	3.3 feet (ADEM, personal communication)
Turbidity	10.45 ntu (ADEM, personal communication)
Growing season	233 frost free days (Jenkins 1967)
Date of impoundment	1926

Table 2. Fish stocking history for Point A Reservoir, 1974 - 2011.

Species	Year	No/Ac	Size (in)	Total
Florida largemouth bass	1974	48	1 - 2	29,000
	1986	2	1 - 2	1,400
	2005	11	1	6,300
	2006	25	1 - 2	15,130
Channel catfish	1982	50	2 - 3	30,000
	1992	53	3 - 5	31,500
	2005	11	8 - 16	6,300
	2006	13	4 - 5	7,520
	2010	10	10- 16	6,000
Hybrid striped bass	1982	10	2 - 3	6,000
Bluegill	1991	234	1 - 2	140,500
	1992	88	1 - 2	52,500
	1994	20	1 - 2	12,000
	2005	102	1	61,000
	2006	503	1	301,560
Redear sunfish	1994	10	1 - 2	6,000
Black crappie	2006	11	2 - 4	6,312

Table 3. Relative stock density (RSD), catch per unit of effort (CPE), and relative weight (Wr) of target species at Point A Reservoir.

Largemouth Bass																							
Year	Effort (hrs.)	Number Samples	SUBSTOCK			RSD S-Q				RSD Q-P				RSD P-M				RSD M-P				TOTAL	
			no.	cpe	ratio	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe
1997	1.9	4	36	18.9	57	36	18.9	56	89	22	11.6	35	78	5	2.6	8	80	0	0.0	0	-	99	52.1
2001	3.1	7	33	10.6	33	62	20.0	62	87	24	7.7	24	88	10	3.2	10	97	4	1.3	4	98	133	42.9
2005	3.1	7	23	7.4	27	36	11.6	42	94	37	11.9	43	86	13	4.2	15	89	0	0.0	0	-	109	35.2
2007	4.0	8	54	13.5	44	56	14.0	45	96	62	15.5	50	91	6	1.5	5	97	0	0.0	0	-	178	44.5
2011	4.0	9	37	9.3	25	59	14.8	40	91	67	16.8	46	86	16	4.0	11	84	4	1.0	3	91	183	45.8
Lake Average			11.9	37		15.9	49	91		12.7	40	86		3.1	10	89		0.5	1	95		44.1	

Bluegill Sunfish																							
Year	Effort (hrs.)	Number Samples	SUBSTOCK			RSD S-Q				RSD Q-P				RSD P-M				RSD M-T				TOTAL	
			no.	cpe	ratio	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe
1997	1.2	3				75	62.5	74	89	27	22.5	26	81	0	0.0	0	-	0	0.0	0	-	102	85.0
2001	1.0	3				71	71.0	71	85	28	28.0	28	82	1	1.0	1	84	0	0.0	0	-	100	100.0
2005	2.2	4				84	38.2	82	99	12	5.5	12	91	6	2.7	6	95	0	0.0	0	-	102	46.4
2007	1.2	3				93	77.5	93	99	4	3.3	4	93	3	2.5	3	94	0	0.0	0	-	100	83.3
2011	1.25	6				93	74.5	81	96	18	14.4	16	88	4	3.2	3	88	0	0.0	0	-	115	92.0
Lake Average						64.7	80	94		14.7	17	87		1.9	3	90		0.0	0	-		81.3	

Redear Sunfish																							
Year	Effort (hrs.)	Number Samples	SUBSTOCK			RSD S-Q				RSD Q-P				RSD P-M				RSD M-T				TOTAL	
			no.	cpe	ratio	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe
1997	1.5	3	10	6.7	11	75	50.0	82	118	13	8.7	14	120	3	2.0	3	109	0	0.0	0	-	101	67.3
2001	2.2	5	7	3.2	8	60	27.3	65	88	23	10.5	25	96	9	4.1	10	98	1	0.0	1	85	100	45.5
2005	1.7	4	3	1.8	3	64	37.6	65	133	31	18.2	32	122	3	1.8	3	123	0	0.0	0	-	101	59.4
2007	1.1	3	8	7.3	7	77	70.0	71	125	24	21.8	22	130	7	6.4	6	130	0	0.0	0	-	116	105.5
2011	1.5	6	0	0.0	0	47	31.3	46	123	39	26.0	38	120	16	10.7	16	123	0	0.0	0	-	102	68.0
Lake Average			3.8	6		43.2	66	117		17.0	26	118		5.0	8	117		0.0	0	85		69.1	

Table 4. Age composition and mean length of largemouth bass from Point A Reservoir, spring 2011.

Age	Year Class	Number	Percent	CPE	Mean TL	SE
1	2010	49	26.8	12.3	167.1	5.3
2	2009	64	35.0	16.0	277.1	3.8
3	2008	22	12.0	5.5	327.5	2.4
4	2007	21	11.5	5.3	347.5	7.1
5	2006	19	10.4	4.8	401.4	14.0
6	2005	2	1.1	0.5	481.5	8.5
7	2004	3	1.6	0.8	495.7	17.9
8	2003	0	0.0	0.0	0.0	
9	2002	2	1.1	0.5	529.5	30.5
10	2001	1	0.5	0.3	536.0	
Total		183	100.0	45.8		

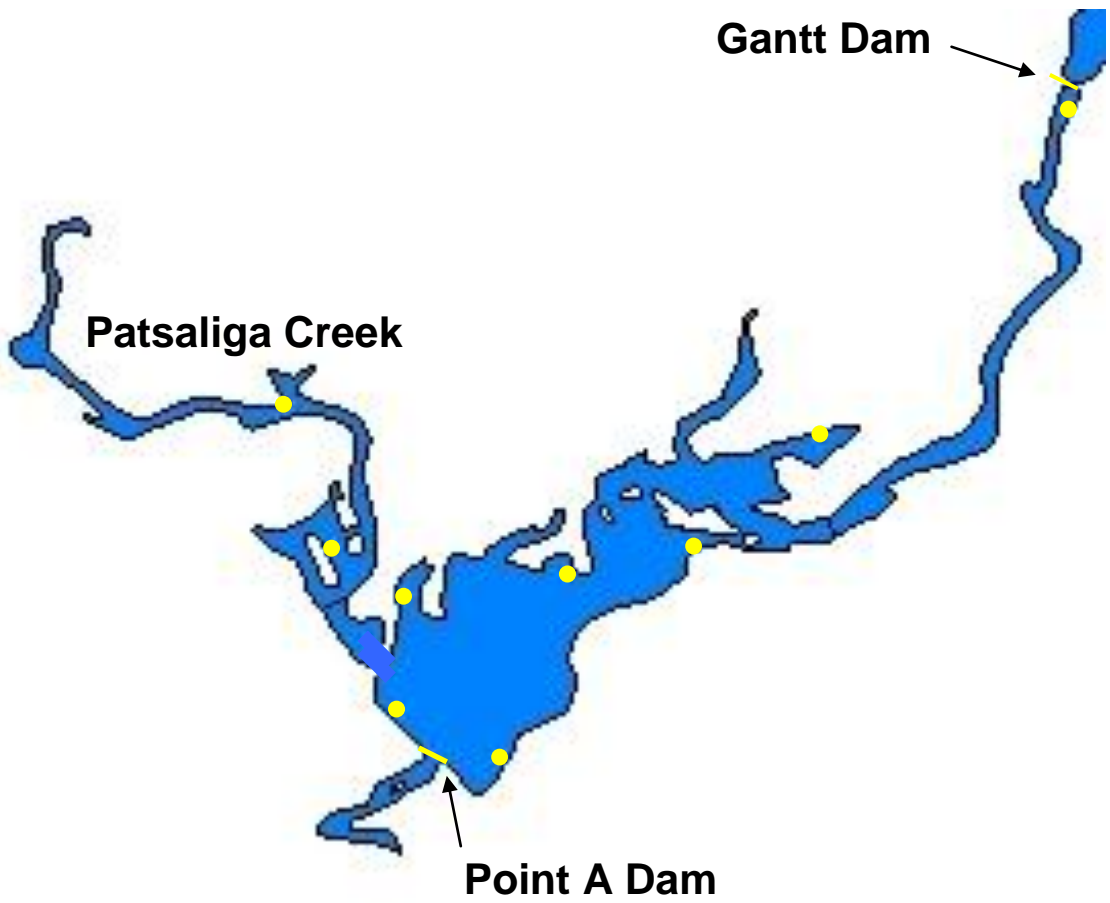


Figure 1. Sampling sites for spring 2011 electrofishing on Point A Reservoir.

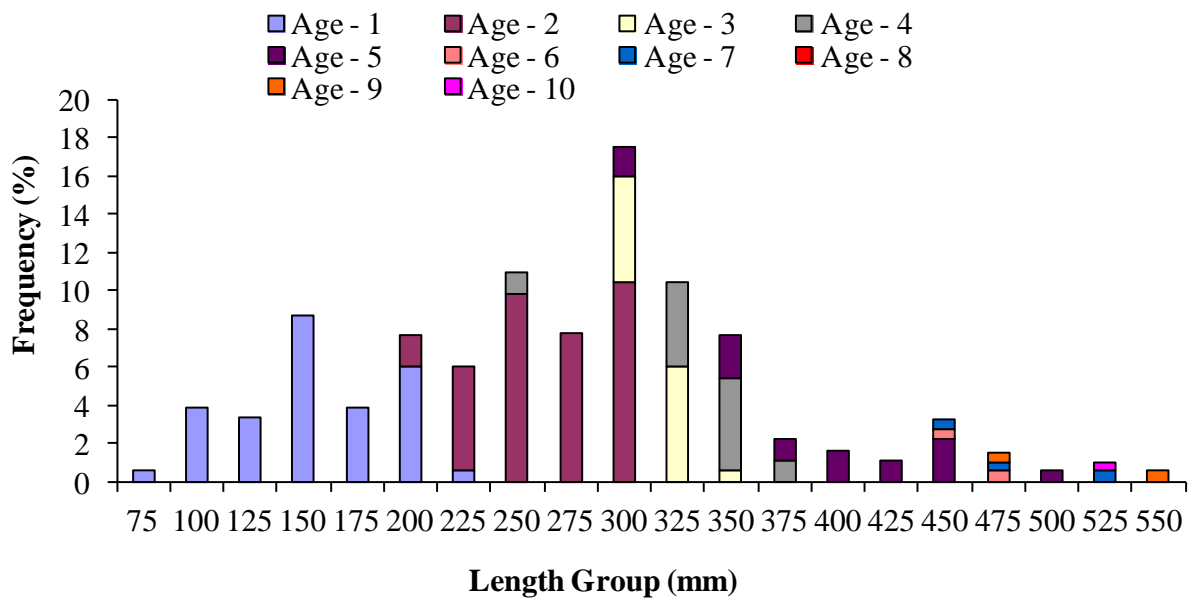


Figure 2. Length at age frequency for Point A Reservoir largemouth bass (n=183), spring 2011.

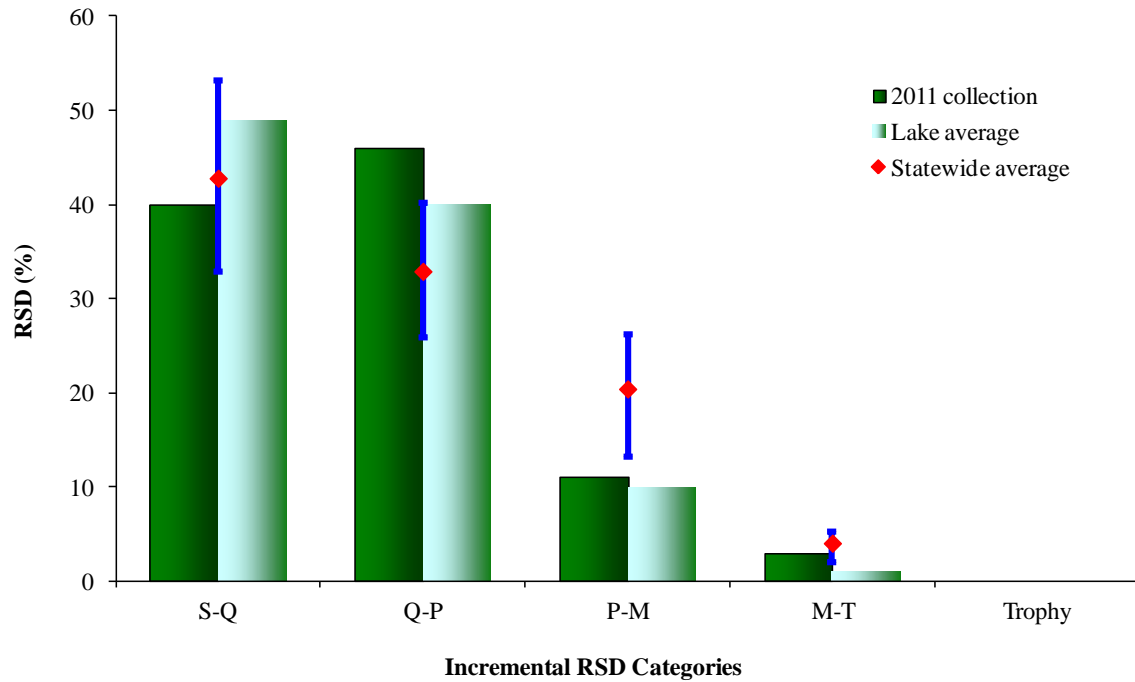


Figure 3. Relative stock density (RSD) of largemouth bass (N=183) at Point A Reservoir, spring 2011. I-Beams represent the 25th and 75th percentile of RSD values of largemouth bass, statewide.

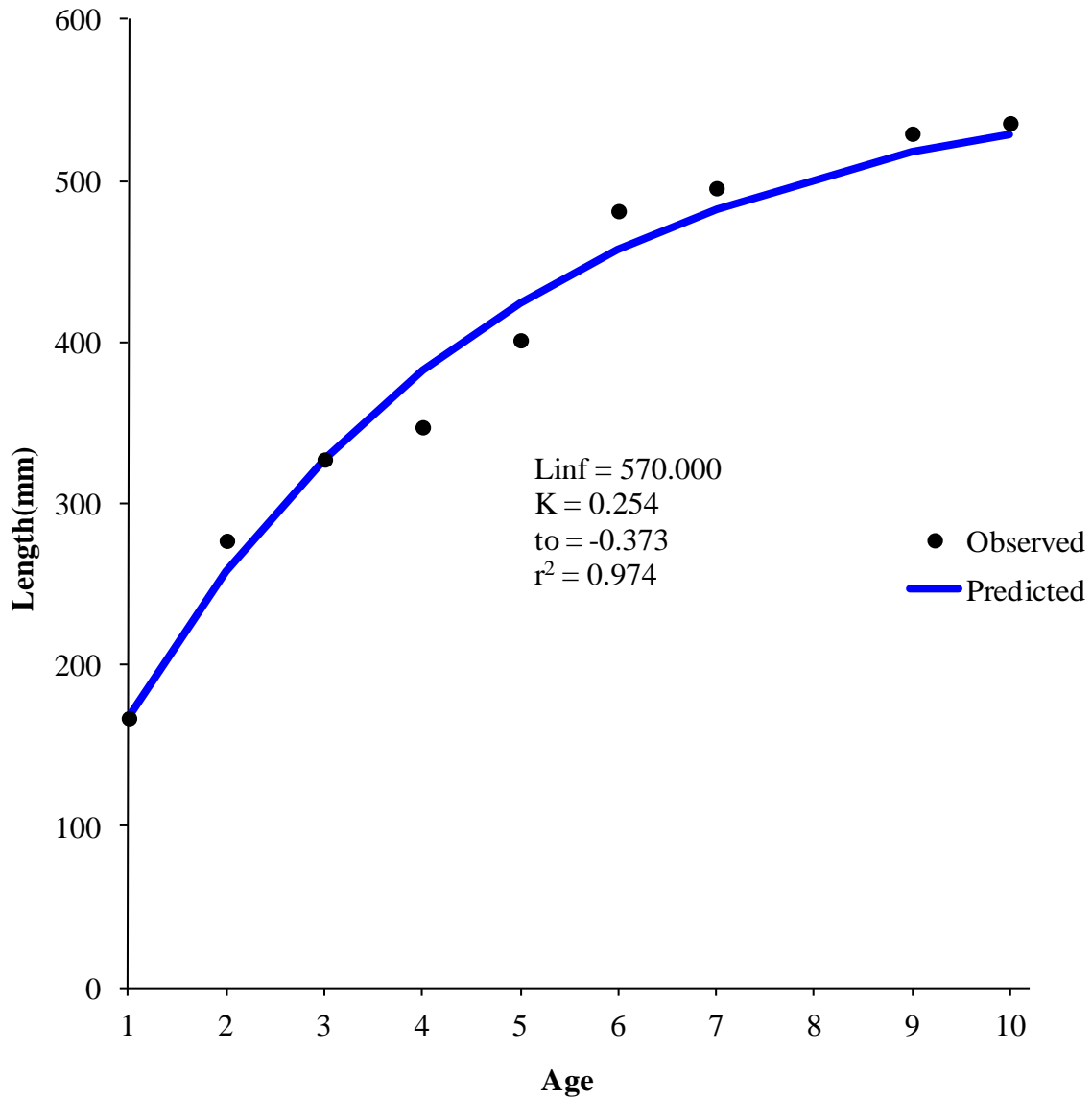


Figure 4. Von Bertalanffy growth curve for largemouth bass from Point A Reservoir, spring 2011. Length infinity was constrained to 570 mm since a fish this size was collected in the sample.

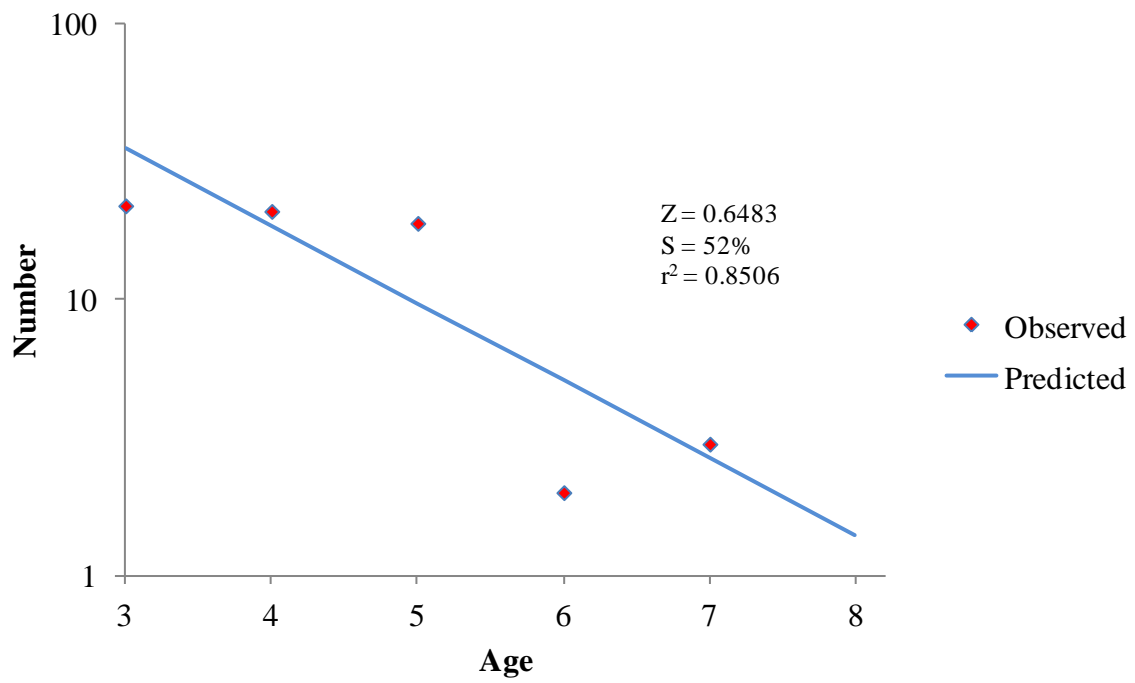


Figure 5. Catch curve regression for largemouth bass 3-8 years old from Point A Reservoir, spring 2011.

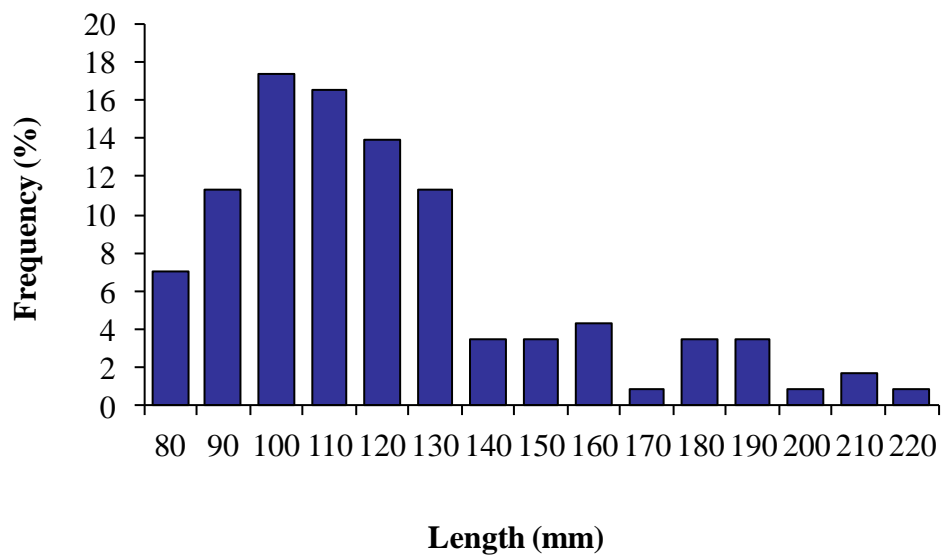


Figure 6. Length frequency for bluegill sunfish (N = 115) collected during spring 2011 electrofishing at Point A Reservoir.

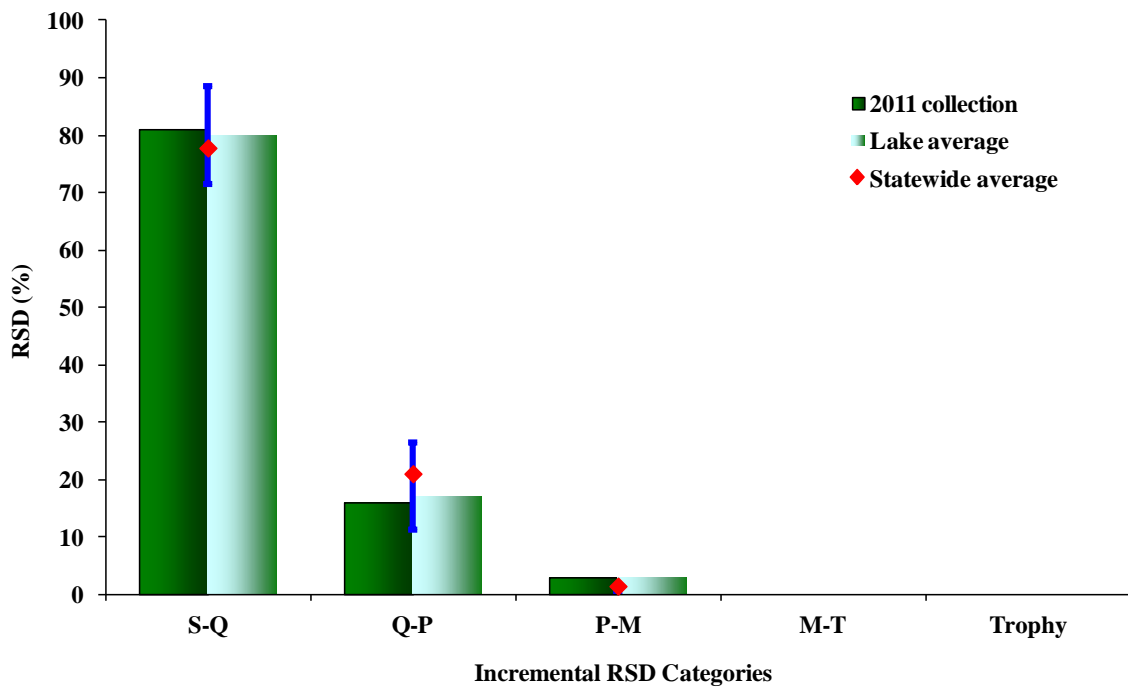


Figure 7. Relative stock density (RSD) of bluegill sunfish (N=115) at Point A Reservoir, spring 2011. I-Beams represent the statewide 25th and 75th percentile of RSD values for bluegill sunfish.

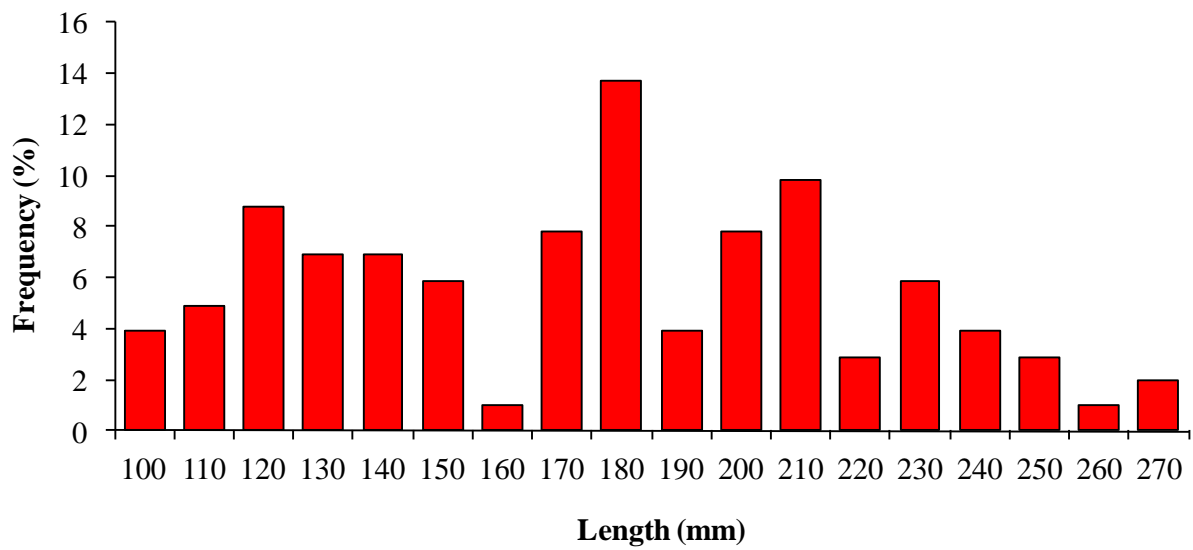


Figure 8. Length Frequency distribution for redear sunfish (N=102) collected during spring 2011 electrofishing at Point A Reservoir.

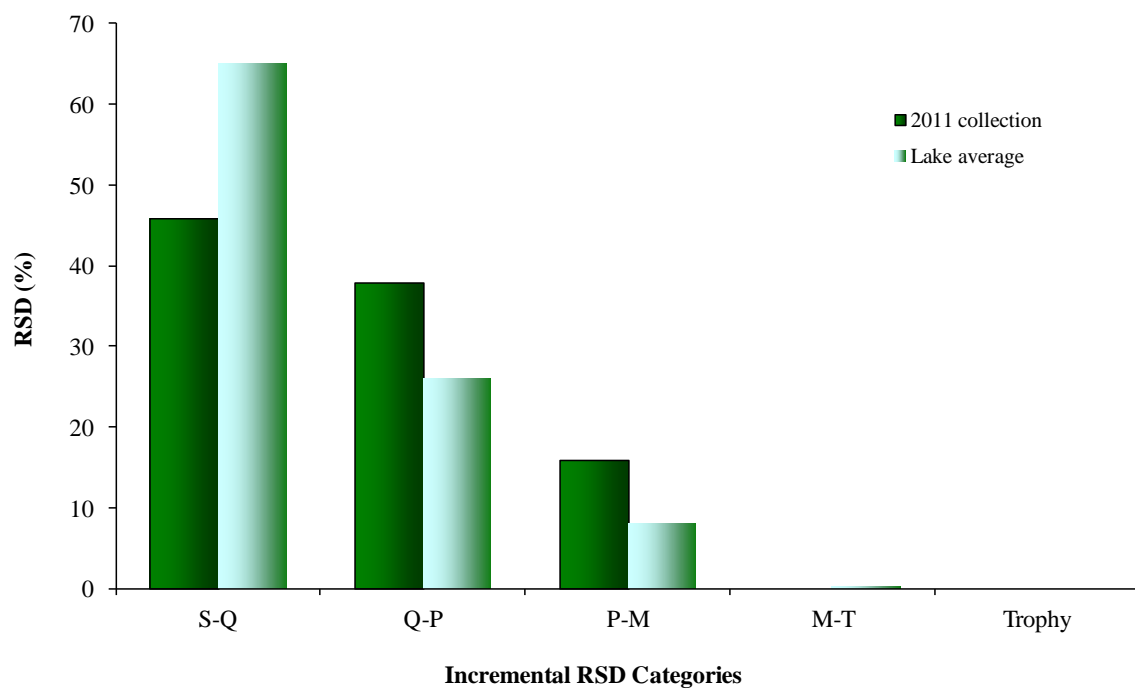


Figure 9. Relative stock density (RSD) of redear sunfish (N=102) at Point A Reservoir, spring 2011.

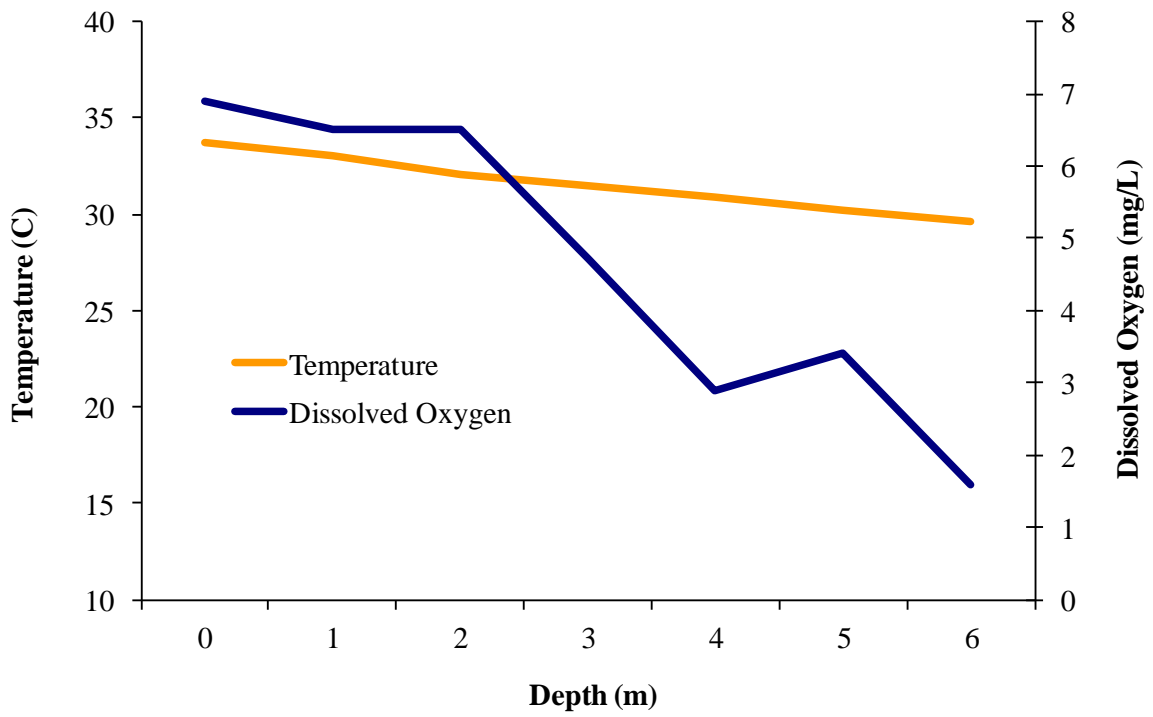


Figure 10. Water temperature and dissolved oxygen profile for Point A Reservoir, August 20, 2011.

Appendix B

General Reconnaissance Survey and Reservoir Fact Sheet

GENERAL RECONNAISSANCE SURVEY

DATE: September 1, 2011

1. Reservoir: Point A
2. Number of free public access areas: 0
3. Number of user fee access areas: 2
4. Location of free public access areas:
 - A. West side of County Road 59, where road crosses Patsaliga Creek.
 - B. At PSEC Park on east side of County Road 59.
5. Wildlife and Freshwater Fisheries boat ramps needing repairs, listed by order of priority.
 - A. None
6. Possible locations of additional access areas.
 - A. To be determined
7. Tailwater access.
 - A. Anglers have access to the tailwater fishery from the River Falls Boat Ramp. Bank fishing access is also available from the angling pier on the west side of Point A Dam.
8. Summary of observations on tailwater fishery.

This site is very popular with anglers for catfish, white bass, and hybrid-striped bass in the spring. It also receives substantial fishing pressure for catfish throughout the year. Parking is a problem since anglers are not allowed to drive on the earthen dam and have to walk several hundred yards and down a steep hill from the parking area to the pier.

9. Fish shelter situation.

Fish attractors were recommended in the 1987 general reconnaissance survey. These attractors have not been constructed and are still recommended by the Wildlife and Freshwater Fisheries Division.

10. Public relation problems or desires concerning the fishery that need attention.

Anglers complain when the reservoir is lowered for dam maintenance, but this has not happened since 2005.

11. Areas of nuisance aquatic plants observed during recent sampling.

Several canals adjacent to Gantt Reservoir were found to contain *Salvinia minima*, but this has not been observed in Point A. Point A does have an abundance of American lotus, alligator weed, water primrose, and *Chara spp.*

12. Shoreline access development.

Other than the tailwater fishery access mentioned above, shoreline access is limited mostly to a privately owned park maintained by the Sweet Home Alabama Campground and a daily fee is required for access.

13. Description of commercial fisheries.

None present.

ALABAMA RESERVOIR FACT SHEET

DATE: September 1, 2011

RESERVOIR: Point A

AREA (Acres): 700

LOCATION: Four miles northwest of Andalusia off Highway 29

YEAR IMPOUNDED: 1926

OPERATOR: Power-South Electric Cooperative

PRIMARY USES: Hydropower, Flood Control, Recreation

PUBLIC FACILITIES: Boat ramps are located on the west side of County Road 59 where the road crosses Patsaliga Creek, and on the east side of County Road 59 in a park operated by Power South EC. Anglers also have access to the tailwaters of Point A dam from a concrete platform accessed from the west side of the dam off of County Road 59.

NOTABLE CHARACTERISTICS OF FISHERY: Flathead catfish over 45 pounds are often reported from Point A Reservoir. In the spring, anglers report good numbers of catfish, white bass, and hybrid striped bass caught below Point A Dam. Crappie anglers often catch white crappie two pounds and larger, although they are fairly low in numbers. The reservoir is primarily known as a good bream fishery, mainly due to the healthy population of quality redear sunfish.

OTHER RECREATIONAL OPPORTUNITIES: Boating, water skiing, and swimming.

MAJOR SPORT FISHERIES

SPECIES

STATUS

1. Redear Sunfish Quality size redear (7 in. and larger) are common. Fish exceeding a half pound are common during the spring spawning season.

2. Largemouth bass Small bass are numerous. Most are 12 in. or less but some over 22 in. are present.

COMMENTS: The best areas for redear appear to be around the cypress trees and sandy bottoms of the upper reservoir. Largemouth bass seemed to be more abundant in the sloughs and creeks on the west side and the upper end of the reservoir, and directly below Gantt Dam tailrace.

HABITAT STATUS AND IMPROVEMENTS: Point A Reservoir drains a coastal plain water shed and the water is usually a brownish color due to tannic acid. Mussels and aquatic snails, favored food items of the redear, are abundant. Submergent aquatic vegetation is abundant in the growing season and is partly responsible for the high snail population that results in quality redear sunfish. Due to low fertility, shad populations are low and bass growth is somewhat slow. White crappie showed up in the early 1990's and have become the predominant crappie species.

PREDICTIONS FOR FISHERY: The redear and largemouth fisheries should remain stable barring a severe drawdown in the near future. White crappie should continue to contribute to the fishery.

FOR MORE INFORMATION CONTACT: Ken Weathers, D-4 Fisheries Supervisor, Alabama Wildlife and Freshwater Fisheries, 3520 Plaza Drive, Enterprise, AL 36330; 334-347-9467; Ken.Weathers@dcnr.alabama.gov.