South Holston Reservoir

Annual Report 2009

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Table of contents

Page

Reservoir Characteristics and Information 3

Habitat 3

Species Summaries 4-11

Tables

1. Fish stocked in South Holston Reservoir 13
2. Number of species collected by gear type 14
3. CPUE and RSD by category and species (black bass) 15
4. CPUE and RSD by category and species (crappie and walleye) 16
5. Largemouth bass mean relative weights (Wr) 17
6. Smallmouth bass mean relative weights (Wr) 17
7. Black crappie mean relative weights (Wr) 18

Figures

1. Sites sampled on South Holston Reservoir in 2008 20
2. Largemouth bass incremental CPUE values 21
3. Largemouth bass length frequency by percent 21
4. Largemouth bass mean relative weights (Wr) 22
5. Largemouth bass traditional PSD and RSD-15 values 22
6. Smallmouth bass incremental CPUE values 23
7. Smallmouth bass length frequency by percent 23
8. Smallmouth bass mean relative weights (Wr) 24
9. Smallmouth bass traditional PSD and RSD-14 values 24
10. Black crappie length frequency by percent 25
11. Black crappie mean relative weights (Wr) 25

Appendix A – Water Quality

Tables A1 – A11 Summer water quality sampling data ..... 27 – 37
Figures A1 – A11 Summer water quality sampling data ..... 38 – 48

Appendix B – Reservoir Elevations

Table B1. Daily reservoir elevation data 49
Figure B1. Daily reservoir elevation data with guide curve 53

South Holston Reservoir

Description

Surface Area: 7,580 acres
Counties: Sullivan, Washington (VA)
Full Pool Elevation: 1,729 feet above mean sea level
Maximum Depth: 245 feet
Mean Chlorophyll (Forebay): 4.2 parts per million
Trophic Status (Forebay): Mesotrophic
Hydraulic Retention Time: 340 days
Total Fishing Effort: N/A in 2009

Shoreline Distance: 182 miles
Drainage Area: 703 square miles
Mean Annual Fluctuation: 39 feet
Thermocline Depth: 13 feet
Shoreline Development: 14%
Trophic Index, Carlson (1977): 44.7
Reservoir Age: 59 years (dam completed 1950)
Total Value by Anglers: N/A in 2009

Habitat Enhancement and Monitoring

	New Sites			Renovated Sites			Expanded Sites		
Location	**Number**	**Units**	**Acres**	**Number**	**Units**	**Acres**	**Number**	**Units**	**Acres**
None In 2009									
Total	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***

Parameter	Date Collected
Temperature, pH, Conductivity, and D.O.	July, August, September

Black Bass

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	292,344	173,156	No Survey	No Survey	No Survey	No Survey	75,404	72,371	No Survey	No Survey	153,319
	(hrs/acre)	38.6	22.8					9.9	9.5			20.2
Any Black Bass	(hrs)	233,522	131,155					66,909	64,527			124,028
	(hrs/acre)	30.8	17.3					8.8	8.5			16.4
Largemouth Bass	(hrs)	2,815	912					0	280			1,002
	(hrs/acre)	0.4	0.1					0.0	0.04			0.1
Smallmouth Bass	(hrs)	56,007	41,089					8,495	7,564			28,289
	(hrs/acre)	7.4	5.4					1.1	1.0			3.7
Spotted Bass	(hrs)	0	0					0	0			0
	(hrs/acre)	0.0	0.0					0.0	0.0			0.0
Tournaments (BITE program & creel survey data)												
# Tournaments (BITE)			5	7	1	1	1	1	none reported	none reported	4	2.9
Pounds/Angler Day (BITE)			3.22	3.48	3.85	2.73	2.83	1.92			1.65	2.81
Bass/Angler Day (BITE)			1.54	1.58	2.27	1.25	1.52	1.31			0.64	1.44
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		$624,310	$365,140	No Survey	No Survey	No Survey	No Survey	$147,040	$144,320	No Survey	No Survey	$256,162
Any Black Bass		$518,200	$260,660					$134,640	$136,890			$262,598
Largemouth Bass		$2,800	$330					$0	$1,270			$1,100
Smallmouth Bass		$103,310	$104,150					$12,400	$6,160			$56,505
Spotted Bass		$0	$0					$0	$0			$0

Largemouth Bass

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Substock CPUE	2.10	2.50	3.60	0.96	1.73	1.38	2.19	0.40	2.40	1.52	1.9
Density (electrofishing data - CPUE = # fish/hour)											
PSD	82%	70%	74%	68%	83%	69%	81%	82%	83%	79%	77.1%
RSD - Preferred	53%	43%	41%	54%	50%	51%	44%	59%	53%	55%	50.3%
CPUE	15.85	18.50	16.20	19.27	18.37	14.76	12.56	19.20	35.80	29.18	20.0
CPUE ≥ Stock	13.75	16.00	12.60	18.31	16.64	13.38	10.37	18.80	33.40	27.66	18.1
CPUE ≥ MSL	No Minimum Size Limit										
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Mean TL at Age-3 (mm)	361	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	361
Relative Weight (electrofishing data)											
Stock - Quality	84.4	89.4	88.7	86.1	86.6	89.5	91.9	96.3	92.8	88.7	89.4
Quality - Preferred	91.3	91.2	99.0	104.0	94.9	92.2	93.0	99.2	97.3	94.3	95.6
Preferred - Memorable	96.0	101.0	94.6	101.3	97.1	96.5	89.8	99.7	101.2	97.7	97.5
Memorable - Trophy	96.8	86.3	none	107.9	100.2	none	89.0	93.7	97.4	93.2	95.6
Trophy	none	none	none	none	none	none	none	none	none	none	
Mortality (electrofishing data)											
Total Mortality	0.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.0%
Fishing Success (creel survey data)											
Catch Rate	not calculated	0.11	No Survey	No Survey	No Survey	No Survey	0.05	0.05	No Survey	No Survey	0.07
Harvest Rate	not calculated	0.02					0.00	0.01			0.01
Percent Harvested	8.1%	15.5%					8.1%	11.3%			10.8%
Mean Weight (pounds)	1.81	1.44					2.05	2.11			1.9

Fishery Forecast

The 2009 South Holston Reservoir largemouth bass catch rates were again above average. The excellent size structure was not much different from last year. South Holston consistently has a fantastic percentage of largemouth bass over 15-inches. It is also consistently one of the best reservoirs in the area for good sized largemouth bass. The good numbers of largemouth under 8-inches should keep the quality of this fishery stable.

Management Recommendations

No change to the current regulation is recommended.

Smallmouth Bass

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	1.0
Substock CPUE	5.3	1.6	0.8	0.2	0.2	2.5	2.4	1.0	1.8	1.4	1.7
Density (electrofishing data - CPUE = # fish/hour)											
PSD	73%	90%	76%	72%	71%	63%	41%	69%	80%	87%	72.2%
RSD - Preferred	49%	64%	59%	52%	44%	38%	29%	46%	47%	57%	48.5%
CPUE	31.06	30.20	12.30	8.87	17.54	17.83	10.58	21.60	27.20	21.45	19.9
CPUE ≥ Stock	25.75	28.60	11.50	8.71	17.36	15.28	8.18	20.60	25.40	20.05	18.1
CPUE ≥ MSL (16" in 2008 18" in 2009)*			N/A	N/A	N/A	N/A	N/A	N/A	5.6	1.4	3.5
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	129	N/A	N/A	N/A	129
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	324	N/A	N/A	N/A	324
Relative Weight (electrofishing data)											
Stock - Quality	89.0	87.6	90.2	88.3	107.5	88.7	89.2	88.4	93.8	92.6	91.5
Quality - Preferred	92.8	92.6	92.7	97.8	97.2	93.4	93.9	89.6	98.4	92.4	94.1
Preferred - Memorable	96.4	92.9	93.9	100.0	90.5	89.8	96.0	97.1	94.4	91.8	94.3
Memorable - Trophy	94.1	94.1	89.9	96.0	93.9	89.6	90.3	94.5	90.7	90.0	92.3
Trophy	none	none	none	none	none	none	none	none	none	none	
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	0.48	N/A	N/A	N/A	48.0%
Fishing Success (creel survey data)											
Catch Rate	not calculate	0.37	No Survey	No Survey	No Survey	No Survey	0.17	0.16	No Survey	No Survey	0.23
Harvest Rate	not calculate	0.06					0.01	0.02			0.03
Percent Harvested	25.4%	17.5%					7.8%	14.2%			16.2%
Mean Weight (pounds)	3.20	2.92					2.64	2.44			2.80

* 15" MLL in effect in 2008 and 18" in 2009

Fishery Forecast

Smallmouth bass size structure improved again in 2009 for the third year in row. Just like largemouth bass, South Holston Reservoir consistently has a great percentage of smallmouth bass over 18-inches. The minimum size limit will be at 15-inches in 2010 which should allow for recruitment of plenty of smallmouth to the 12 to 14-inch size class.

Management Recommendations

Evaluate the impact of the regulation change on the smallmouth bass fishery.

White Crappie

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Recruitment (electrofishing data) - CPUE = # fish/ hour)											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Density (electrofishing data) - CPUE = # fish/ hour)											
PSD	100%	100%	none	none	100%	none	none	none	100%	none	100%
RSD - Preferred	100%	100%	none	none	100%	none	none	none	100%	none	100%
CPUE	0.23	0.23	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.09
CPUE ≥ Stock	0.23	0.23	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.09
CPUE ≥ MSL (10")	0.23	0.23	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.09
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	none	none	none	none	94.532	none	none	none	none	none	94.5
Quality - Preferred	none	none	none	none	none	none	none	none	none	none	
Preferred - Memorable	none	93.613	none	none	none	none	none	none	none	none	93.6
Memorable - Trophy	98.044	none	none	none	none	none	none	none	90.2	none	94.1
Trophy	none	none	none	none	none	none	none	none	none	none	
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	24,776	7,906	No Survey	No Survey	No Survey	No Survey	11,595	7,564	No Survey	No Survey	12,960
Angler Hours/Acre	3.3	1.0					1.5	1.0			0.4
Fishing Success (creel survey data)											
Catch Rate	none	0.05					none	none			0.05
Harvest Rate	none	0.00					none	none			0.00
Percent Harvested	none	100.0%					none	none			100.0%
Mean Weight (pounds)	none	N/A					none	none			
Value of Fishery (creel survey data - trip exp											
Any Crappie	$0	$8,410					$17,840	$11,200			$9,363

Fishery Forecast

White Crappie are rarely sampled in South Holston Reservoir. While there is a population in the reservoir, white crappie usually do not do very well in clear cool, aging reservoirs like South Holston. Therefore, not many white crappie are expected to be a significant part of the overall catch and harvest of the reservoir.

Management Recommendations

Continue to monitor the population and maintain the current 15 fish, 254 mm (10-inch) length limit.

Black Crappie

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Recruitment (electrofishing data) - CPUE = # fish/ hour)											
Age-0 CPUE	N/A	N/A	none	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.00	0.20	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Density (electrofishing data) - CPUE = # fish/ hour)											
PSD	100%	87%	96%	97%	94%	96%	87%	98%	99%	95%	94.9%
RSD - Preferred	86%	64%	82%	78%	74%	77%	62%	74%	86%	79%	76.2%
CPUE	4.87	26.26	6.52	11.72	6.80	8.47	10.35	18.20	34.60	17.48	14.53
CPUE ≥ Stock	4.87	26.06	6.23	11.72	6.80	8.47	10.35	18.20	34.60	17.48	14.48
CPUE ≥ MSL (10")	0.39	15.12	4.52	9.01	4.43	6.10	5.97	11.00	26.60	13.29	9.64
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	none	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	254	N/A	N/A	N/A	N/A	N/A	N/A	N/A	254
Relative Weight (electrofishing data)											
Stock - Quality	none	97.099	104.947	145.89	103.3	94.9	98.5	96.3	95.8	99.7	104.1
Quality - Preferred	91.079	100.933	96.37	101.594	118	101.8	100.3	99.2	96.3	99.4	100.5
Preferred - Memorable	95.65	95.783	97.405	100.666	103.8	94.7	97.2	97.2	95.8	91.0	96.9
Memorable - Trophy	89.566	97.181	90.862	98.268	90.1	86.9	90	93.7	91.3	87.4	91.5
Trophy	none	none	none	none	none	none	none	none	none	none	
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	0.29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29%
Stocking											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	24,776	7,906	No Survey	No Survey	No Survey	No Survey	11,595	7,564	No Survey	No Survey	12,960
Angler Hours/Acre	3.3	1.0					1.5	1.0			0.4
Fishing Success (creel survey data)											
Catch Rate	0.60	0.56					0.12	0.13			0.35
Harvest Rate	0.46	0.17					0.09	0.09			0.20
Percent Harvested	73.9%	34.0%					64.2%	62.2%			58.6%
Mean Weight (pounds)	0.65	0.79					0.94	0.89			0.82
Value of Fishery (creel survey data - trip exp											
Any Crappie	$31,000	$8,410					$17,840	$11,200			$17,113

Fishery Forecast

In 2009, black crappie electrofishing catch rates were still above average but showed a decline. However, the size structure was still excellent where nearly 80% of the crappie collected were larger than 10-inches. South Holston generally does not have a good crappie population, but 2010 should provide anglers an excellent opportunity to harvest some quality black crappie.

Management Recommendations

Maintain the current 15 fish, 254 mm (10-inch) length limit.

Walleye

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Recruitment (winter gill net data)											
Substock CPUE	0.00	no sample	0.03	no sample	0.00	no sample	0.13	0.00	0.00	0.00	0.02
Density (winter gill net data - CPUE = # fish/net night)											
PSD	99%	no sample	98%	no sample	95%	no sample	91%	93%	79%	92%	92.4%
RSD - Preferred	52%	no sample	42%	no sample	48%	no sample	38%	59%	45%	22%	43.7%
CPUE	11.22	no sample	9.39	no sample	6.25	no sample	8.29	6.29	12.58	10.86	9.27
CPUE ≥ Stock	11.22	no sample	9.36	no sample	6.25	no sample	8.17	6.29	12.58	10.86	9.25
CPUE ≥ MSL (18")	8.13	no sample		no sample	3.67	no sample	4.17	4.86	8.08	5.00	5.65
Growth (winter gill net data)											
Mean TL at Age-1 (mm)		no sample	426	no sample		no sample	411	415	450	434	427.2
Mean TL at Age-3 (mm)		no sample	538	no sample		no sample	539	537	524	525	532.6
Relative Weight (winter gill net data)											
Stock - Quality	102.1	no sample		no sample	92.9	no sample	105.5	99.7	103.4	104.0	101.3
Quality - Preferred	108.7	no sample		no sample	98.7	no sample	96.4	95.1	103.6	96.5	99.8
Preferred - Memorable	109.4	no sample		no sample	96.0	no sample	97.1	97.3	101.7	94.2	99.3
Memorable - Trophy	110.0	no sample		no sample	98.5	no sample	93.7	96.7	none	87.6	97.3
Trophy	none	no sample		no sample	none	no sample	none	none	none	none	
Mortality (winter gill net data)											
Total Mortality		no sample		no sample		no sample	48%	N/A	N/A	32%	40.0%
Stocking*											
# per Acre	0.0	0.0	6.8	2.2	6.2	5.4	7.5	5.1	5.4	3.3	4.2
Angling Pressure (creel survey data - walleye data only)											
Angler Hours	22,207	17,579	No Survey	No Survey	No Survey	No Survey	17,580	21,543	No Survey	No Survey	19,727
Angler Hours/Acre	2.93	2.32					2.32	2.84			0.65
Fishing Success (creel survey data - walleye											
Catch Rate	not calculated	not calculated					not calculated	not calculated			
Harvest Rate	not calculated	not calculated					not calculated	not calculated			
Percent Harvested	90.7%	79.8%					55.5%	59.0%			71.3%
Mean Weight (pounds)	3.72	3.38					3.32	3.35			3.44
Value of Fishery (creel survey data - trip exp											
Walleye Data Only	$37,760	$28,130					$33,010	$37,930			$34,208

* Does not include fish stocked by Virginia Dept. of Game and Inland Fisheries

Fishery Forecast

Walleye continue to do very well in South Holston. Overall, the size and condition of the walleye population in South Holston is very good where almost half of the walleye collected in gill net sampling were above the minimum size limit of 18-inches. There was also really good numbers of smaller walleye just under the size limit which should provide anglers with excellent fishing in 2010. The quality of the walleye fishery should remain stable due to TWRA stocking efforts.

Management Recommendations

Maintain the current regulations.

Trout

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Angling Pressure (creel survey data)												
All Trout	(hrs)	58,635	44,906	No Survey	No Survey	No Survey	No Survey	8,287	10,467	No Survey	No Survey	24,459
	(hrs/acre)	7.7	5.9					1.1	1.4			4.03
Any Trout	(hrs)	58,635	37,750					6,565	10,099			28,262
	(hrs/acre)	7.7	5.0					0.9	1.3			3.73
Rainbow Trout	(hrs)	0	7,156					1,722	368			2,312
	(hrs/acre)	0.0	0.9					0.2	0.05			0.30
Brown Trout	(hrs)	0	0					0	0			0
	(hrs/acre)	0.0	0.0					0.0	0.0			0.00
Lake Trout	(hrs)	0	0					0	0			0
	(hrs/acre)	0.0	0.0					0.0	0.0			0.00
Value of Fishery (creel survey data - trip expenditures)												
All Trout		$85,350	$52,220	No Survey	No Survey	No Survey	No Survey	$12,240	$13,520	No Survey	No Survey	$40,833
Any Trout		$85,350	$46,110					$9,780	$12,740			$38,495
Rainbow Trout		$0	$6,110					$2,460	$780			$2,338
Brown Trout		$0	$0					$0	$0			$0
Lake Trout		$0	$0					$0	$0			$0

Fishery Forecast

The quality of the trout fishery should remain stable, due to TWRA stocking efforts. This year, lake trout should be available for catching and harvest due to the tremendous growth rates that have been documented. Tennessee Technological University is conducting a research project on trout species in South Holston Reservoir and we hope to learn a lot more about the size structure, age structure and recommended stocking rates in the near future.

Management Recommendations

None at this time. Maintain current regulations.

Rainbow Trout

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Fishing Success (creel survey data)											
Catch Rate	not calculated	0.80	No Survey	No Survey	No Survey	No Survey	0.03	0.07	No Survey	No Survey	0.30
Harvest Rate	not calculated	0.60					0.01	0.05			0.22
Percent Harvested	74.4%	68.9%					30.0%	42.8%			54.0%
Mean Weight (pounds)	1.37	1.2					1.54	1.65			1.4

Brown Trout

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Fishing Success (creel survey data)											
Catch Rate	not calculated	0.14	No Survey	No Survey	No Survey	No Survey	0.00	0.01	No Survey	No Survey	0.05
Harvest Rate	not calculated	0.01					0.00	0.01			0.01
Percent Harvested	none	8.2%					0.0%	9.7%			6.0%
Mean Weight (pounds)	none	0.46					N/A	1.7			1.1

Lake Trout

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Fishing Success (creel survey data)											
Catch Rate	not calculated	none	No Survey	No Survey	No Survey	No Survey	none	none	No Survey	No Survey	
Harvest Rate	not calculated	none					none	none			
Percent Harvested	none	none					none	none			
Mean Weight (pounds)	none	none					none	none			

Sunfish

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	* 28,765	17,823	No Survey	No Survey	No Survey	No Survey	233	792	No Survey	No Survey	11,903
Angler Hours/Acre	3.79	2.35					0.03	0.10			0.39
Fishing Success (creel survey data - bluegill											
Catch Rate (bluegill)	3.21	2.11					4.61	1.52			2.86
Harvest Rate (bluegill)	0.24	0.30					1.51	0.35			0.60
% Harvested (bluegill)	9.2%	9.8%					9.8%	15.6%			11.1%
Mean Weight (bluegill)	0.22	0.20					0.23	0.26			0.23
Value of Fishery (creel survey data - trip exp											
Any Sunfish	$46,500	$16,510					$290	$530			$15,958

* Bluegill only

Catfish

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
Angling Pressure (creel survey data - any catfish)											
Angler Hours	873	321	No Survey	No Survey	No Survey	No Survey	851	3,106	No Survey	No Survey	1,288
Angler Hours/Acre	0.12	0.04					0.11	0.41			0.04
Fishing Success (creel survey data)											
Catch Rate (channel cat)	not calculated	0.18					0.18	0.11			0.16
Harvest Rate (channel cat)	not calculated	0.18					0.18	0.11			0.16
% Harvested (channel cat)	34.7%	39.2%					40.4%	65.2%			44.9%
Mean Weight (channel cat)	2.65	2.84					2.85	2.93			2.82
Value of Fishery (creel survey data - trip exp											
Any Catfish	$1,700	$930					$2,090	$2,960			$1,920

Tables

Table 1. South Holston Reservoir stocking records 2002 – 2009.

Species	Date	Rate (per acre)	Mean Length (in.)	Number
Walleye	May 2002	6.8	1.25 – 1.6	51,411
	May 2002*	6.3	1.0 – 2.0	47,553
	May 2003	2.2	1.25 – 2.25	17,047
	May 2003	23.6		179,033
	May 2004	6.2	1.00 – 1.25	46,725
	May 2005	5.4	1.0 – 1.1	41,199
	May 2006	7.5	1.0 – 2.0	56,840
	May 2007	5.1	0.75 – 2.0	38,623
	May 2008	5.4	1.0 – 2.0	40,921
	May 2009	3.3	1.0 – 1.25	24,920
Lake Trout	Jan. 2006	10.0	5.0 – 6.0	75,645
	Feb. 2007	6.4	6.0	48,494
	Winter Months 2008	3.6	5.6 – 5.9	27,009
	Winter Months 2009	3.5	6.0	26,610
Rainbow Trout	2002	6.5	Adult	49,003
	2003	5.3	Adult	40,576
	2004	5.3	Adult	40,210
	2005	4.2	Adult	31,712
	2006	5.6	9.0 – 10.0	42,308
	Winter Months 2007	5.8	9.0 – 10.0	44,119
	Winter Months 2008	4.2	7.9 – 10.0	32,097
	Winter Months 2009	1.1	8.0 – 9.0	8,403
Brown Trout	2002	1.3	Fingerling	10,156
	2003	1.3	Fingerling	10,031
	2004	0.0		0
	2005	2.6	Fingerling	20,012
	2006	0.0		0
	Feb. 2007	5.3	6.0 – 7.0	40,004
	Winter Months 2008	6.6	5.7	50,020
	Winter Months 2009	1.9	5.0	14,041

* - fished stocked by VDGIF

Table 2. Number of species collected by gear type in South Holston Reservoir, 2009. Effort is represented in hours for electrofishing and net nights for gill netting

	Spring Electrofishing			Winter Gill Netting		
Species	No.	CPUE (# fish / hour)	Total Effort	No.	CPUE (# fish / net night)	Total Effort
Largemouth Bass	141	29.2	5	X	X	X
Smallmouth Bass	107	21.4	5	X	X	X
Spotted Bass	0	0	5	X	X	X
Black Crappie	87	17.5	5	X	X	X
Black-Nose Crappie	1	0.2	5	X	X	X
White Crappie	0	0	5	X	X	X
Walleye	61	12.1	5	76	10.9	7
White Bass	0	0	5	X	X	X
Gizzard Shad	X	X	X	X	X	X
Threadfin Shad	X	X	X	X	X	X
Alewife	X	X	X	X	X	X

X = non targeted species

Table 3. Black bass catch, mean CPUE, and RSD by incremental category for target species by gear in South Holston Reservoir 1998 – 2009.

				RSD Substock			RSD Stock - Quality			RSD Quality - Preferred			RSD Preferred-Memorable			RSD Memorable-Trophy			RSD Trophy			**PSD**	Total	
Species	Year	Gear	Number of Samples	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	%	#	CPUE
Largemouth Bass	1998	EL	22	4	0.6	**3**	46	8	**37**	20	3.5	**16**	50	8.6	**40**	5	0.8	**4**				**60**	130	21.6
	1999	EL	18	6	1.3	**5**	25	5.6	**22**	34	7.6	**29**	54	12	**47**	3	0.7	**3**				**79**	122	27.1
	2000	EL	18	9	2	**13**	11	2.4	**18**	17	3.7	**28**	29	6.2	**48**	3	0.6	**5**				**81**	69	15
	2001	EL	17	11	2.5	**14**	21	4.8	**30**	19	4.4	**27**	28	6.4	**40**	2	0.5	**3**				**70**	81	18.5
	2002	EL	14	13	3.6	**22**	12	3.2	**26**	15	4.1	**33**	19	5.3	**41**	0	0	**0**				**74**	59	16.2
	2003	EL	20	5	1	**5**	32	6	**32**	14	2.6	**14**	49	9	**49**	4	1	**4**				**67**	104	19.3
	2004	EL	20	9	1.7	**9**	15	2.9	**17**	28	5.4	**33**	37	7.1	**43**	6	1.2	**7**	0	0	**0**	**83**	95	18.4
	2005	EL	20	7	1.4	**9**	21	4.1	**31**	12	2.4	**18**	35	6.9	**51**	0	0	**0**	0	0	**0**	**69**	75	14.8
	2006	EL	20	11	2.2	**17**	10	2	**19**	19	3.8	**37**	22	4.4	**42**	1	0.2	**2**	0	0	**0**	**81**	63	12.6
	2007	EL	20	2	0.4	**2**	17	3.4	**18**	22	4.4	**23**	52	10	**55**	3	0.6	**3**	0	0	**0**	**81**	96	19.2
	2008	EL	20	12	2.4	**7**	28	5.6	**17**	50	10	**30**	84	17	**50**	5	1	**3**	0	0	**0**	**83**	179	35.8
	2009	EL	20	7	1.5	**5**	28	5.8	**21**	32	6.8	**24**	69	14	**51**	5	1	**4**	0	0	**0**	**79**	141	29.2
Smallmouth Bass	1998	EL	22	30	5.2	**19**	31	5.4	**24**	59	10	**46**	31	5.4	**24**	9	1.5	**7**				**77**	160	27.7
	1999	EL	18	19	4.2	**14**	35	7.8	**30**	37	8.2	**32**	27	6	**23**	17	3.8	**15**				**70**	135	30
	2000	EL	18	23	5	**17**	31	6.7	**27**	27	5.8	**24**	22	6.2	**19**	29	6.2	**26**				**69**	136	29.3
	2001	EL	17	7	1.6	**5**	13	2.9	**10**	32	7.3	**25**	42	9.6	**33**	36	8.2	**29**				**87**	133	30.2
	2002	EL	14	3	0.8	**7**	10	2.7	**24**	7	2	**17**	15	4.3	**37**	8	2.3	**20**	1	0.3	**2**	**74**	44	12.3
	2003	EL	20	1	0.2	**2**	13	2.4	**28**	9	1.7	**20**	11	2.1	**24**	10	1.9	**22**				**66**	47	8.8
	2004	EL	20	1	0.2	**1**	26	5	**29**	24	4.6	**27**	19	3.7	**21**	17	3.3	**19**	0	0	**0**	**67**	91	17.5
	2005	EL	20	13	2.5	**14**	29	5.7	**37**	19	3.7	**24**	18	3.5	**23**	10	2	**13**	2	0.4	**3**	**63**	91	17.8
	2006	EL	20	12	2.4	**23**	24	4.8	**59**	5	1	**12**	9	1.8	**22**	3	0.6	**7**	0	0	**0**	**41**	53	10.6
	2007	EL	20	5	1	**5**	32	6.4	**31**	24	4.8	**23**	32	6.4	**31**	13	2.6	**13**	2	0.4	**2**	**69**	108	21.6
	2008	EL	20	9	1.8	**7**	26	5.2	**20**	41	8.2	**32**	40	8	**31**	17	3.4	**13**	3	0.6	**2**	**80**	136	27.2
	2009	EL	20	7	1.4	**7**	13	2.6	**13**	30	6.1	**30**	37	7.4	**37**	19	3.8	**19**	1	0.2	**1**	**87**	107	21.4

Table 4. Black crappie and Walleye catch, mean CPUE, and RSD by incremental category for target species by gear in South Holston Reservoir 1998 – 2009.

				RSD Substock			RSD Stock - Quality			RSD Quality - Preferred			RSD Preferred-Memorable			RSD Memorable-Trophy			RSD Trophy			**PSD**	Total	
Species	Year	Gear	Number of Samples	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	%	#	CPUE
Black Crappie	1998	EL	22	1	0.1	**3**	4	0.7	**11**	8	1.3	**22**	17	2.9	**50**	5	0.8	**14**				**86**	36	6
	1999	EL	18	0	0		0	0		24	5.3	**34**	41	9.1	**59**	5	1.1	**7**				**100**	70	16
	2000	EL	18	0	0		0	0		3	0.7	**14**	10	2.2	**48**	8	1.7	**38**				**100**	21	4.6
	2001	EL	17	1	0.2	**1**	15	3.4	**13**	26	5.9	**23**	54	12	**47**	19	4.3	**17**				**87**	115	26
	2002	EL	14	1	0.3	**4**	1	0.3	**5**	3	0.9	**14**	11	3.1	**50**	7	2	**32**				**96**	23	6.5
	2003	EL	20	0	0		2	0.4	**3**	12	2.1	**19**	22	4.1	**35**	27	5.1	**43**				**97**	63	12
	2004	EL	20	0	0	**0**	2	0.4	**6**	7	1.4	**20**	18	3.5	**51**	8	1.5	**23**	0	0	**0**	**94**	35	6.8
	2005	EL	20	0	0	**0**	2	0.4	**5**	8	1.6	**19**	12	2.4	**28**	21	4.1	**49**	0	0	**0**	**96**	43	8.5
	2006	EL	20	0	0	**0**	7	1.4	**13**	13	2.6	**25**	20	4	**38**	12	2.4	**23**	0	0	**0**	**87**	52	10
	2007	EL	20	0	0	**0**	2	0.4	**2**	22	4.4	**24**	53	11	**58**	14	2.8	**15**	0	0	**0**	**98**	91	18
	2008	EL	20	0	0	**0**	2	0.4	**1**	22	4.4	**13**	83	17	**48**	65	13	**38**	1	0.2	**1**	**99**	173	35
	2009	EL	20	0	0	**0**	4	0.8	**5**	14	2.8	**16**	39	7.8	**45**	30	6.1	**34**	0	0	**0**	**95**	87	17
Walleye (Winter Gill Net)	1998	GN	6	0			0			56	9.7	**75**	19	3.2	**25**	0	0		0			**100**	77	13
	1999	GN	9	0			1	0.1	**1**	53	5.9	**60**	35	3.9	**48**	0	0					**100**	89	9.8
	2000	GN	23	0			2	0.1	**1**	79	3.4	**48**	80	3.5	**49**	3	0.1	**2**	1	0	**1**	**99**	164	7.1
	2001	GN*																						
	2002	GN	36	1	0		8	0.2	**2**	190	5.3	**56**	130	3.6	**39**	9	0.3	**3**				**98**	338	9.4
	2003	GN																						
	2004	GN	14	1	0.1	**1**	5	0.4	**5**	47	3.4	**47**	46	3.3	**46**	2	0.1	**2**	0	0	**0**	**95**	101	7.2
	2005	GN																						
	2006	GN	24	3	0.1	**2**	17	0.7	**9**	105	4.4	**54**	72	3	**37**	2	0.1	**1**	0	0	**0**	**91**	199	8.3
	2007	GN	7	0	0	**0**	7	0.4	**3**	15	2.1	**34**	22	3.1	**50**	4	0.6	**9**	0	0	**0**	**93**	44	6.3
	2008	GN	12	0	0	**0**	31	2.6	**21**	52	4.3	**34**	38	5.7	**45**	0	0	**0**	0	0	**0**	**79**	151	13
	2009	GN	7	0	0	**0**	6	0.9	**8**	53	7.6	**70**	15	2.1	**20**	2	0.3	**3**	0	0	**0**	**92**	76	11

Table 5. Largemouth bass mean relative weights (Wr) in South Holston Reservoir, spring 2009.

Length Group	Mean Wr	Std. Error	N
150	86.334	13.021	2
175	87.366	2.241	3
200	88.930	1.202	4
225	91.206	4.179	4
250	86.619	2.414	8
275	89.160	1.810	12
300	90.812	3.100	8
325	100.594	5.567	8
350	93.713	1.891	14
375	98.639	2.591	11
400	95.684	1.910	25
425	98.739	2.524	13
450	97.562	2.291	14
475	98.405	2.430	7
500	100.929	3.287	3
525	91.284	0.874	2
550			0
575			0
600			0
625	83.378		1
		Total =	**139**

Table 6. Smallmouth bass mean relative weights (Wr) in South Holston Reservoir, spring 2009.

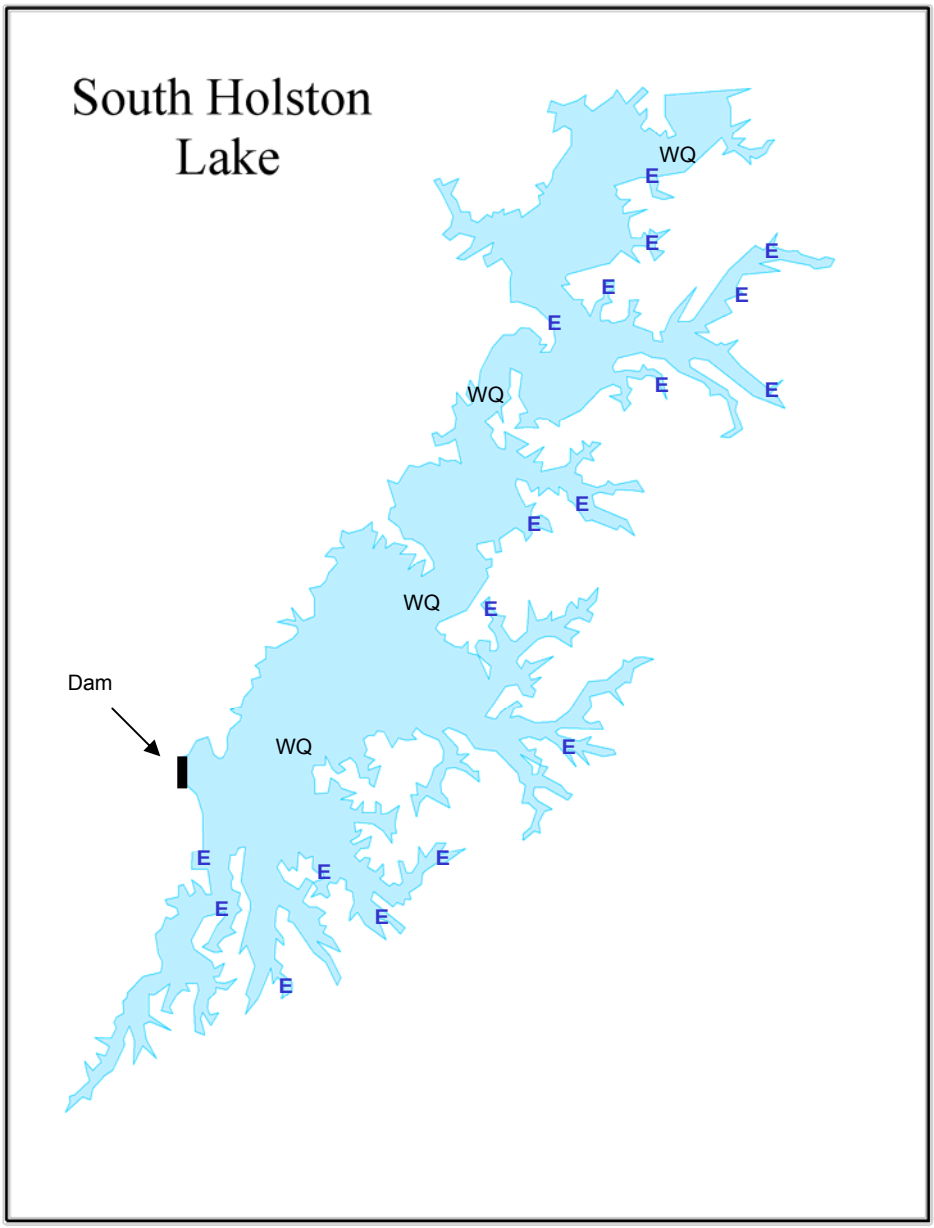
Length Group	Mean Wr	Std. Error	N
150	82.989	1.222	2
175	83.287	3.425	6
200	87.481	4.090	5
225	93.392	5.892	2
250			0
275	97.686	5.994	9
300	97.386	2.815	8
325	91.166	1.961	15
350	90.510	2.824	10
375	89.887	2.040	12
400	94.308	1.882	15
425	90.649	1.148	10
450	91.421	4.183	6
475	82.248	6.926	2
500			0
525	86.323		1
550			0
		Total =	**103**

Table 7. Black crappie mean relative weights (Wr) in South Holston Reservoir, spring 2009.

Length Group	Mean Wr	Std. Error	N
150			0
175	99.744	4.017	4
200	98.163	3.200	4
225	99.877	2.294	10
250	93.731	1.473	10
275	90.098	1.241	29
300	87.600	1.524	18
325	89.956	2.810	7
350	83.294	2.608	4
375	83.827		1
		Total =	**87**

Figures

Figure 1. South Holston Reservoir with sites sampled in 2009.



E = Spring Electrofishing
WQ = Water Quality

Largemouth Bass

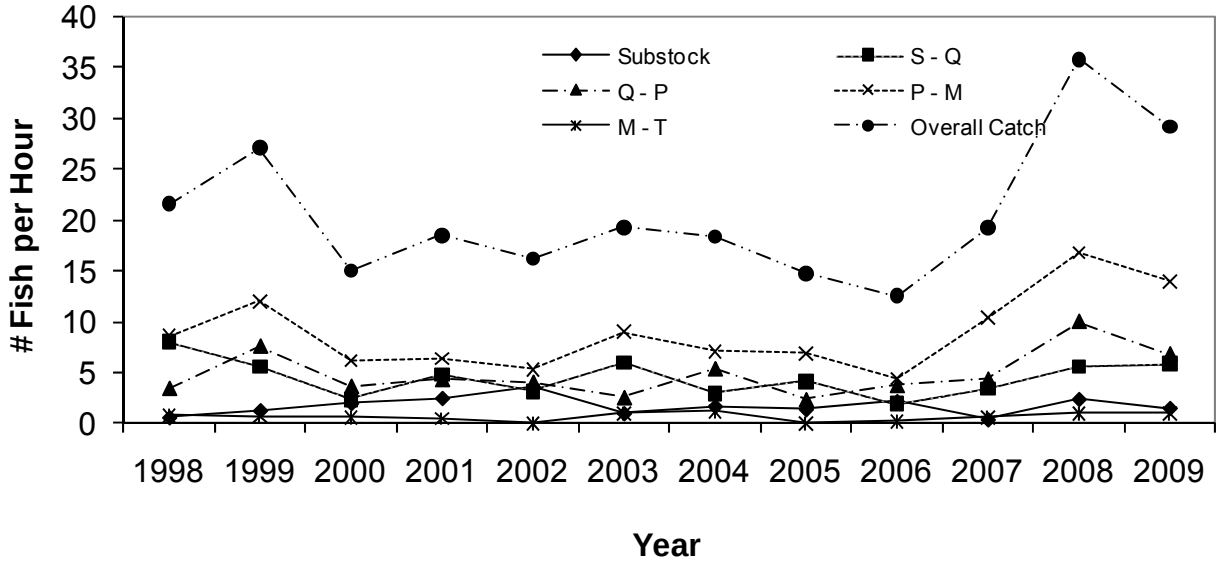


Figure 2. Largemouth bass CPUE by incremental length category in South Holston Reservoir, 1998 - 2009.

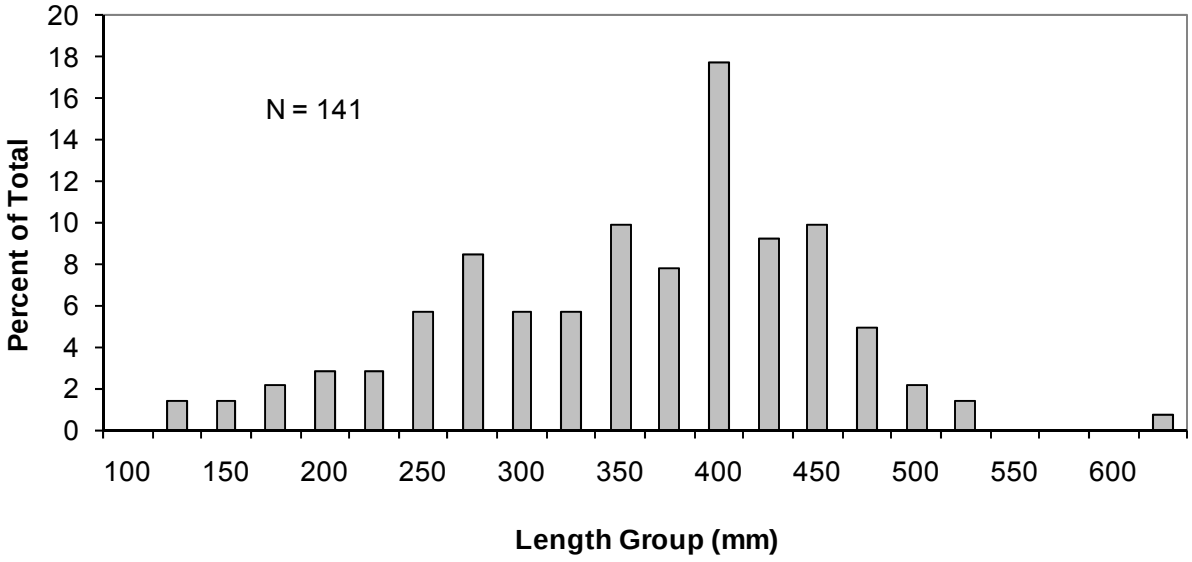


Figure 3. Largemouth bass length frequency by percent in South Holston Reservoir, spring 2009.

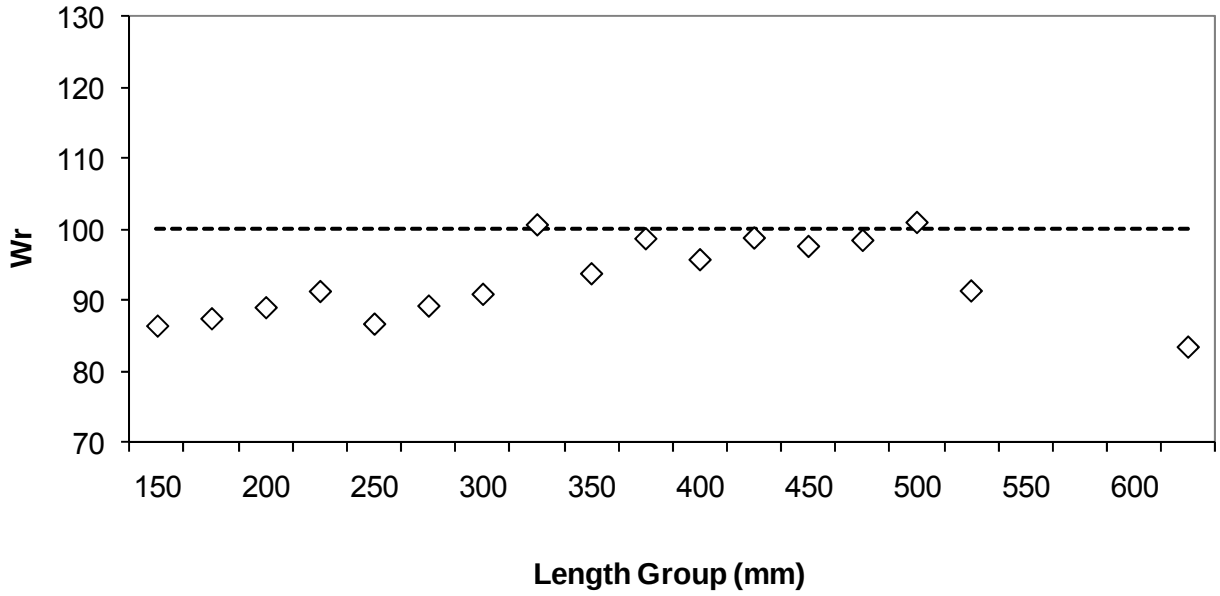


Figure 4. Largemouth bass mean relative weights (Wr) in South Holston Reservoir, spring 2009.

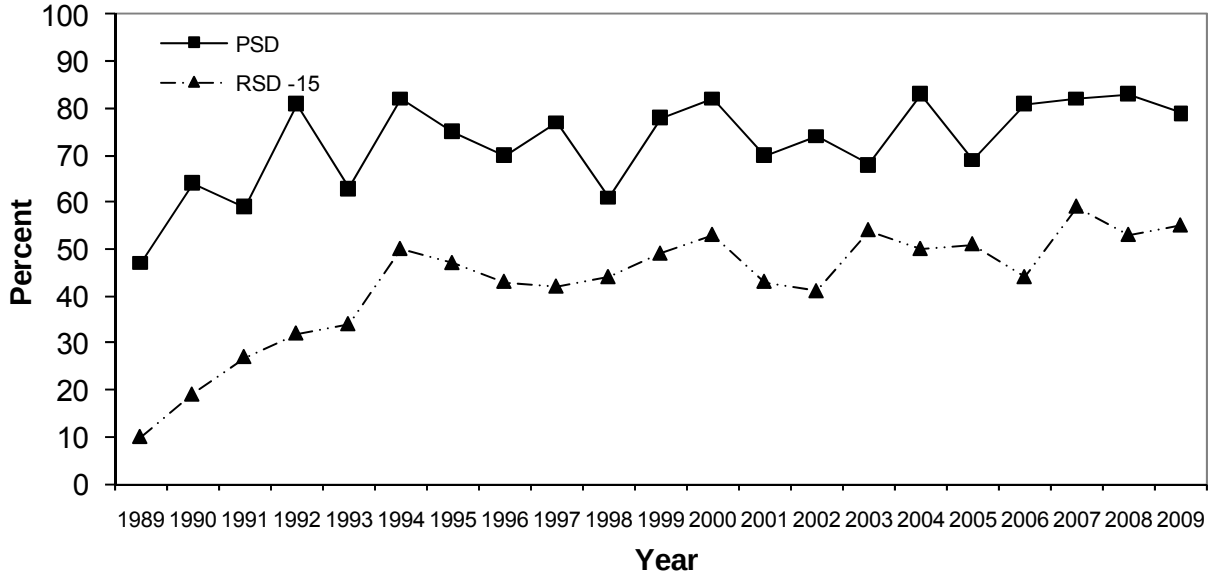


Figure 5. Largemouth bass traditional PSD and RSD -15 values in South Holston Reservoir 1989 – 2009.

Smallmouth Bass

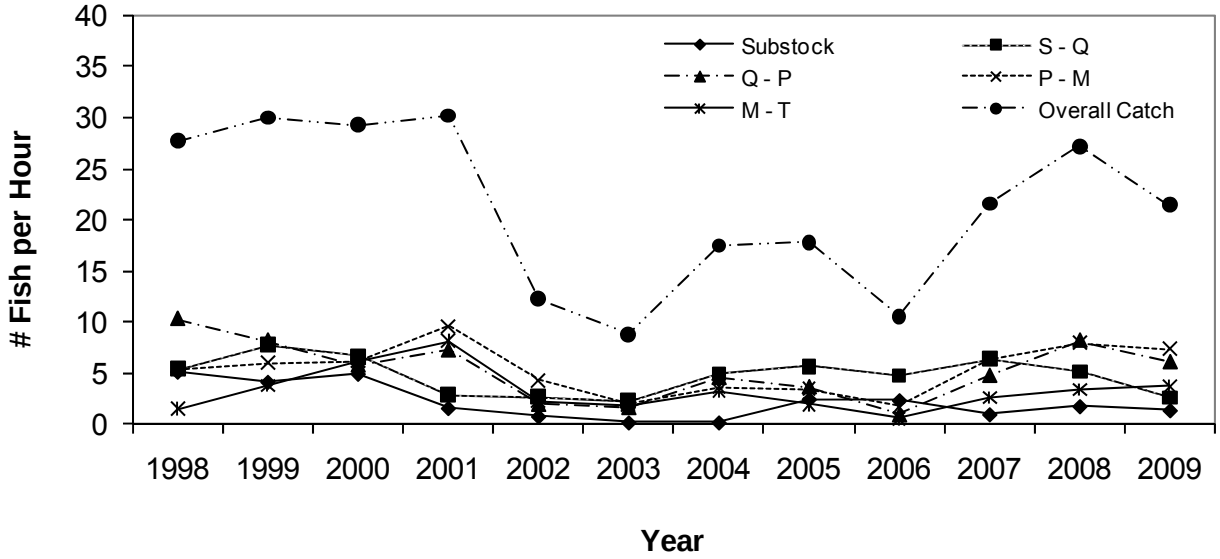


Figure 6. Smallmouth bass CPUE by incremental length category in South Holston Reservoir, 1998 - 2009.

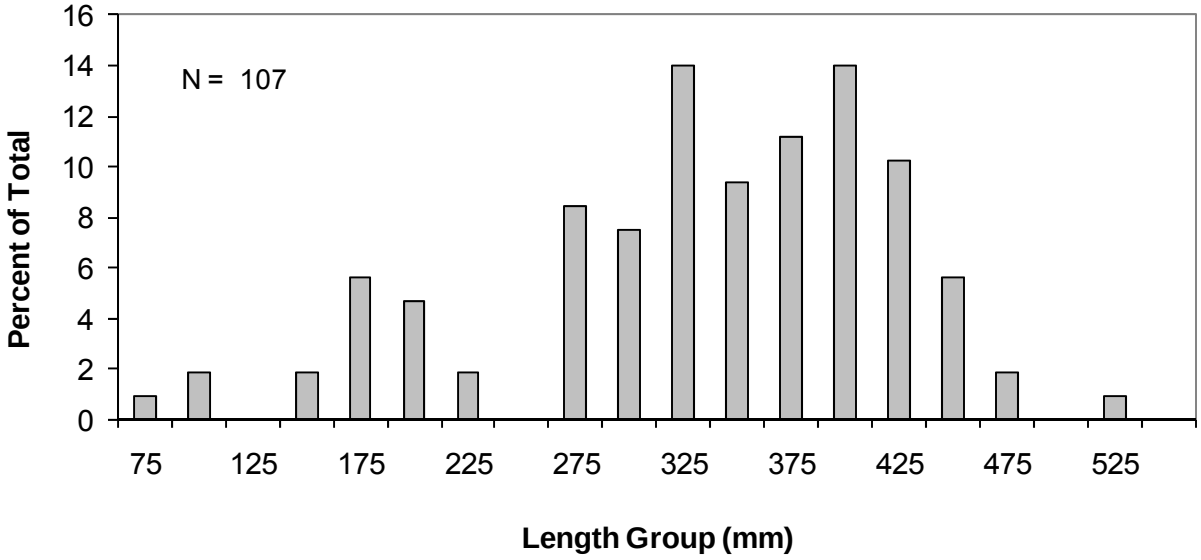


Figure 7. Smallmouth bass length frequency by percent in South Holston Reservoir, spring 2009.

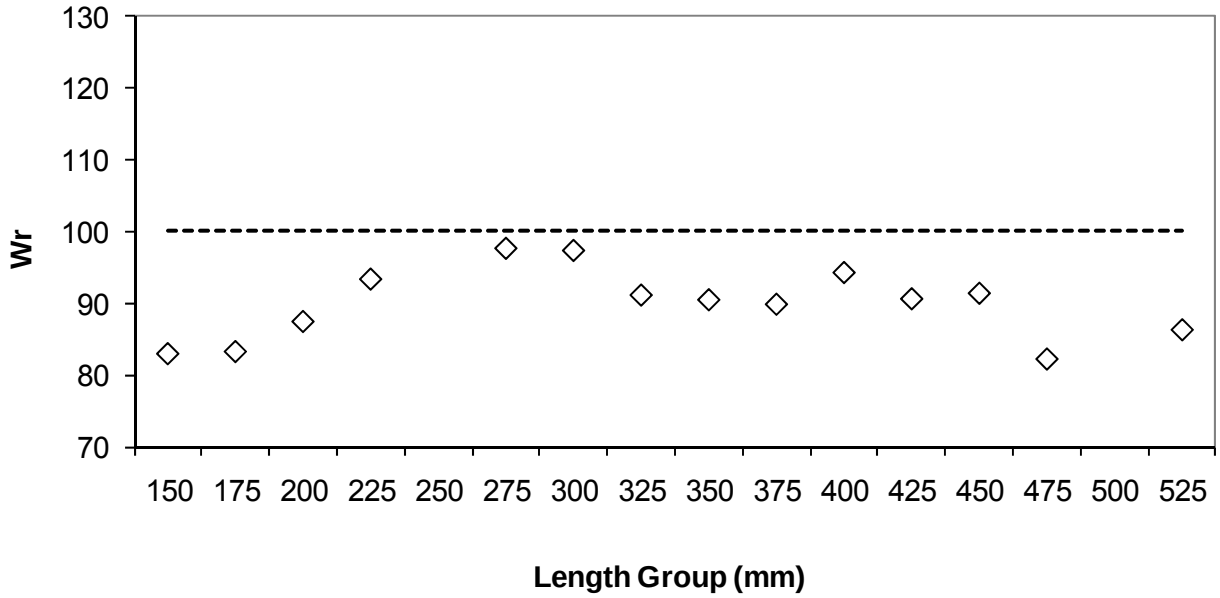


Figure 8. Smallmouth bass mean relative weights (Wr) in South Holston Reservoir, spring 2009.

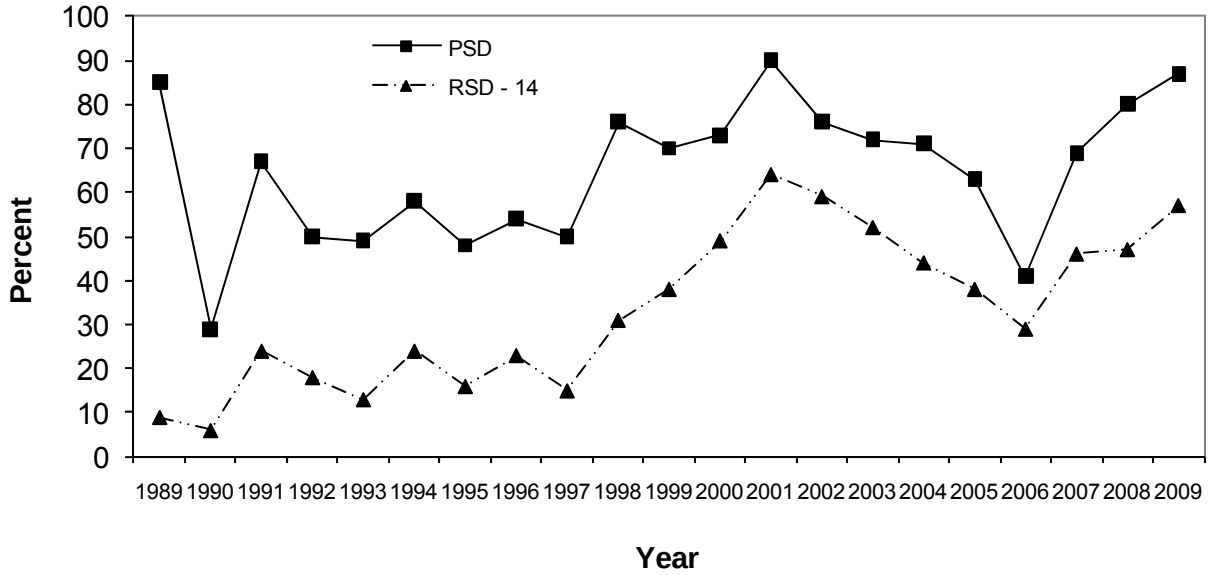


Figure 9. Smallmouth bass traditional PSD and RSD - 14 values in South Holston Reservoir 1989 – 2009.

Black Crappie

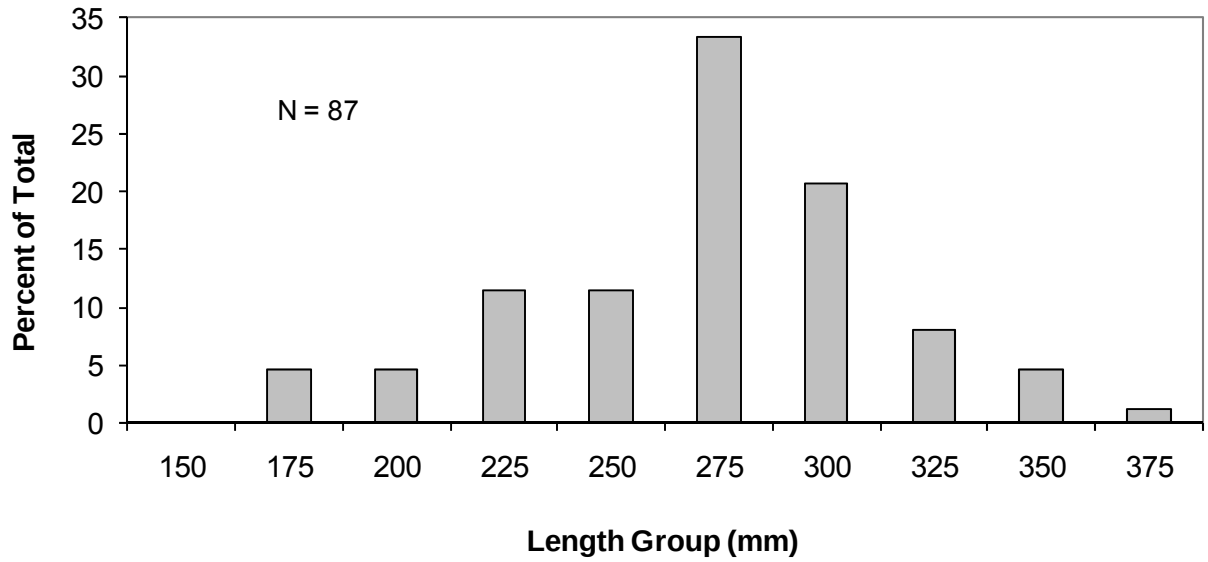


Figure 10. Black crappie length frequency by percent in South Holston Reservoir, spring 2009.

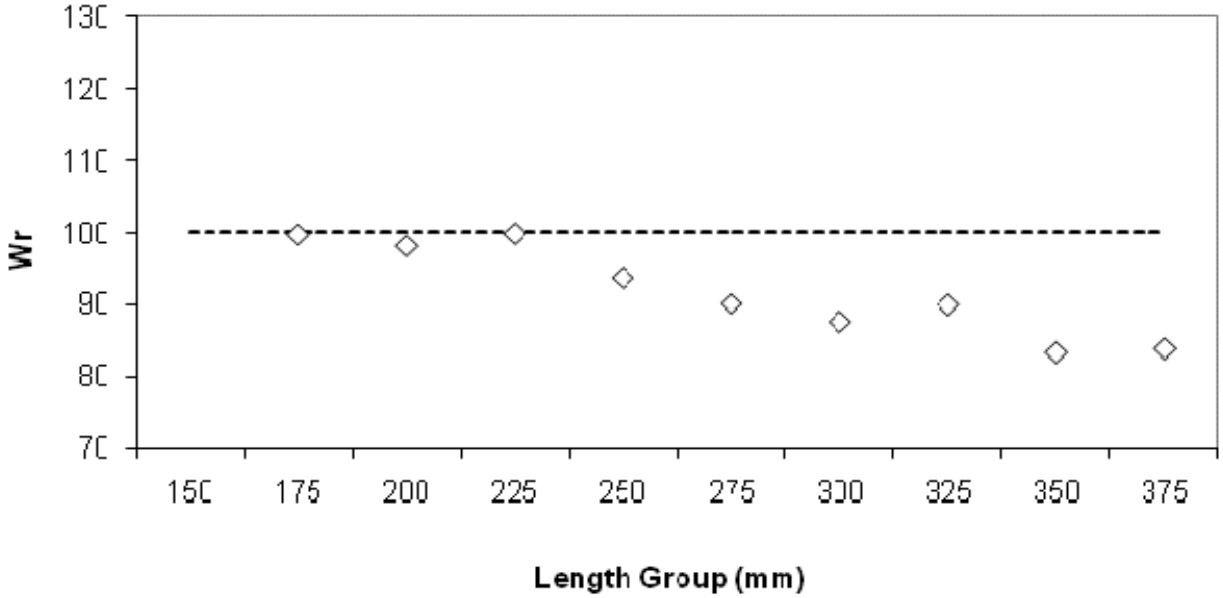


Figure 11. Black crappie mean relative weights (Wr) in South Holston Reservoir spring 2009.

Appendix A
Water Quality

Table A1. South Holston Reservoir, water quality summary at SFHRM 51, July 8, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	24.6	231	9.7	HRM51	3.5	08:50
1	24.6	231	9.8			
2	24.6	232	9.8			
3	24.6	231	9.8			
4	24.6	231	9.8			
5	24.5	231	9.8			
6	24.3	230	9.9			
7	20.7	240	10.9			
8	19.1	243	7.9			
9	18.0	235	6.3			
10	16.7	231	4.7			
11	15.6	227	4.4			
12	14.8	230	4.4			
13	13.9	235	4.7			
14	12.9	242	5.1			
15	12.3	246	6.4			
16	12.0	247	7.1			
17	11.5	247	7.4			
18	11.0	247	7.7			
19	10.4	246	8.1			
20	10.2	246	8.3			
21	10.0	246	8.5			
22	9.6	247	8.7			
23	9.3	247	8.8			
24	9.0	247	8.9			
25	8.8	247	9.0			
26	8.3	248	9.0			
27	8.1	248	8.9			
28	7.8	249	8.9			
29	7.5	250	8.9			
30	7.2	251	8.9			

Table A2. South Holston Reservoir, water quality summary at SFHRM 55, July 8, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	24.8	238	9.4	HRM55	3	09:30
1	24.8	239	9.5			
2	24.8	239	9.5			
3	24.8	239	9.7			
4	24.7	238	9.7			
5	24.4	239	9.8			
6	22.7	245	12.0			
7	20.7	249	10.3			
8	19.3	252	6.9			
9	17.8	246	3.2			
10	16.8	235	3.2			
11	15.9	230	3.4			
12	14.8	229	3.8			
13	13.8	233	4.4			
14	13.2	238	4.9			
15	12.2	247	6.3			
16	11.9	249	6.8			
17	11.3	249	7.4			
18	10.9	250	7.7			
19	10.4	249	8.1			
20	10.1	249	8.3			
21	9.7	249	8.5			
22	9.5	250	8.6			
23	9.2	249	8.7			
24	9.0	249	8.8			
25	8.6	249	8.9			
26	8.4	252	8.9			
27	8.1	253	8.8			
28	7.9	254	8.6			
29	7.6	254	8.5			
30	7.2	256	8.4			

Table A3. South Holston Reservoir, water quality summary at SFHRM 58, July 8, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.1	240	10.5	HRM58	2.5	10:15
1	25.0	239	10.6			
2	25.0	239	10.6			
3	25.0	239	10.6			
4	25.0	239	10.6			
5	24.6	240	10.1			
6	22.3	263	6.3			
7	20.4	261	6.2			
8	19.0	255	4.5			
9	18.1	251	2.4			
10	17.1	244	2.3			
11	16.0	234	2.0			
12	14.9	227	2.2			
13	14.1	227	2.6			
14	13.2	235	4.0			
15	12.4	244	5.6			
16	12.0	247	5.7			
17	11.5	251	6.2			
18	11.0	252	6.8			
19	10.6	252	7.3			
20	10.3	252	7.6			
21	9.8	253	7.8			
22	9.6	253	7.9			
23	9.0	254	8.0			
24	9.1	254	8.1			
25	8.8	255	8.1			
26	8.6	256	8.1			
27	8.3	258	8.1			
28	8.0	259	8.0			
29	7.7	260	7.9			
30	7.3	261	7.8			

Table A4. South Holston Reservoir, water quality summary at SFHRM 64, July 8, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.2	234	12.5	HRM64	1.8	11:00
1	25.2	234	12.6			
2	25.1	234	12.8			
3	24.9	236	12.7			
4	24.7	238	11.6			
5	23.6	263	6.8			
6	22.4	279	4.0			
7	20.8	296	4.1			
8	19.7	267	4.0			
9	17.9	244	2.4			
10	17.1	245	2.3			
11	16.4	245	1.9			
12	15.4	242	1.8			
13	14.1	233	2.1			
14	13.4	234	3.6			
15	12.9	237	3.9			
16	12.1	247	4.9			
17	11.5	255	5.5			
18	11.0	259	6.0			
19	10.7	260	6.5			
20	10.3	261	6.8			
21	10.0	262	7.0			
22	9.7	262	7.0			
23	9.3	262	7.1			
24	9.1	263	7.2			
25	8.9	265	7.1			
26	8.7	267	5.9			
27	8.5	268	5.4			
28	8.3	270	5.1			
29	Bottom					
30						

Table A5. South Holston Reservoir, water quality summary at SFHRM 51, August 6, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.4	221	9.8	HRM51	5.1	10:00
1	25.4	221	9.8			
2	25.4	221	9.8			
3	25.4	221	9.8			
4	25.4	221	9.8			
5	25.3	221	9.8			
6	25.3	222	9.8			
7	23.6	242	9.5			
8	22.0	257	4.9			
9	20.9	257	4.0			
10	20.1	253	2.6			
11	19.4	249	1.9			
12	18.3	231	1.9			
13	17.5	227	2.0			
14	16.6	222	1.9			
15	15.9	219	1.7			
16	14.9	218	1.7			
17	14.0	220	1.9			
18	13.4	227	3.4			
19	12.7	231	4.5			
20	12.2	232	5.1			
21	11.9	234	6.0			
22	11.4	234	6.2			
23	10.9	234	6.6			
24	10.4	234	6.9			
25	10.1	234	7.5			
26	9.9	234	7.8			
27	9.6	234	8.0			
28	9.4	235	8.1			
29	9.0	235	8.3			
30	8.7	235	8.4			

Table A6. South Holston Reservoir, water quality summary at SFHRM 55, August 6, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.7	222	9.5	HRM55	4.6	10:45
1	25.7	222	9.5			
2	25.7	222	9.6			
3	25.6	222	9.8			
4	25.6	222	9.8			
5	25.6	222	9.7			
6	24.9	225	9.8			
7	23.5	238	7.3			
8	22.3	252	4.2			
9	20.9	257	3.0			
10	20.3	257	2.2			
11	19.5	249	1.9			
12	18.8	245	1.8			
13	17.6	240	0.6			
14	16.6	225	0.5			
15	15.6	217	0.5			
16	14.7	217	1.5			
17	14.0	219	1.8			
18	13.2	225	3.3			
19	12.6	231	3.9			
20	12.0	233	5.2			
21	11.6	235	5.4			
22	11.2	236	6.0			
23	10.9	236	6.4			
24	10.5	236	6.9			
25	10.4	236	7.2			
26	10.1	236	7.4			
27	9.7	236	7.6			
28	9.2	238	7.8			
29	9.0	239	7.9			
30	8.9	240	7.9			

Table A7. South Holston Reservoir, water quality summary at SFHRM 58, August 6, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.9	223	9.7	HRM58	3.4	11:15
1	25.7	223	10.0			
2	25.7	223	10.0			
3	25.6	224	10.0			
4	25.6	224	10.1			
5	25.3	225	10.2			
6	24.2	232	7.7			
7	23.2	244	5.4			
8	21.9	257	4.1			
9	21.2	260	4.1			
10	20.3	252	4.2			
11	19.5	241	4.3			
12	18.8	241	3.0			
13	17.8	244	0.8			
14	16.9	236	0.5			
15	15.7	220	0.5			
16	14.9	217	0.5			
17	14.0	218	0.6			
18	13.3	223	2.9			
19	12.7	228	3.7			
20	12.1	231	4.2			
21	11.7	236	4.8			
22	11.1	237	4.9			
23	10.7	239	5.2			
24	10.4	240	5.7			
25	10.2	240	5.9			
26	10.0	241	6.1			
27	9.8	242	6.3			
28	9.6	242	6.4			
29	9.1	244	6.6			
30	8.9	245	6.7			

Table A8. South Holston Reservoir, water quality summary at SFHRM 64, August 6, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.8	219	11.2	HRM64	1.6	12:00
1	25.6	218	11.3			
2	25.5	218	11.5			
3	25.5	218	11.2			
4	25.5	218	11.2			
5	25.3	221	10.4			
6	24.0	231	8.0			
7	23.0	233	7.3			
8	21.8	237	7.2			
9	21.1	239	7.0			
10	20.3	228	7.2			
11	19.7	222	7.3			
12	19.2	216	7.5			
13	18.8	217	7.7			
14	18.1	221	6.4			
15	16.1	238	3.0			
16	14.9	234	0.9			
17	14.2	232	0.8			
18	13.4	230	1.2			
19	12.8	232	2.3			
20	12.3	236	2.9			
21	11.8	241	3.6			
22	11.4	245	4.3			
23	10.9	249	5.1			
24	10.6	251	5.4			
25	10.3	253	5.4			
26	10.1	255	3.7			
27	9.9	256	3.4			
28	9.6	258	3.3			
29	Bottom					
30						

Table A9. South Holston Reservoir, water quality summary at SFHRM 51, September 2, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.4	226	13.0	HRM51	5.4	11:15
1	25.4	226	13.0			
2	25.3	226	13.0			
3	25.3	226	13.1			
4	25.3	226	13.1			
5	25.3	226	13.1			
6	25.2	226	13.1			
7	25.2	226	13.1			
8	24.0	229	10.7			
9	22.5	254	7.0			
10	21.6	256	4.5			
11	20.8	254	2.9			
12	20.4	250	2.0			
13	19.8	247	1.9			
14	19.1	242	1.3			
15	18.6	239	0.6			
16	18.1	236	0.3			
17	17.6	232	0.2			
18	16.7	227	0.2			
19	16.0	223	0.2			
20	15.2	222	0.2			
21	14.4	224	0.5			
22	14.0	225	1.0			
23	13.3	227	1.9			
24	12.6	233	3.2			
25	12.3	234	4.1			
26	12.0	235	4.8			
27	11.7	237	5.7			
28	11.1	237	6.4			
29	10.8	237	7.0			
30	10.5	238	7.4			

Table A10. South Holston Reservoir, water quality summary at SFHRM 55, September 2, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.3	227	13.5	HRM55	4.3	12:00
1	25.3	227	13.7			
2	25.3	227	13.8			
3	25.3	227	13.8			
4	25.2	227	13.9			
5	25.2	227	13.9			
6	25.2	227	13.8			
7	25.1	227	13.8			
8	23.3	251	8.0			
9	22.5	252	6.3			
10	21.6	260	4.3			
11	20.7	255	3.5			
12	20.2	249	2.1			
13	19.7	243	1.9			
14	19.3	235	2.0			
15	18.7	234	2.1			
16	18.1	233	1.3			
17	17.5	235	0.5			
18	16.8	228	0.0			
19	16.0	225	0.0			
20	15.4	221	0.0			
21	14.6	221	0.2			
22	14.0	223	0.5			
23	13.3	228	1.2			
24	12.8	231	2.5			
25	12.4	234	3.4			
26	12.0	236	4.1			
27	11.5	239	4.9			
28	11.0	241	5.4			
29	10.8	242	5.9			
30	10.3	245	6.3			

Table A11. South Holston Reservoir, water quality summary at SFHRM 58, September 2, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.4	227	13.5	HRM58	3.2	12:30
1	25.4	227	13.5			
2	25.4	227	13.5			
3	25.2	228	13.6			
4	25.1	227	13.5			
5	25.1	226	13.6			
6	25.1	226	13.7			
7	25.0	228	13.6			
8	23.0	258	6.4			
9	22.3	269	5.2			
10	21.4	269	5.1			
11	20.9	267	5.0			
12	20.3	255	4.5			
13	19.8	241	4.4			
14	19.3	232	4.4			
15	18.7	231	2.5			
16	18.3	230	1.9			
17	17.5	234	1.4			
18	17.0	234	0.7			
19	16.4	231	0.3			
20	15.5	224	0.0			
21	14.5	222	0.0			
22	13.9	224	0.0			
23	13.4	225	0.3			
24	12.9	229	0.8			
25	12.5	232	1.4			
26	12.0	236	2.0			
27	11.6	240	2.8			
28	11.2	245	3.6			
29	10.9	247	4.1			
30	10.7	248	4.5			

No measurements taken at SFHRM 64 in September 2009.

Figure A1. South Holston Reservoir water quality at HRM 51, July 2009.

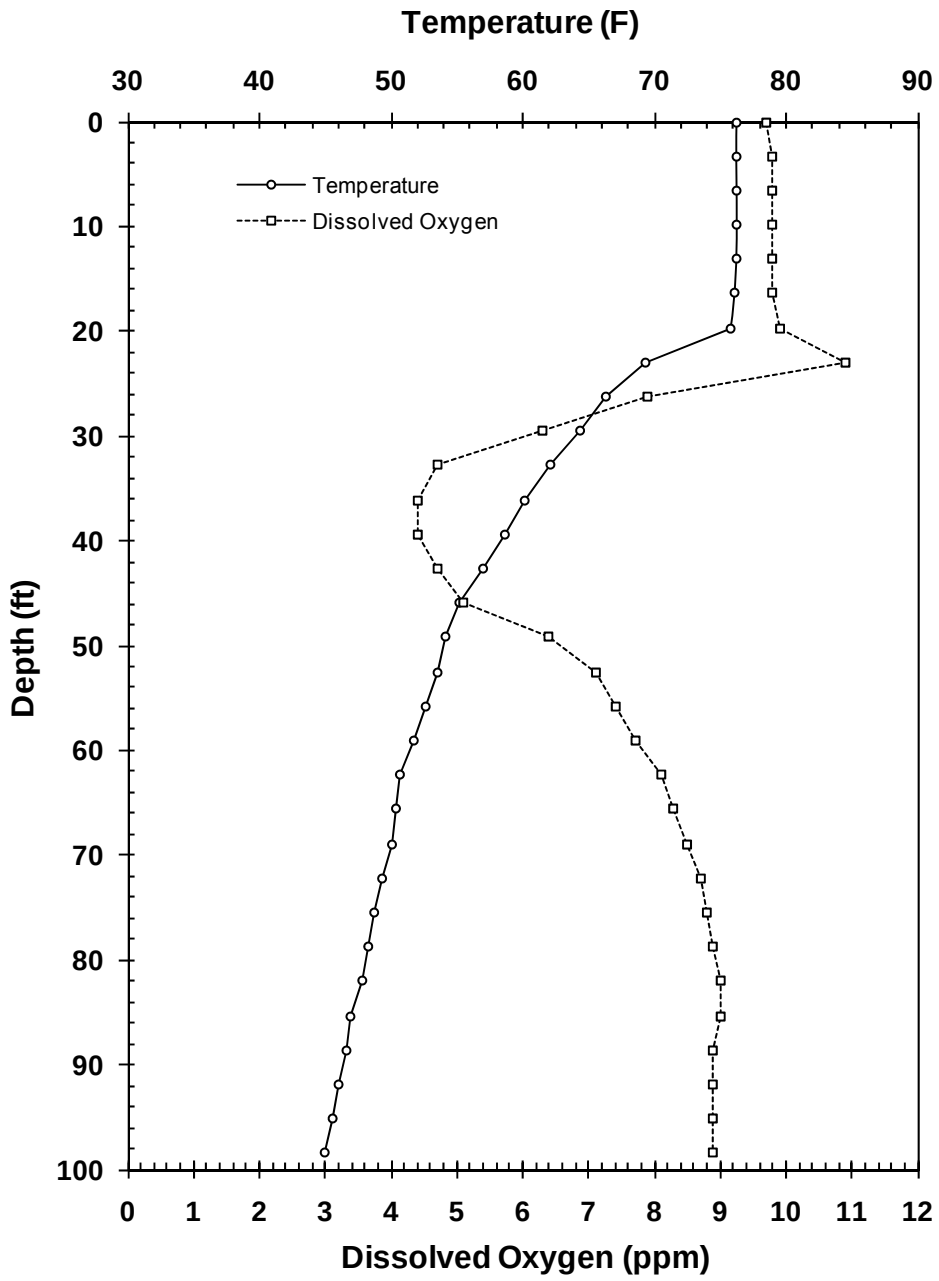


Figure A2. South Holston Reservoir water quality at HRM 55, July 2009.

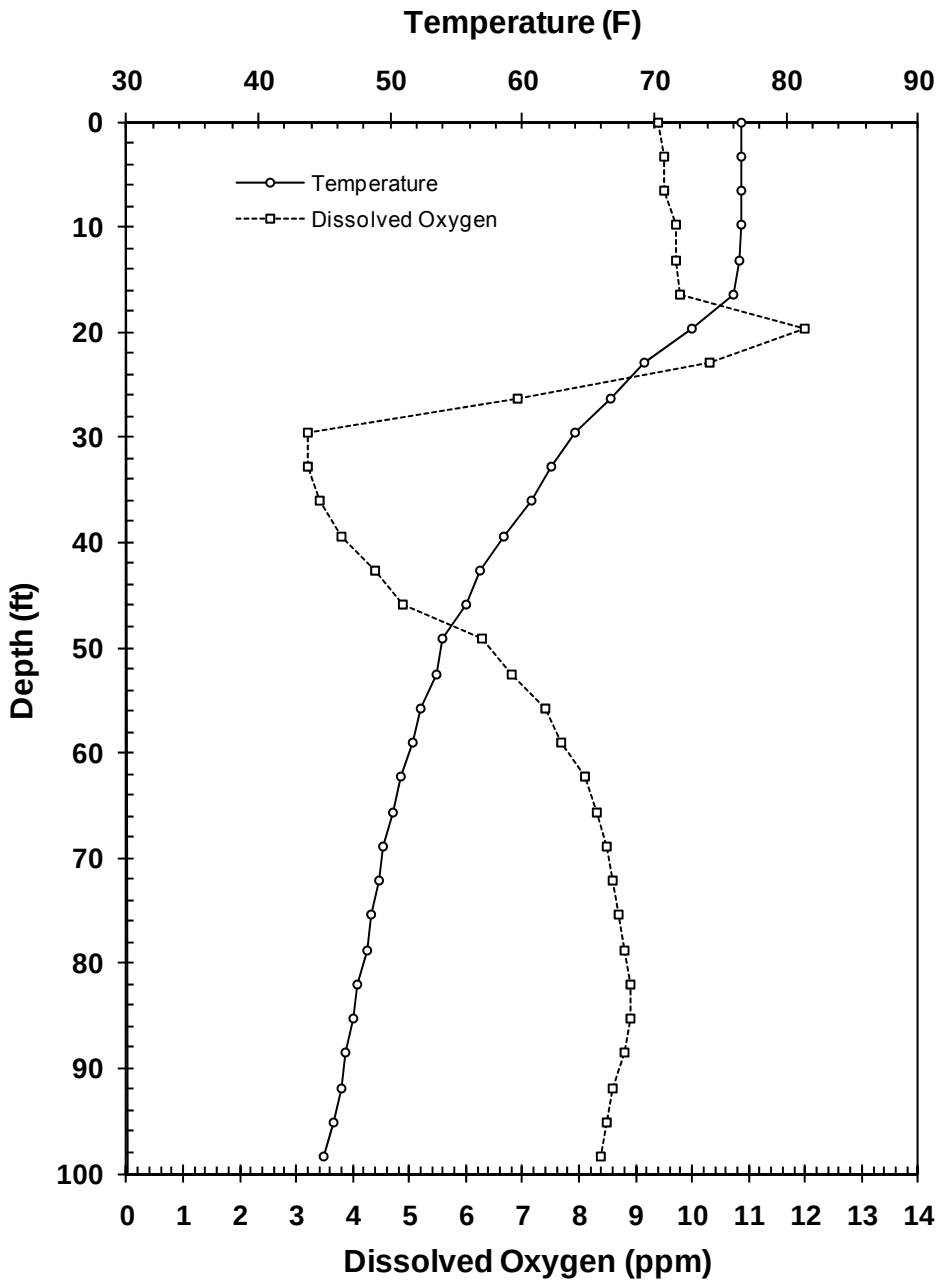


Figure A3. South Holston Reservoir water quality at HRM 58, July 2009.

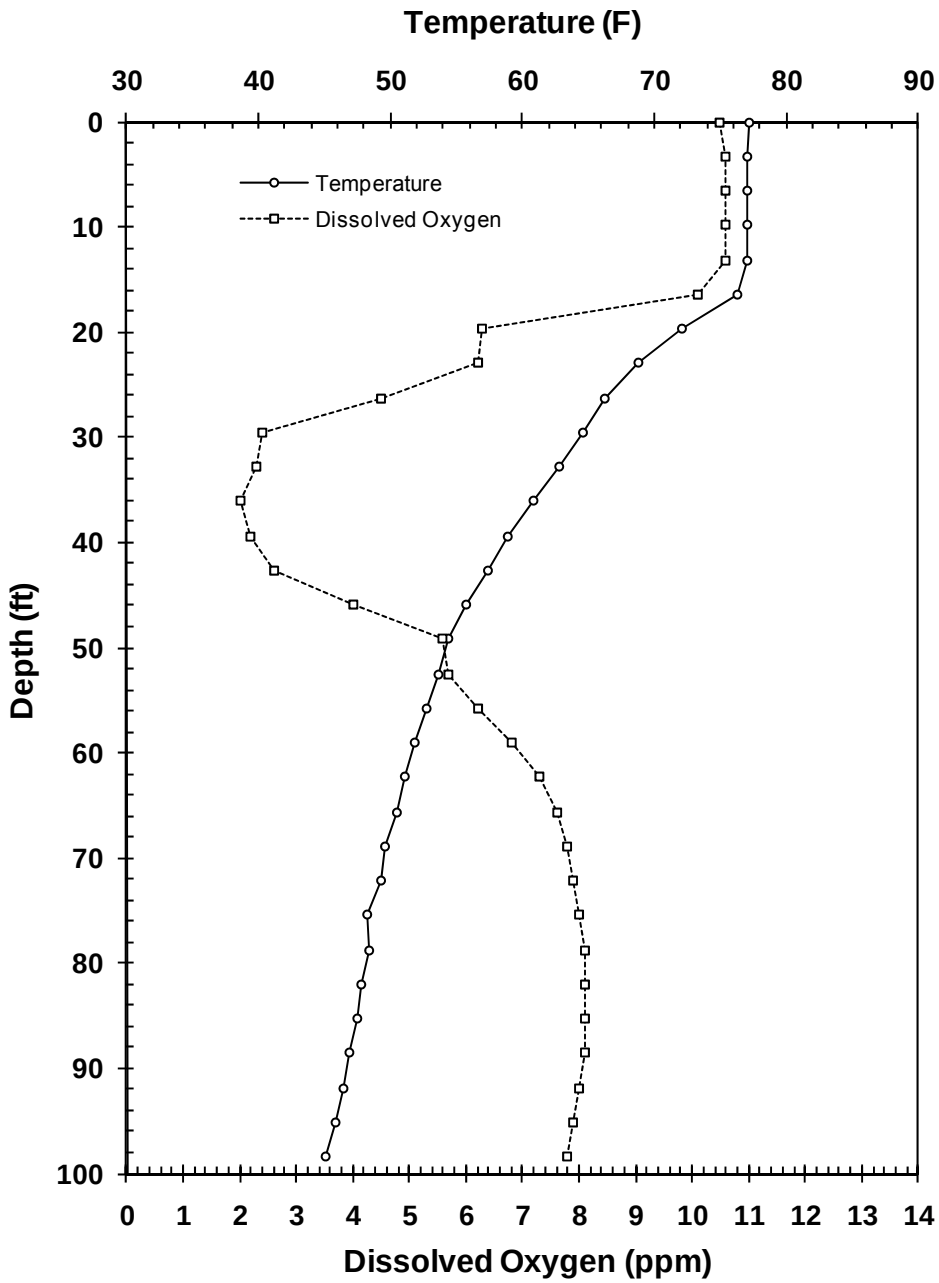


Figure A4. South Holston Reservoir water quality at HRM 64, July 2009.

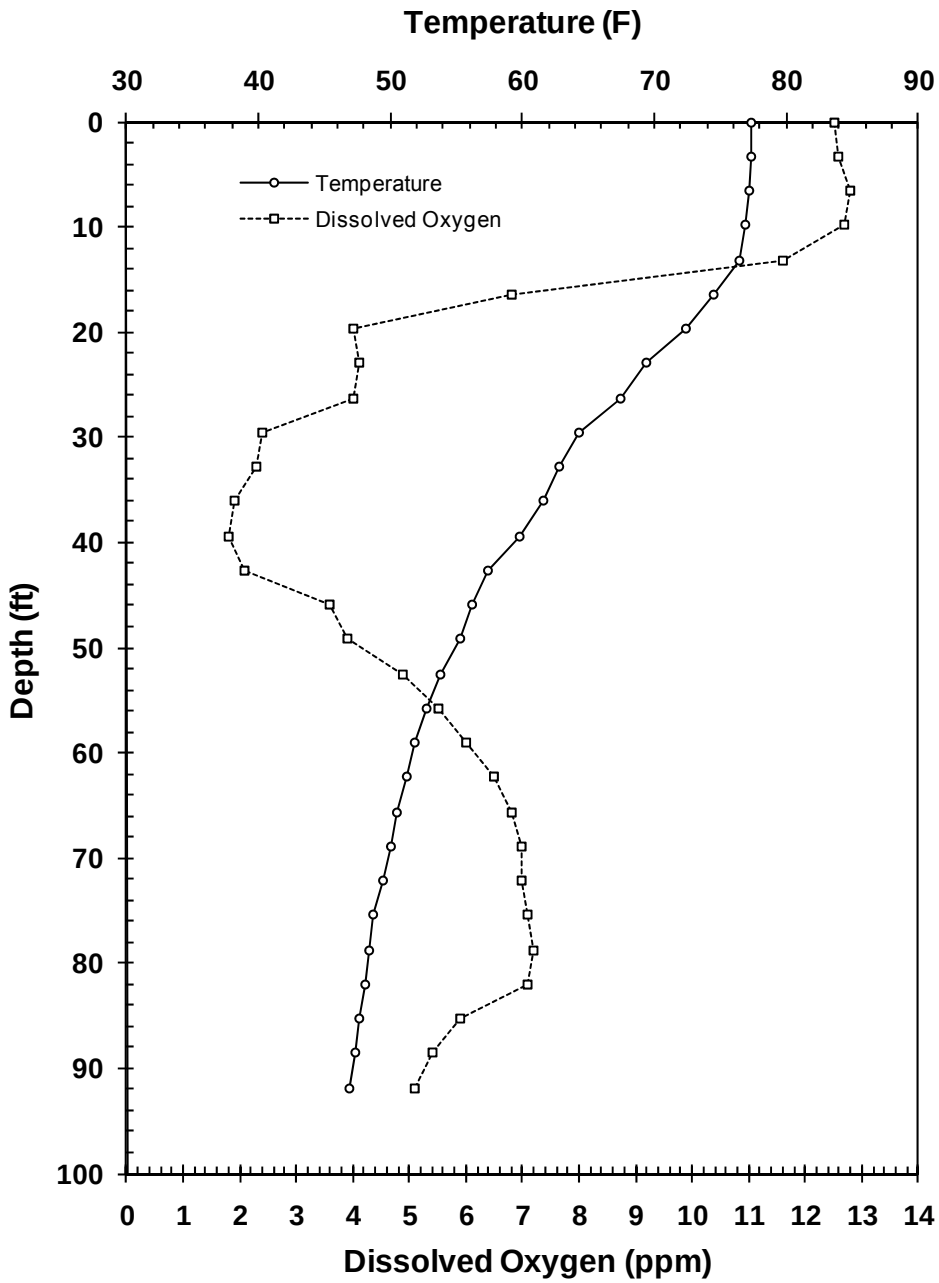


Figure A5. South Holston Reservoir water quality at HRM 51, August 2009.

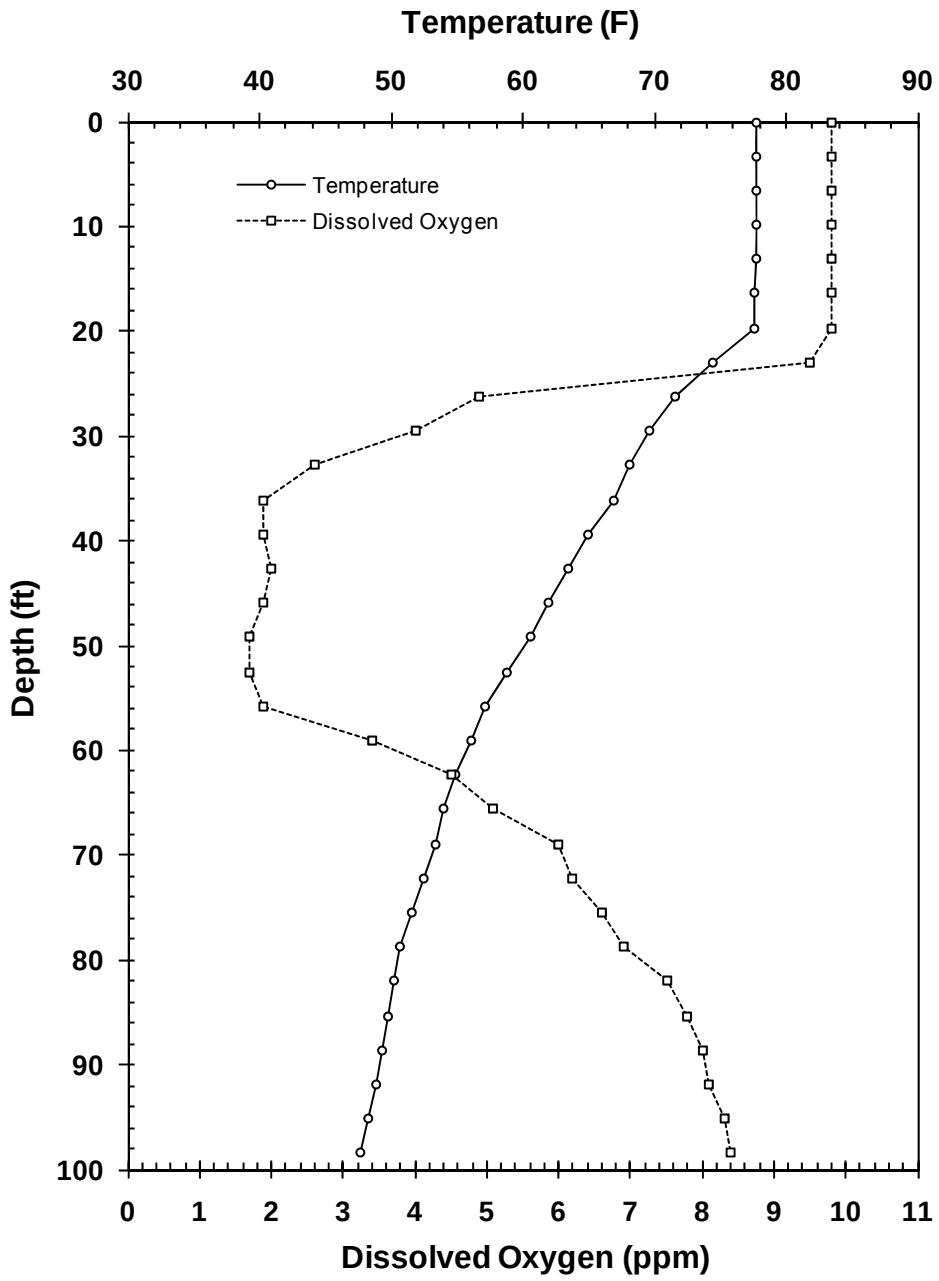


Figure A6. South Holston Reservoir water quality at HRM 55, August 2009.

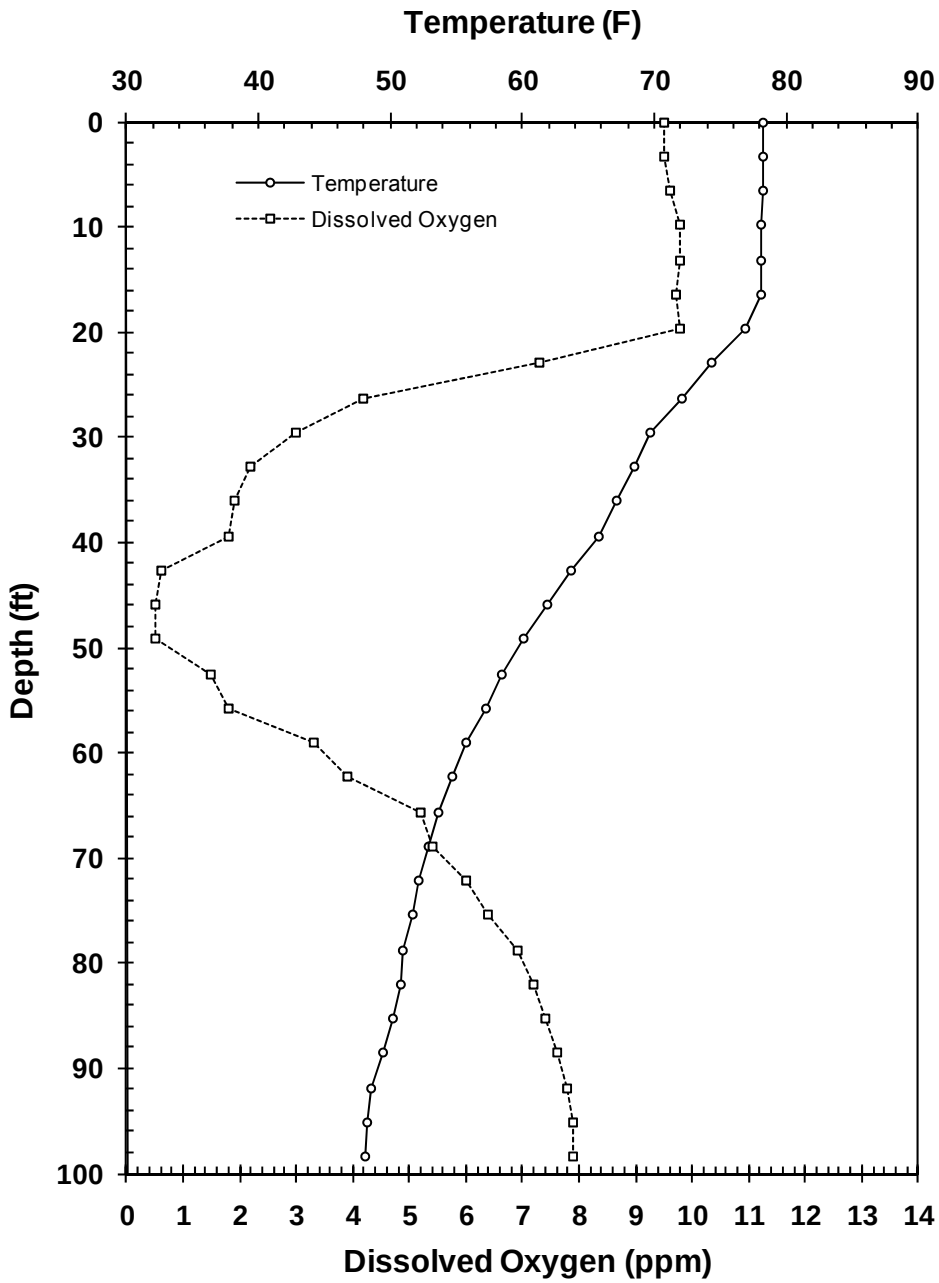


Figure A7. South Holston Reservoir water quality at HRM 58, August 2009.

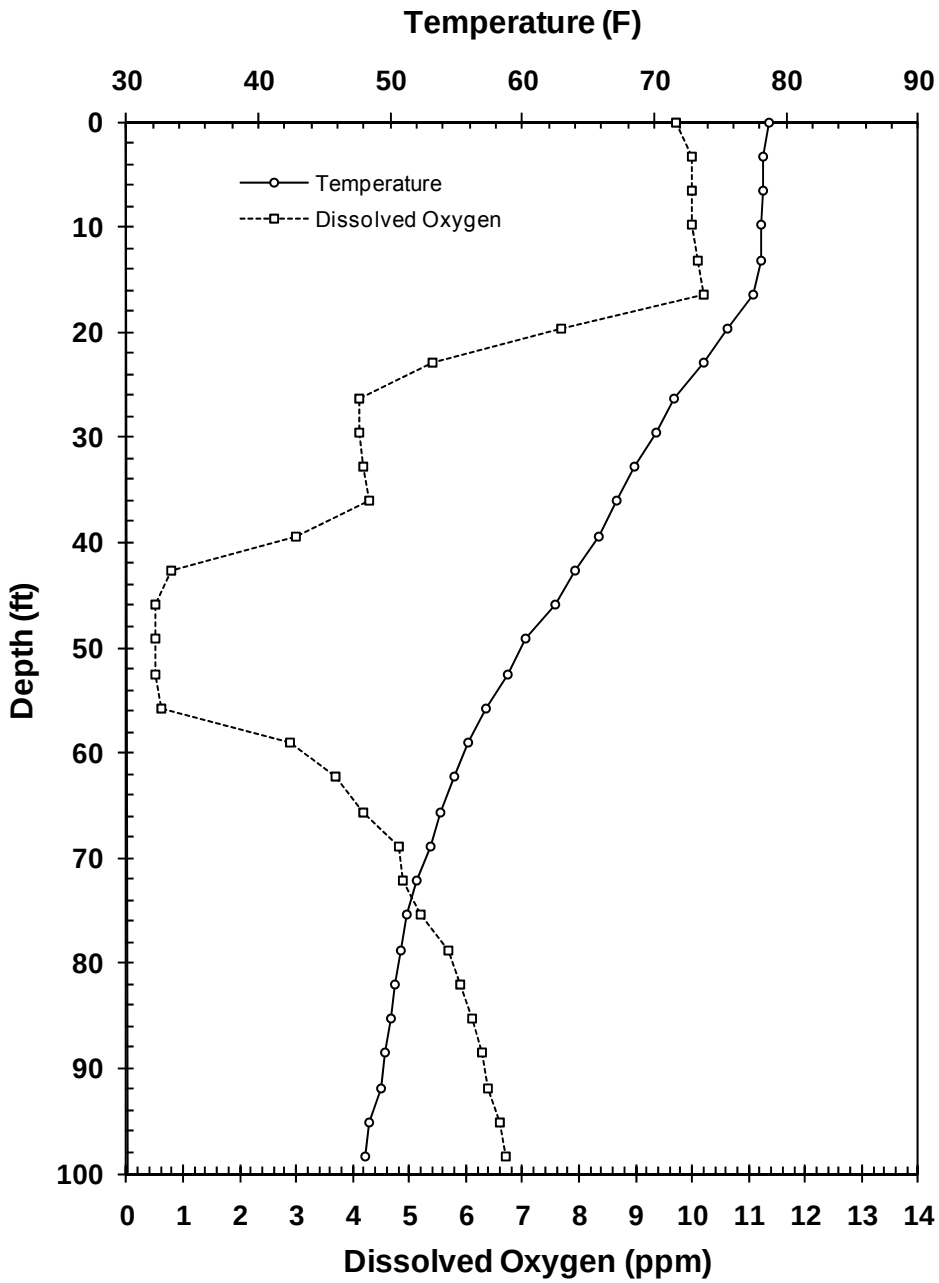


Figure A8. South Holston Reservoir water quality at HRM 64, August 2009.

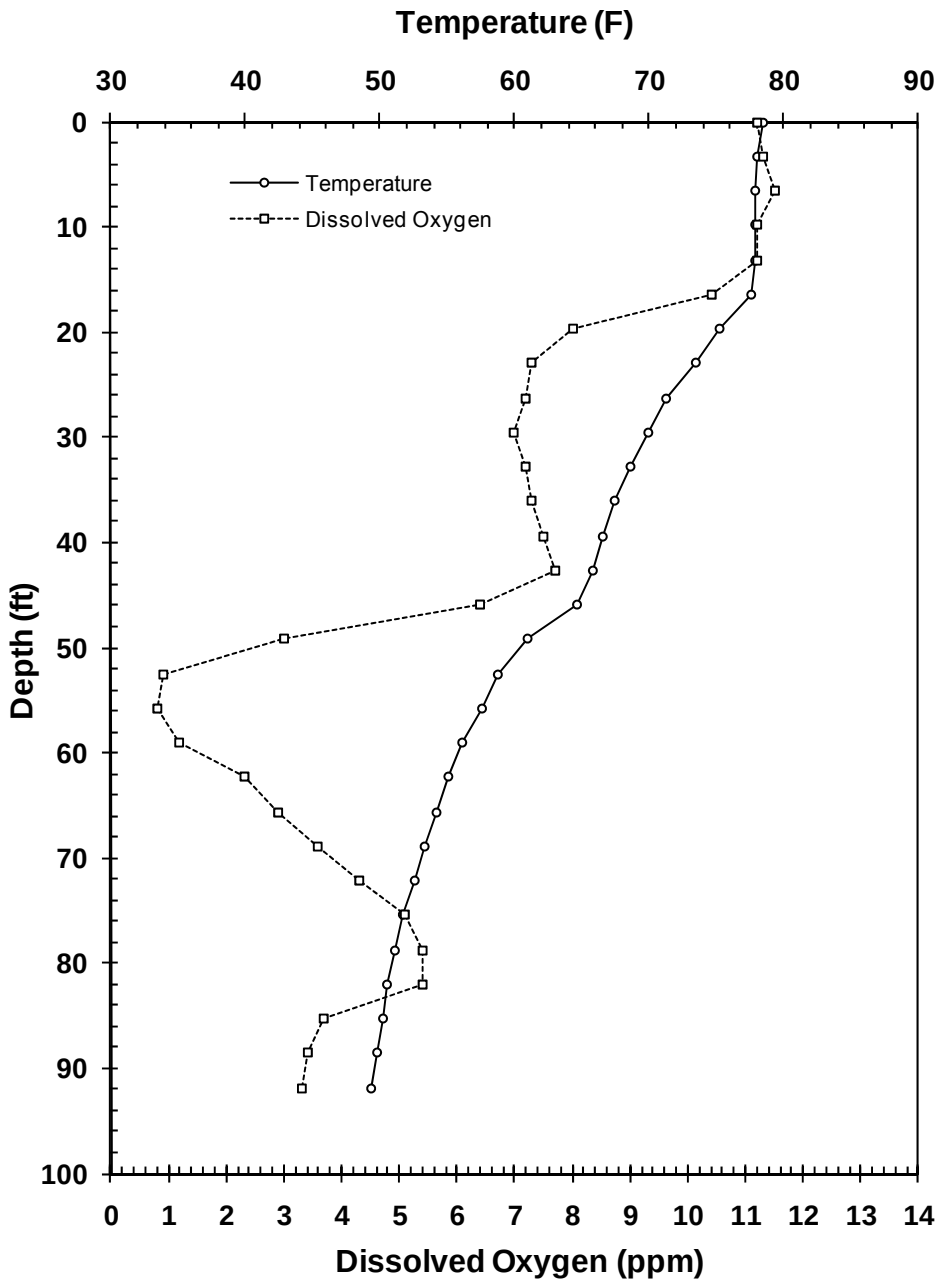


Figure A9. South Holston Reservoir water quality at HRM 51, Sept. 2009.

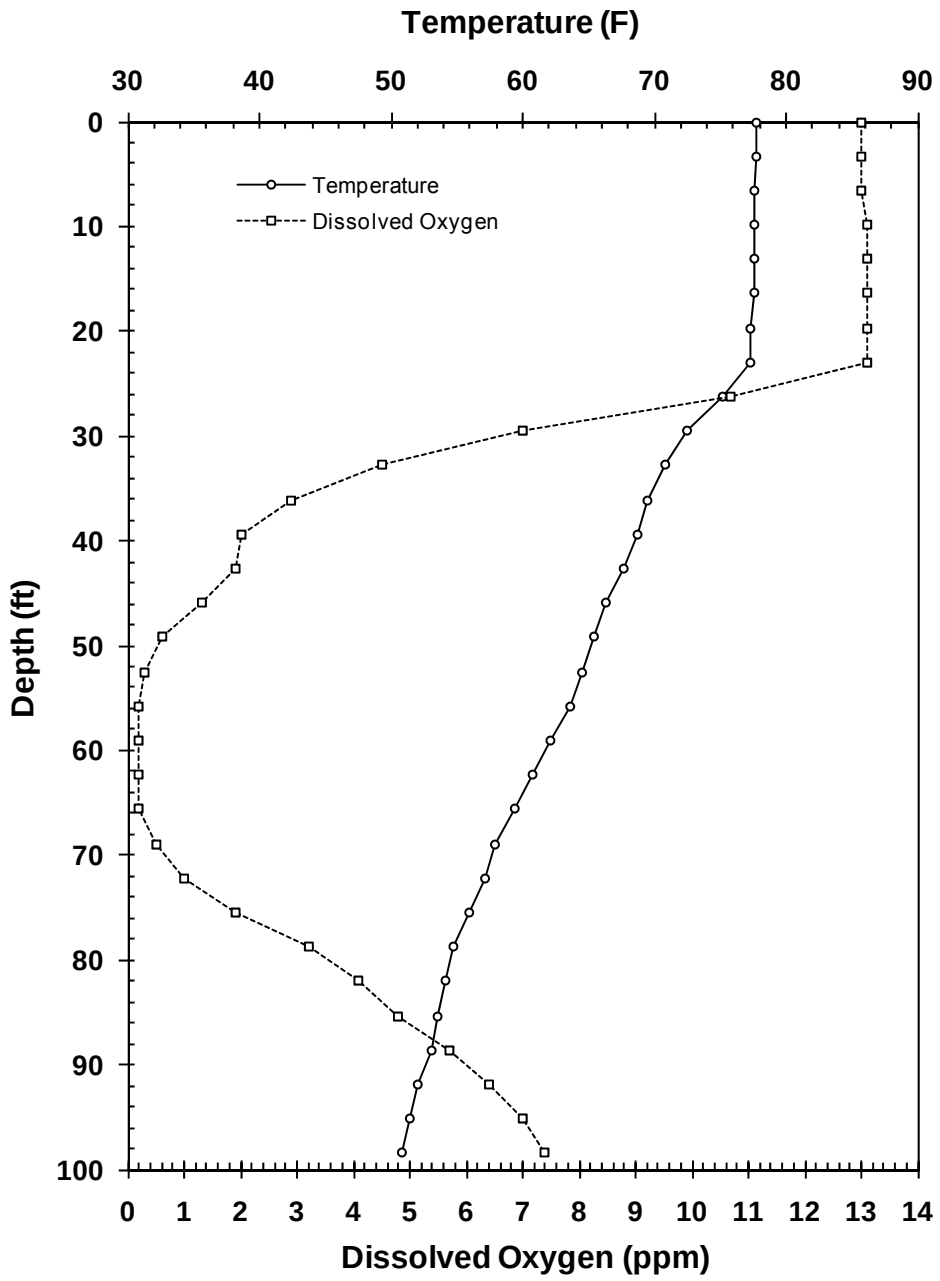


Figure A10. South Holston Reservoir water quality at HRM 55, Sept. 2009.

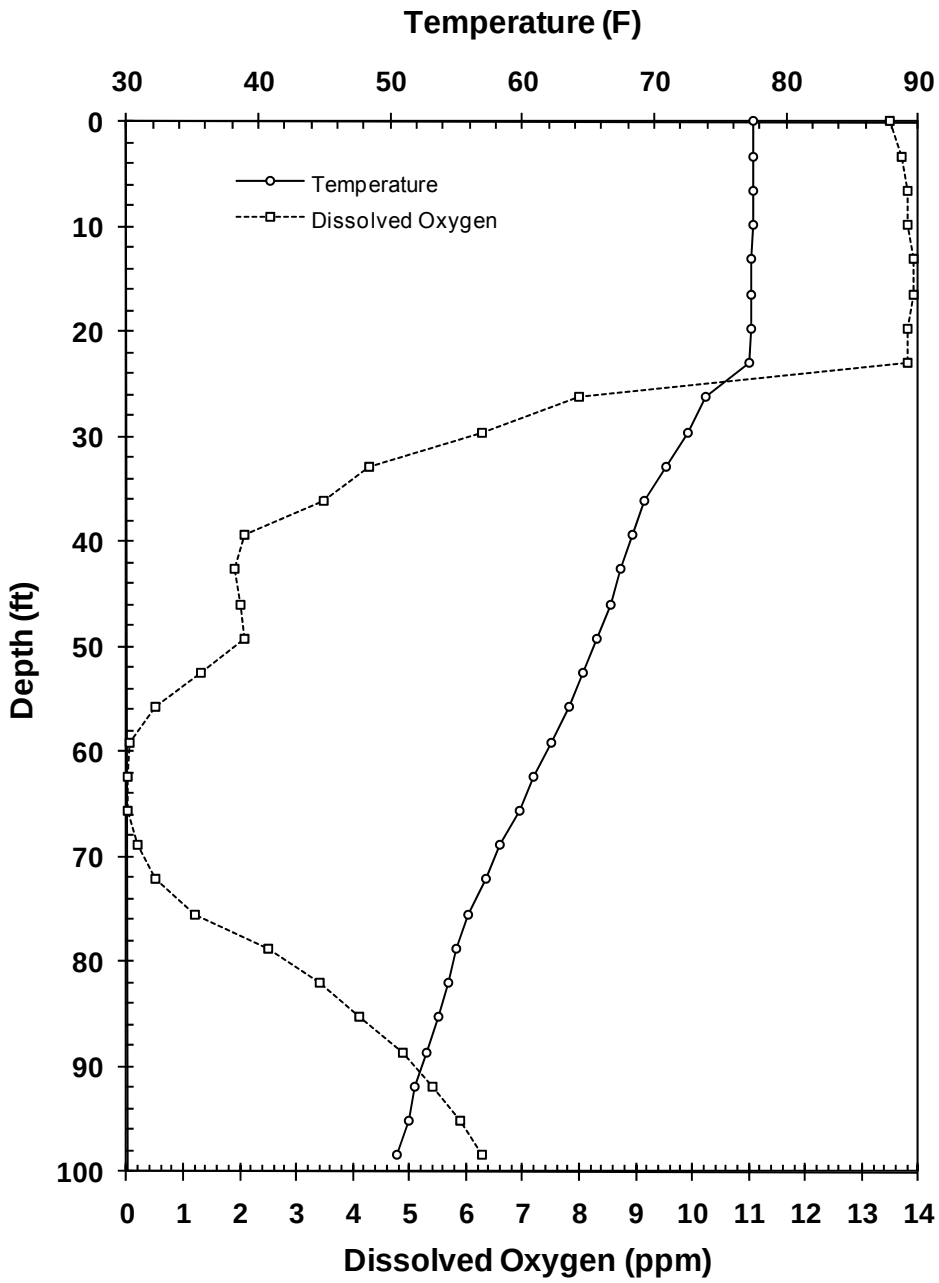
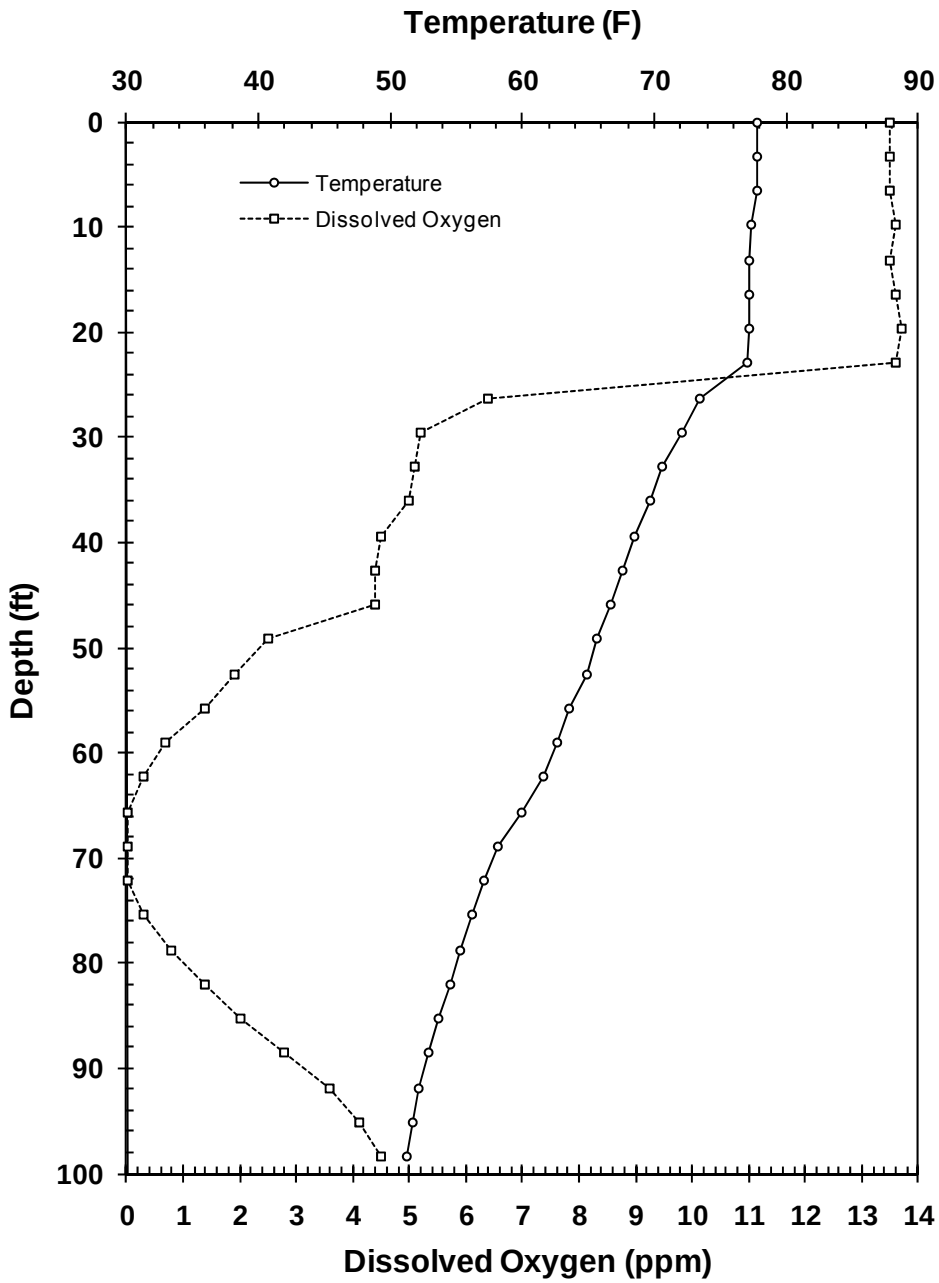


Figure A11. South Holston Reservoir water quality at HRM 58, Sept. 2009.



Appendix B
South Holston Daily Elevations

Table B1. S. Holston Reservoir elevation data for 2009. Data is courtesy of TVA.

Elevation	Month	Day	Elevation	Month	Day	Elevation	Month	Day
1695.39	January	1	1711.34	February	24	1724.64	April	19
1695.49	January	2	1711.45	February	25	1724.89	April	20
1695.58	January	3	1711.54	February	26	1725.14	April	21
1695.71	January	4	1711.68	February	27	1725.35	April	22
1695.90	January	5	1711.95	February	28	1725.56	April	23
1696.71	January	6	1712.30	March	1	1725.76	April	24
1699.62	January	7	1712.45	March	2	1725.93	April	25
1700.95	January	8	1712.54	March	3	1726.09	April	26
1701.62	January	9	1712.61	March	4	1726.21	April	27
1702.27	January	10	1712.74	March	5	1726.33	April	28
1703.98	January	11	1712.87	March	6	1726.47	April	29
1705.02	January	12	1713.10	March	7	1726.58	April	30
1705.64	January	13	1713.30	March	8	1726.74	May	1
1706.09	January	14	1713.51	March	9	1726.88	May	2
1706.40	January	15	1713.68	March	10	1727.04	May	3
1706.63	January	16	1713.83	March	11	1727.33	May	4
1706.82	January	17	1713.96	March	12	1727.69	May	5
1707.05	January	18	1714.10	March	13	1728.21	May	6
1707.24	January	19	1714.27	March	14	1729.58	May	7
1707.40	January	20	1714.80	March	15	1730.19	May	8
1707.53	January	21	1715.56	March	16	1730.83	May	9
1707.66	January	22	1716.19	March	17	1731.15	May	10
1707.79	January	23	1716.73	March	18	1731.13	May	11
1707.92	January	24	1717.16	March	19	1731.00	May	12
1708.04	January	25	1717.49	March	20	1730.73	May	13
1708.15	January	26	1717.77	March	21	1730.48	May	14
1708.44	January	27	1718.02	March	22	1730.22	May	15
1709.04	January	28	1718.14	March	23	1730.16	May	16
1709.53	January	29	1718.24	March	24	1729.76	May	17
1709.83	January	30	1718.35	March	25	1729.70	May	18
1710.01	January	31	1718.58	March	26	1729.40	May	19
1710.13	February	1	1718.84	March	27	1729.23	May	20
1710.09	February	2	1719.11	March	28	1729.05	May	21
1709.94	February	3	1719.38	March	29	1728.94	May	22
1709.78	February	4	1719.55	March	30	1729.05	May	23
1709.56	February	5	1719.69	March	31	1729.20	May	24
1709.31	February	6	1719.84	April	1	1729.30	May	25
1709.26	February	7	1719.96	April	2	1729.30	May	26
1709.25	February	8	1720.21	April	3	1729.24	May	27
1709.19	February	9	1720.41	April	4	1729.18	May	28
1709.25	February	10	1720.58	April	5	1729.10	May	29
1709.16	February	11	1720.85	April	6	1729.12	May	30
1709.11	February	12	1721.07	April	7	1729.23	May	31
1709.09	February	13	1721.30	April	8	1729.24	June	1
1709.14	February	14	1721.52	April	9	1729.26	June	2
1709.18	February	15	1721.81	April	10	1729.35	June	3
1709.19	February	16	1722.26	April	11	1729.27	June	4
1709.24	February	17	1722.72	April	12	1729.27	June	5
1709.47	February	18	1723.09	April	13	1729.31	June	6
1710.11	February	19	1723.43	April	14	1729.34	June	7
1710.52	February	20	1723.74	April	15	1729.34	June	8
1710.82	February	21	1724.00	April	16	1729.38	June	9
1711.06	February	22	1724.23	April	17	1729.38	June	10
1711.21	February	23	1724.43	April	18	1729.39	June	11

Table B1. Continued.

Elevation	Month	Day	Elevation	Month	Day	Elevation	Month	Day
1729.45	June	12	1728.45	August	5	1719.25	September	28
1729.33	June	13	1728.92	August	6	1719.14	September	29
1729.32	June	14	1728.83	August	7	1719.02	September	30
1729.29	June	15	1728.73	August	8	1718.86	October	1
1729.33	June	16	1728.57	August	9	1718.78	October	2
1729.70	June	17	1728.31	August	10	1718.66	October	3
1730.11	June	18	1728.03	August	11	1718.54	October	4
1730.19	June	19	1727.90	August	12	1718.32	October	5
1730.16	June	20	1727.73	August	13	1718.11	October	6
1730.00	June	21	1727.47	August	14	1717.99	October	7
1729.79	June	22	1727.12	August	15	1717.83	October	8
1729.54	June	23	1726.74	August	16	1717.77	October	9
1729.41	June	24	1726.38	August	17	1717.70	October	10
1729.28	June	25	1726.07	August	18	1717.63	October	11
1729.13	June	26	1725.81	August	19	1717.45	October	12
1729.15	June	27	1725.53	August	20	1717.27	October	13
1729.12	June	28	1725.30	August	21	1717.11	October	14
1729.02	June	29	1725.25	August	22	1717.00	October	15
1728.87	June	30	1725.15	August	23	1716.91	October	16
1728.74	July	1	1724.99	August	24	1716.94	October	17
1728.60	July	2	1724.82	August	25	1717.05	October	18
1728.48	July	3	1724.62	August	26	1716.75	October	19
1728.41	July	4	1724.43	August	27	1716.54	October	20
1728.49	July	5	1724.22	August	28	1716.31	October	21
1728.55	July	6	1724.12	August	29	1716.07	October	22
1728.47	July	7	1724.06	August	30	1715.85	October	23
1728.39	July	8	1723.83	August	31	1715.75	October	24
1728.37	July	9	1723.57	September	1	1715.67	October	25
1728.36	July	10	1723.30	September	2	1715.43	October	26
1728.34	July	11	1723.01	September	3	1715.30	October	27
1728.32	July	12	1722.75	September	4	1715.27	October	28
1728.48	July	13	1722.55	September	5	1715.21	October	29
1728.45	July	14	1722.38	September	6	1715.12	October	30
1728.39	July	15	1722.17	September	7	1715.15	October	31
1728.37	July	16	1721.94	September	8	1715.31	November	1
1728.77	July	17	1721.73	September	9	1715.29	November	2
1728.71	July	18	1721.49	September	10	1715.23	November	3
1728.55	July	19	1721.24	September	11	1715.11	November	4
1728.38	July	20	1721.15	September	12	1714.95	November	5
1728.35	July	21	1720.94	September	13	1714.73	November	6
1728.21	July	22	1720.75	September	14	1714.55	November	7
1728.01	July	23	1720.51	September	15	1714.42	November	8
1727.82	July	24	1720.27	September	16	1714.19	November	9
1727.66	July	25	1720.02	September	17	1714.11	November	10
1727.53	July	26	1719.76	September	18	1714.97	November	11
1727.59	July	27	1719.64	September	19	1715.88	November	12
1727.51	July	28	1719.52	September	20	1716.26	November	13
1727.49	July	29	1719.27	September	21	1716.37	November	14
1727.68	July	30	1719.00	September	22	1716.35	November	15
1728.01	July	31	1718.72	September	23	1716.19	November	16
1728.22	August	1	1718.52	September	24	1716.04	November	17
1728.43	August	2	1718.32	September	25	1715.80	November	18
1728.52	August	3	1718.61	September	26	1715.55	November	19
1728.34	August	4	1719.20	September	27	1715.19	November	20

Table B1. Continued.

Elevation	Month	Day
1714.91	November	21
1714.63	November	22
1714.26	November	23
1713.88	November	24
1713.49	November	25
1713.14	November	26
1712.79	November	27
1712.46	November	28
1712.11	November	29
1711.86	November	30
1711.59	December	1
1711.41	December	2
1711.52	December	3
1711.58	December	4
1711.60	December	5
1711.55	December	6
1711.29	December	7
1711.09	December	8
1713.38	December	9
1714.18	December	10
1714.25	December	11
1714.08	December	12
1714.31	December	13
1714.72	December	14
1714.81	December	15
1714.85	December	16
1714.57	December	17
1714.26	December	18
1713.88	December	19
1713.44	December	20
1712.99	December	21
1712.46	December	22
1711.96	December	23
1711.69	December	24
1711.88	December	25
1712.06	December	26
1711.95	December	27
1711.66	December	28
1711.29	December	29
1711.02	December	30
1710.54	December	31

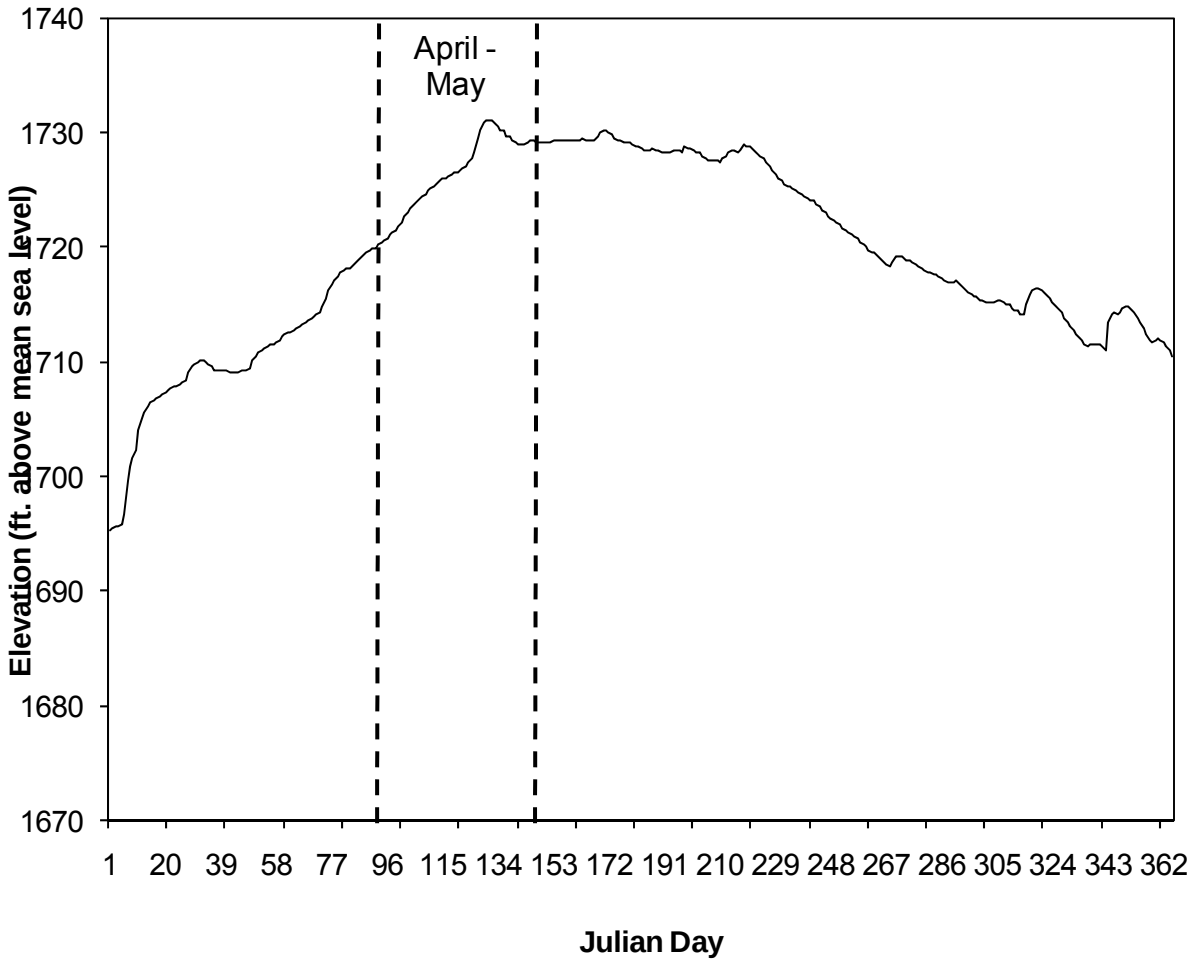



Figure B1. S. Holston Reservoir daily reservoir elevations for 2009 (TVA data).