

**South Holston Reservoir**  
**Annual Report 2008**

Prepared By:

John Hammonds  
and  
Douglas C. Peterson

Tennessee Wildlife Resources Agency  
Region IV  
3030 Wildlife Way  
Morristown, TN 37814

All activities covered in this report were conducted under the following TWRA cost centers: 4311, 4312, and 4313. Development of this report was financed in part by funds from Federal Aid in Fish and Wildlife Restoration (Public Law 91-503) as documented in Federal Aid Project FW-6.

This program receives Federal Aid in Fish and Wildlife Restoration. Under Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973, the United States Department of the Interior prohibits discrimination on the basis of race, color, national origin, or disability. If you believe you have been discriminated against in any program, activity, or facility as described above, or if you desire further information, please write to:

Office of Equal Opportunity  
United States Department of the Interior  
Washington, D.C. 20240

## Table of contents

	<b>Page</b>
<b>Reservoir Characteristics and Information</b> .....	3
<b>Habitat</b> .....	3
<b>Species Summaries</b> .....	4-11
<b>Tables</b>	
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
<b>Figures</b>	
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
<b>Appendix A – Water Quality</b>	
Tables A1 – A11 Summer water quality sampling data.....	27 – 37
Figures A1 – A11 Summer water quality sampling data .....	38 – 48
<b>Appendix B – Reservoir Elevations</b>	
Table B1. Daily reservoir elevation data .....	49
Figure B1. Daily reservoir elevation data with guide curve .....	53

## South Holston Reservoir

### Description

<b>Surface Area:</b> 7,580 acres	<b>Shoreline Distance:</b> 182 miles
<b>Counties:</b> Sullivan, Washington (VA)	<b>Drainage Area:</b> 703 square miles
<b>Full Pool Elevation:</b> 1,729 feet above mean sea level	<b>Mean Annual Fluctuation:</b> 39 feet
<b>Maximum Depth:</b> 245 feet	<b>Thermocline Depth:</b> 13 feet
<b>Mean Chlorophyll (Forebay):</b> 4.2 parts per million	<b>Shoreline Development:</b> 14%
<b>Trophic Status (Forebay):</b> Mesotrophic	<b>Trophic Index, Carlson (1977):</b> 44.7
<b>Hydraulic Retention Time:</b> 340 days	<b>Reservoir Age:</b> 58 years (dam completed 1950)
<b>Total Fishing Effort:</b> N/A in 2008	<b>Total Value by Anglers:</b> N/A in 2008

### Habitat Enhancement and Monitoring

Location	New Sites			Renovated Sites			Expanded Sites		
	Number	Units	Acres	Number	Units	Acres	Number	Units	Acres
SFHRM 60.75 L*				1	397	7.94			
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>397</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*Christmas Trees with block

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

# Black Bass

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Angling Pressure</b> (creel survey data)												
All Black Bass	(hrs)	159,531	292,344	173,156	N	o	N	o	75,404	72,371	N	154,561
	(hrs/acre)	21.0	38.6	22.8					9.9	9.5		
Any Black Bass	(hrs)	158,297	233,522	131,155	S	u	r	v	66,909	64,527	S	130,882
	(hrs/acre)	20.9	30.8	17.3					8.8	8.5		
Largemouth Bass	(hrs)	0	2,815	912	S	u	r	v	0	280	S	801
	(hrs/acre)	0.0	0.4	0.1					0.0	0.04		
Smallmouth Bass	(hrs)	1,234	56,007	41,089	e	y	e	y	8,495	7,564	e	22,878
	(hrs/acre)	0.2	7.4	5.4					1.1	1.0		
Spotted Bass	(hrs)	0	0	0	y	y	y	y	0	0	y	0
	(hrs/acre)	0.0	0.0	0.0					0.0	0.0		
<b>Tournaments</b> (BITE program & creel survey data)												
# Tournaments (BITE)				5	7	1	1	1	1			2.7
Pounds/Angler Day (BITE)				3.22	3.48	3.85	2.73	2.83	1.92	none reported	none reported	3.01
Bass/Angler Day (BITE)				1.54	1.58	2.27	1.25	1.52	1.31			1.58
<b>Value of Fishery</b> (creel survey data - trip expenditures)												
All Black Bass	not calculated	\$624,310	\$365,140	No Survey	No Survey	No Survey	No Survey	\$147,040	\$144,320	No Survey	\$256,162	
Any Black Bass	not calculated	\$518,200	\$260,660					\$134,640	\$136,890		\$262,598	
Largemouth Bass	not calculated	\$2,800	\$330	\$0	\$1,270	\$1,100						
Smallmouth Bass	not calculated	\$103,310	\$104,150	\$12,400	\$6,160	\$56,505						
Spotted Bass	not calculated	\$0	\$0	\$0	\$0	\$0						

## Largemouth Bass

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Recruitment</b> (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	1.30	2.10	2.50	3.60	0.96	1.73	1.38	2.19	0.40	2.40	1.9
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	78%	82%	70%	74%	68%	83%	69%	81%	82%	83%	77.0%
RSD - Preferred	49%	53%	43%	41%	54%	50%	51%	44%	59%	53%	49.7%
CPUE	27.10	15.85	18.50	16.20	19.27	18.37	14.76	12.56	19.20	35.80	19.8
CPUE = Stock	25.80	13.75	16.00	12.60	18.31	16.64	13.38	10.37	18.80	33.40	17.9
CPUE = MSL	N o M i n i m u m S i z e L i m i t										
<b>Growth</b> (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)	N/A	361	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	361
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	85.2	84.4	89.4	88.7	86.1	86.6	89.5	91.9	96.3	92.8	89.1
Quality - Preferred	102.2	91.3	91.2	99.0	104.0	94.9	92.2	93.0	99.2	97.3	96.4
Preferred - Memorable	96.1	96.0	101.0	94.6	101.3	97.1	96.5	89.8	99.7	101.2	97.3
Memorable - Trophy	96.4	96.8	86.3	none	107.9	100.2	none	89.0	93.7	97.4	96.0
Trophy	none	none	none	none	none	none	none	none	none	none	
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	22.00%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.0%
<b>Fishing Success</b> (creel survey data)											
Catch Rate	not calculated	not calculated	0.11	No	No	No	No	0.05	0.05	No	0.07
Harvest Rate	not calculated	not calculated	0.02	Survey	Survey	Survey	Survey	0.00	0.01	Survey	0.01
Percent Harvested	11.2%	8.1%	15.5%					8.1%	11.3%		10.8%
Mean Weight (pounds)	1.44	1.81	1.44					2.05	2.11		1.8

## Fishery Forecast

The 2008 South Holston Reservoir largemouth bass catch rates were the highest recorded since 1998 and were nearly double the average catch rates. The size structure was not much different from last year which is very good. 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

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Recruitment</b> (electrofishing data)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1.0
Substock CPUE	4.2	5.3	1.6	0.8	0.2	0.2	2.5	2.4	1.0	1.8	2.0
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	70%	73%	90%	76%	72%	71%	63%	41%	69%	80%	70.5%
RSD - Preferred	38%	49%	64%	59%	52%	44%	38%	29%	46%	47%	46.6%
CPUE	30.00	31.06	30.20	12.30	8.87	17.54	17.83	10.58	21.60	27.20	20.7
CPUE = Stock	25.80	25.75	28.60	11.50	8.71	17.36	15.28	8.18	20.60	25.40	18.7
CPUE = MSL (16" in 2008 15" in 2009)*			N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.6	5.6
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	129	N/A	N/A	129
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	324	N/A	N/A	324
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	103.1	89.0	87.6	90.2	88.3	107.5	88.7	89.2	88.4	93.8	92.6
Quality - Preferred	87.9	92.8	92.6	92.7	97.8	97.2	93.4	93.9	89.6	98.4	93.6
Preferred - Memorable	90.1	96.4	92.9	93.9	100.0	90.5	89.8	96.0	97.1	94.4	94.1
Memorable - Trophy	88.8	94.1	94.1	89.9	96.0	93.9	89.6	90.3	94.5	90.7	92.2
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	48%	N/A	N/A	48.0%
<b>Fishing Success</b> (creel survey data)											
Catch Rate	not calculated	not calculated	0.37	No	No	No	No	0.17	0.16	No	0.23
Harvest Rate	not calculated	not calculated	0.06	Survey	Survey	Survey	Survey	0.01	0.02	Survey	0.03
Percent Harvested	22.0%	25.4%	17.5%					7.8%	14.2%		17.4%
Mean Weight (pounds)	0.45	3.2	2.92					2.64	2.44		2.33

\* 15" MLL in effect in 2008

## Fishery Forecast

Smallmouth bass size structure improved again in 2008 after seeing three years of a slight decline in smallmouth bass greater than 18-inches from 2003 to 2006. Even though there was a slight decline in the percentage of larger (> 18-inches) smallmouth bass from 2003-2006, the size structure is still superior to most area reservoirs. Just like largemouth bass, South Holston Reservoir consistently has a great percentage of smallmouth bass over 18-inches. This should improve in 2009 when the smallmouth bass minimum size limit goes to 18-inches to provide a high quality smallmouth bass fishery.

## Management Recommendations

Continue to monitor the concern that some smallmouth bass anglers have for the quality of the fishery. Implement incremental minimum size limit of 18-inches on March 1, 2009. Evaluate the impact of the regulation change on the smallmouth bass fishery.

## White Crappie

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Recruitment</b> (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
<b>Density</b> (electrofishing data) - CPUE = # fish/ hour)											
PSD	none	100%	100%	none	none	100%	none	none	none	100%	100%
RSD - Preferred	none	100%	100%	none	none	100%	none	none	none	100%	100%
CPUE	0.00	0.23	0.23	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.09
CPUE = Stock	0.00	0.23	0.23	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.09
CPUE = MSL (10")	0.00	0.23	0.23	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.09
<b>Growth</b> (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
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	none	none	none	none	none	94.5	none	none	none	none	94.5
Quality - Preferred	none	none	none	none	none	none	none	none	none	none	none
Preferred - Memorable	none	none	93.613	none	none	none	none	none	none	none	93.6
Memorable - Trophy	none	98.044	none	none	none	none	none	none	none	90.2	94.1
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (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
<b>Stocking</b>											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel survey data - any crappie)											
Angler Hours	4,996	24,776	7,906					11,595	7,564		11,367
Angler Hours/Acre	0.7	3.3	1.0	N	N	N	N	1.5	1.0	N	0.4
<b>Fishing Success</b> (creel survey data)											
Catch Rate	not calculated	none	0.05	S	S	S	S	none	none	S	0.05
Harvest Rate	not calculated	none	0.00	u	u	u	u	none	none	u	0.00
Percent Harvested	45.0%	none	100.0%	r	r	r	r	none	none	r	72.5%
Mean Weight (pounds)	N/A	none	N/A	v	v	v	v	none	none	v	
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Crappie	not calculated	\$0	\$8,410	y	y	y	y	\$17,840	\$11,200	y	\$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

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Recruitment</b> (electrofishing data) - CPUE = # fish/ hour)											
Age-0 CPUE	N/A	N/A	N/A	none	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.00	0.00	0.20	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.05
<b>Density</b> (electrofishing data) - CPUE = # fish/ hour)											
PSD	100%	100%	87%	96%	97%	94%	96%	87%	98%	99%	95.4%
RSD - Preferred	66%	86%	64%	82%	78%	74%	77%	62%	74%	86%	74.9%
CPUE	15.60	4.87	26.26	6.52	11.72	6.80	8.47	10.35	18.20	34.60	14.34
CPUE = Stock	15.60	4.87	26.06	6.23	11.72	6.80	8.47	10.35	18.20	34.60	14.29
CPUE = MSL (10")	8.44	0.39	15.12	4.52	9.01	4.43	6.10	5.97	11.00	26.60	9.16
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	none	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	254	N/A	N/A	N/A	N/A	N/A	N/A	254
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	none	none	97.099	104.947	145.89	103.3	94.9	98.5	96.3	95.8	104.6
Quality - Preferred	119.657	91.079	100.933	96.37	101.594	118.0	101.8	100.3	99.2	96.3	102.5
Preferred - Memorable	102.376	95.65	95.783	97.405	100.666	103.8	94.7	97.2	97.2	95.8	98.1
Memorable - Trophy	72.896	89.566	97.181	90.862	98.268	90.1	86.9	90.0	93.7	91.3	90.1
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	29%	N/A	N/A	N/A	N/A	N/A	N/A	29%
<b>Stocking</b>											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel survey data - any crappie)											
Angler Hours	4,996	24,776	7,906					11,595	7,564		11,367
Angler Hours/Acre	0.7	3.3	1.0	N	N	N	N	1.5	1.0	N	0.4
<b>Fishing Success</b> (creel survey data)											
Catch Rate	not calculated	0.60	0.56	S	S	S	S	0.12	0.13	S	0.35
Harvest Rate	not calculated	0.46	0.17	u	u	u	u	0.09	0.09	u	0.20
Percent Harvested	68.0%	73.9%	34.0%	r	r	r	r	64.2%	62.2%	r	60.5%
Mean Weight (pounds)	0.09	0.65	0.79	v	v	v	v	0.94	0.89	v	0.67
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Crappie	not calculated	\$31,000	\$8,410	y	y	y	y	\$17,840	\$11,200	y	\$17,113

## Fishery Forecast

In 2008, Black crappie electrofishing catch rates were 2.6 times higher than normal and were double the catch rates from last year. The size structure was also excellent with nearly 83% of the crappie that were collected were larger than 10-inches. South Holston generally does not have a good crappie population, but 2008 and 2009 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

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Recruitment</b> (winter gill net data)											
Substock CPUE	0.00	0.00	no sample	0.03	no sample	0.00	no sample	0.13	0.00	0.00	0.02
<b>Density</b> (winter gill net data - CPUE = # fish/net night)											
PSD	100%	99%	no sample	98%	no sample	95%	no sample	91%	93%	79%	93.6%
RSD - Preferred	48%	52%	no sample	42%	no sample	48%	no sample	38%	59%	45%	47.4%
CPUE	9.80	11.22	no sample	9.39	no sample	6.25	no sample	8.29	6.29	12.58	9.12
CPUE = Stock	9.80	11.22	no sample	9.36	no sample	6.25	no sample	8.17	6.29	12.58	9.10
CPUE = MSL (18")	7.33	8.13	no sample		no sample	3.67	no sample	4.17	4.86	8.08	6.04
<b>Growth</b> (winter gill net data)											
Mean TL at Age-1 (mm)			no sample	426	no sample		no sample	411	415	450	425.5
Mean TL at Age-3 (mm)			no sample	538	no sample		no sample	539	537	524	534.5
<b>Relative Weight</b> (winter gill net data)											
Stock - Quality	103.6	102.1	no sample		no sample	92.9	no sample	105.5	99.7	103.4	101.2
Quality - Preferred	101.9	108.7	no sample		no sample	98.7	no sample	96.4	95.1	103.6	100.7
Preferred - Memorable	119.5	109.4	no sample		no sample	96.0	no sample	97.1	97.3	101.7	103.5
Memorable - Trophy	none	110.0	no sample		no sample	98.5	no sample	93.7	96.7	none	99.7
Trophy	none	none	no sample		no sample	none	no sample	none	none	none	
<b>Mortality</b> (winter gill net data)											
Total Mortality			no sample		no sample		no sample	48%	N/A		48.0%
<b>Stocking*</b>											
# per Acre	5.2	0.0	0.0	6.8	2.2	6.2	5.4	7.5	5.1	5.4	4.4
<b>Angling Pressure</b> (creel survey data - walleye data only)											
Angler Hours	12,520	22,207	17,579					17,580	21,543		18,286
Angler Hours/Acre	1.65	2.93	2.32	N	N	N	N	2.32	2.84	N	0.60
<b>Fishing Success</b> (creel survey data - walleye data only)											
Catch Rate	not calculated	not calculated	not calculated	S	S	S	S	not calculated	not calculated	S	
Harvest Rate	not calculated	not calculated	not calculated	u	u	u	u	not calculated	not calculated	u	
Percent Harvested	81.6%	90.7%	79.8%	r	r	r	r	55.5%	59.0%	r	73.3%
Mean Weight (pounds)	4.00	3.72	3.38	v	v	v	v	3.32	3.35	v	3.55
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Walleye Data Only	not calculated	\$37,760	\$28,130	y	y	y	y	\$33,010	\$37,930	y	\$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 the majority (64%) 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 collected also. The quality of the walleye fishery should remain stable due to TWRA stocking efforts.

## Management Recommendations

Maintain the current regulations.

## Trout

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Angling Pressure</b> (creel survey data)												
All Trout	(hrs)	5,212	58,635	44,906	N	o	o	o	8,287	10,467	N	21,251
	(hrs/acre)	0.7	7.7	5.9					1.1	1.4		3.36
Any Trout	(hrs)	0	58,635	37,750	S	u	r	v	6,565	10,099	S	22,610
	(hrs/acre)	0.0	7.7	5.0					0.9	1.3		2.98
Rainbow Trout	(hrs)	5,212	0	7,156	u	r	v	e	1,722	368	u	2,892
	(hrs/acre)	0.7	0.0	0.9					0.2	0.05		0.38
Brown Trout	(hrs)	0	0	0	y	y	y	y	0	0	y	0
	(hrs/acre)	0.0	0.0	0.0					0.0	0.0		0.00
Lake Trout	(hrs)	0	0	0					0	0		0
	(hrs/acre)	0.0	0.0	0.0					0.0	0.0		0.00
<b>Value of Fishery</b> (creel survey data - trip expenditures)												
All Trout	not calculated	\$85,350	\$52,220	No	Survey	No	Survey	No	Survey	\$12,240	\$13,520	\$40,833
Any Trout	not calculated	\$85,350	\$46,110							\$9,780	\$12,740	\$38,495
Rainbow Trout	not calculated	\$0	\$6,110	No	Survey	No	Survey	No	Survey	\$2,460	\$780	\$2,338
Brown Trout	not calculated	\$0	\$0							\$0	\$0	\$0
Lake Trout	not calculated	\$0	\$0	No	Survey	No	Survey	No	Survey	\$0	\$0	\$0

## Fishery Forecast

The quality of the trout fishery should remain stable, due to TWRA stocking efforts. This year, lake trout have been added to the species list and should be available for catching and harvest within two years. 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

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Fishing Success</b> (creel survey data)												
Catch Rate	not calculated	not calculated	0.80	No	No	No	No	No	0.03	0.07	No	0.30
Harvest Rate	not calculated	not calculated	0.60						0.01	0.05		0.22
Percent Harvested	56.1%	74.4%	68.9%	Survey	Survey	Survey	Survey	30.0%	42.8%	Survey	54.4%	
Mean Weight (pounds)	0.15	1.37	1.2					1.54	1.65		1.2	

## Brown Trout

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Fishing Success</b> (creel survey data)												
Catch Rate	not calculated	not calculated	0.14	No	No	No	No	No	0.00	0.01	No	0.05
Harvest Rate	not calculated	not calculated	0.01						0.00	0.01		0.01
Percent Harvested	none	none	8.2%	Survey	Survey	Survey	Survey	0.0%	9.7%	Survey	6.0%	
Mean Weight (pounds)	none	none	0.46					N/A	1.7		1.1	

## Lake Trout

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Fishing Success</b> (creel survey data)												
Catch Rate	not calculated	not calculated	none	No	No	No	No	No	none	none	No	
Harvest Rate	not calculated	not calculated	none						none	none		none
Percent Harvested	none	none	none	Survey	Survey	Survey	Survey	none	none	Survey		
Mean Weight (pounds)	none	none	none					none	none			

## Sunfish

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Angling Pressure</b> (creel survey data - any sunfish)											
Angler Hours	* 8,247	28,765	17,823	N	o	N	o	233	792	N	11,172
Angler Hours/Acre	1.09	3.79	2.35								
<b>Fishing Success</b> (creel survey data - bluegill only)											
Catch Rate (bluegill)	not calculated	3.21	2.11	S	u	S	u	4.61	1.52	S	2.86
Harvest Rate (bluegill)	not calculated	0.24	0.30								
% Harvested (bluegill)	14.3%	9.2%	9.8%	r	v	e	e	9.8%	15.6%	r	11.7%
Mean Weight (bluegill)	0.13	0.22	0.20								
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Sunfish	not calculated	\$46,500	\$16,510	y	y	y	y	\$290	\$530	y	\$15,958

\* Bluegill only

## Catfish

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
<b>Angling Pressure</b> (creel survey data - any catfish)											
Angler Hours	not calculated	873	321	N	o	N	o	851	3,106	N	1,288
Angler Hours/Acre	N/A	0.12	0.04								
<b>Fishing Success</b> (creel survey data)											
Catch Rate (channel cat)	not calculated	not calculated	0.18	S	u	S	u	0.18	0.11	S	0.16
Harvest Rate (channel cat)	not calculated	not calculated	0.18								
% Harvested (channel cat)	25.7%	34.7%	39.2%	r	v	e	e	40.4%	65.2%	r	41.0%
Mean Weight (channel cat)	0.81	2.65	2.84								
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Catfish	not calculated	\$1,700	\$930	y	y	y	y	\$2,090	\$2,960	y	\$1,920

## Tables

Table 1. South Holston Reservoir stocking records 2000 – 2008.

<b>Species</b>	<b>Date</b>	<b>Rate (per acre)</b>	<b>Mean Length (in.)</b>	<b>Number</b>
Walleye	May 2000*	19.3	1.5	146,000
	May 2001*	19.7	1.0 – 1.25	149,700
	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**	27.7	0.75 – 2.0	209,862
	May 2008**	30.3	1.0 – 2.0	229,435
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
Rainbow Trout	2000	5.4	Adult	40,627
	2001	4.9	Adult	37,502
	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
Brown Trout	2001	1.3	Fingerling	10,092
	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

\* - fished stocked by VDGIF

\*\* - combined stockings of TWRA and VDGIF

Table 2. Number of species collected by gear type in South Holston Reservoir, 2008. Effort is represented in hours for electrofishing and net nights for gill netting

Species	Spring Electrofishing			Winter Gill Netting		
	No.	CPUE (# fish / hour)	Total Effort	No.	CPUE (# fish / net night)	Total Effort
Largemouth Bass	179	35.8	5	X	X	X
Smallmouth Bass	136	27.2	5	X	X	X
Spotted Bass	0	0	5	X	X	X
Black Crappie	173	34.6	5	X	X	X
Black-Nose Crappie	2	0.4	5	X	X	X
White Crappie	1	0.2	5	X	X	X
Walleye	6	1.2	5	151	12.6	12
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 – 2008.

Species	Year	Gear	Number of Samples	RSD Substock			RSD Stock - Quality			RSD Quality - Preferred			RSD Preferred-Memorable			RSD Memorable-Trophy			RSD Trophy			PSD	Total	
				#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	%	#	CPUE
Largemouth Bass	1998	EL	22	4	0.6	<b>3</b>	46	8	<b>37</b>	20	3.5	<b>16</b>	50	8.6	<b>40</b>	5	0.8	<b>4</b>				<b>60</b>	130	21.6
	1999	EL	18	6	1.3	<b>5</b>	25	5.6	<b>22</b>	34	7.6	<b>29</b>	54	12	<b>47</b>	3	0.7	<b>3</b>				<b>79</b>	122	27.1
	2000	EL	18	9	2	<b>13</b>	11	2.4	<b>18</b>	17	3.7	<b>28</b>	29	6.2	<b>48</b>	3	0.6	<b>5</b>				<b>81</b>	69	15
	2001	EL	17	11	2.5	<b>14</b>	21	4.8	<b>30</b>	19	4.4	<b>27</b>	28	6.4	<b>40</b>	2	0.5	<b>3</b>				<b>70</b>	81	18.5
	2002	EL	14	13	3.6	<b>22</b>	12	3.2	<b>26</b>	15	4.1	<b>33</b>	19	5.3	<b>41</b>	0	0	<b>0</b>				<b>74</b>	59	16.2
	2003	EL	20	5	1	<b>5</b>	32	6	<b>32</b>	14	2.6	<b>14</b>	49	9	<b>49</b>	4	1	<b>4</b>				<b>67</b>	104	19.3
	2004	EL	20	9	1.7	<b>9</b>	15	2.9	<b>17</b>	28	5.4	<b>33</b>	37	7.1	<b>43</b>	6	1.2	<b>7</b>	0	0	<b>0</b>	<b>83</b>	95	18.4
	2005	EL	20	7	1.4	<b>9</b>	21	4.1	<b>31</b>	12	2.4	<b>18</b>	35	6.9	<b>51</b>	0	0	<b>0</b>	0	0	<b>0</b>	<b>69</b>	75	14.8
	2006	EL	20	11	2.2	<b>17</b>	10	2	<b>19</b>	19	3.8	<b>37</b>	22	4.4	<b>42</b>	1	0.2	<b>2</b>	0	0	<b>0</b>	<b>81</b>	63	12.56
	2007	EL	20	2	0.4	<b>2</b>	17	3.4	<b>18</b>	22	4.4	<b>23</b>	52	10	<b>55</b>	3	0.6	<b>3</b>	0	0	<b>0</b>	<b>81</b>	96	19.2
2008	EL	20	12	2.4	<b>7</b>	28	5.6	<b>17</b>	50	10	<b>30</b>	84	17	<b>50</b>	5	1	<b>3</b>	0	0	<b>0</b>	<b>83</b>	179	35.8	
Smallmouth Bass	1998	EL	22	30	5.2	<b>19</b>	31	5.4	<b>24</b>	59	10	<b>46</b>	31	5.4	<b>24</b>	9	1.5	<b>7</b>				<b>77</b>	160	27.7
	1999	EL	18	19	4.2	<b>14</b>	35	7.8	<b>30</b>	37	8.2	<b>32</b>	27	6	<b>23</b>	17	3.8	<b>15</b>				<b>70</b>	135	30
	2000	EL	18	23	5	<b>17</b>	31	6.7	<b>27</b>	27	5.8	<b>24</b>	22	6.2	<b>19</b>	29	6.2	<b>26</b>				<b>69</b>	136	29.3
	2001	EL	17	7	1.6	<b>5</b>	13	2.9	<b>10</b>	32	7.3	<b>25</b>	42	9.6	<b>33</b>	36	8.2	<b>29</b>				<b>87</b>	133	30.17
	2002	EL	14	3	0.8	<b>7</b>	10	2.7	<b>24</b>	7	2	<b>17</b>	15	4.3	<b>37</b>	8	2.3	<b>20</b>	1	0.3	<b>2</b>	<b>74</b>	44	12.3
	2003	EL	20	1	0.2	<b>2</b>	13	2.4	<b>28</b>	9	1.7	<b>20</b>	11	2.1	<b>24</b>	10	1.9	<b>22</b>				<b>66</b>	47	8.8
	2004	EL	20	1	0.2	<b>1</b>	26	5	<b>29</b>	24	4.6	<b>27</b>	19	3.7	<b>21</b>	17	3.3	<b>19</b>	0	0	<b>0</b>	<b>67</b>	91	17.5
	2005	EL	20	13	2.5	<b>14</b>	29	5.7	<b>37</b>	19	3.7	<b>24</b>	18	3.5	<b>23</b>	10	2	<b>13</b>	2	0.4	<b>3</b>	<b>63</b>	91	17.8
	2006	EL	20	12	2.4	<b>23</b>	24	4.8	<b>59</b>	5	1	<b>12</b>	9	1.8	<b>22</b>	3	0.6	<b>7</b>	0	0	<b>0</b>	<b>41</b>	53	10.58
	2007	EL	20	5	1	<b>5</b>	32	6.4	<b>31</b>	24	4.8	<b>23</b>	32	6.4	<b>31</b>	13	2.6	<b>13</b>	2	0.4	<b>2</b>	<b>69</b>	108	21.6
2008	EL	20	9	1.8	<b>7</b>	26	5.2	<b>20</b>	41	8.2	<b>32</b>	40	8	<b>31</b>	17	3.4	<b>13</b>	3	0.6	<b>2</b>	<b>80</b>	136	27.2	

Table 4. Black crappie and Walleye catch, mean CPUE, and RSD by incremental category for target species by gear in South Holston Reservoir 1998 – 2008.

Species	Year	Gear	Number of Samples	RSD Substock			RSD Stock - Quality			RSD Quality - Preferred			RSD Preferred-Memorable			RSD Memorable-Trophy			RSD Trophy			PSD	Total	
				#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	#	CPUE	RSD	%	#	CPUE
Black Crappie	1998	EL	22	1	0.1	<b>3</b>	4	0.7	<b>11</b>	8	1.3	<b>22</b>	17	2.9	<b>50</b>	5	0.8	<b>14</b>				<b>86</b>	36	6
	1999	EL	18	0	0		0	0		24	5.3	<b>34</b>	41	9.1	<b>59</b>	5	1.1	<b>7</b>				<b>100</b>	70	15.6
	2000	EL	18	0	0		0	0		3	0.7	<b>14</b>	10	2.2	<b>48</b>	8	1.7	<b>38</b>				<b>100</b>	21	4.6
	2001	EL	17	1	0.2	<b>1</b>	15	3.4	<b>13</b>	26	5.9	<b>23</b>	54	12	<b>47</b>	19	4.3	<b>17</b>				<b>87</b>	115	26.3
	2002	EL	14	1	0.3	<b>4</b>	1	0.3	<b>5</b>	3	0.9	<b>14</b>	11	3.1	<b>50</b>	7	2	<b>32</b>				<b>96</b>	23	6.5
	2003	EL	20	0	0		2	0.4	<b>3</b>	12	2.1	<b>19</b>	22	4.1	<b>35</b>	27	5.1	<b>43</b>				<b>97</b>	63	11.7
	2004	EL	20	0	0	<b>0</b>	2	0.4	<b>6</b>	7	1.4	<b>20</b>	18	3.5	<b>51</b>	8	1.5	<b>23</b>	0	0	<b>0</b>	<b>94</b>	35	6.8
	2005	EL	20	0	0	<b>0</b>	2	0.4	<b>5</b>	8	1.6	<b>19</b>	12	2.4	<b>28</b>	21	4.1	<b>49</b>	0	0	<b>0</b>	<b>96</b>	43	8.5
	2006	EL	20	0	0	<b>0</b>	7	1.4	<b>13</b>	13	2.6	<b>25</b>	20	4	<b>38</b>	12	2.4	<b>23</b>	0	0	<b>0</b>	<b>87</b>	52	10.4
	2007	EL	20	0	0	<b>0</b>	2	0.4	<b>2</b>	22	4.4	<b>24</b>	53	11	<b>58</b>	14	2.8	<b>15</b>	0	0	<b>0</b>	<b>98</b>	91	18.2
2008	EL	20	0	0	<b>0</b>	2	0.4	<b>1</b>	22	4.4	<b>13</b>	83	17	<b>48</b>	65	13	<b>38</b>	1	0.2	<b>1</b>	<b>99</b>	173	34.6	
Walleye (Winter Gill Net)	1998	GN	6	0			0			56	9.7	<b>75</b>	19	3.2	<b>25</b>	0	0		0			<b>100</b>	77	12.8
	1999	GN	9	0			1	0.1	<b>1</b>	53	5.9	<b>60</b>	35	3.9	<b>48</b>	0	0					<b>100</b>	89	9.8
	2000	GN	23	0			2	0.1	<b>1</b>	79	3.4	<b>48</b>	80	3.5	<b>49</b>	3	0.1	<b>2</b>	1	0	<b>1</b>	<b>99</b>	164	7.1
	2001	GN*																						
	2002	GN	36	1	0		8	0.2	<b>2</b>	190	5.3	<b>56</b>	130	3.6	<b>39</b>	9	0.3	<b>3</b>				<b>98</b>	338	9.4
	2003	GN																						
	2004	GN	14	1	0.1	<b>1</b>	5	0.4	<b>5</b>	47	3.4	<b>47</b>	46	3.3	<b>46</b>	2	0.1	<b>2</b>	0	0	<b>0</b>	<b>95</b>	101	7.21
	2005	GN																						
	2006	GN	24	3	0.1	<b>2</b>	17	0.7	<b>9</b>	105	4.4	<b>54</b>	72	3	<b>37</b>	2	0.1	<b>1</b>	0	0	<b>0</b>	<b>91</b>	199	8.29
2007	GN	7	0	0	<b>0</b>	7	0.4	<b>3</b>	15	2.1	<b>34</b>	22	3.1	<b>50</b>	4	0.6	<b>9</b>	0	0	<b>0</b>	<b>93</b>	44	6.29	
2008	GN	12	0	0	<b>0</b>	31	2.6	<b>21</b>	52	4.3	<b>34</b>	38	5.7	<b>45</b>	0	0	<b>0</b>	0	0	<b>0</b>	<b>79</b>	151	12.6	

Table 5. Largemouth bass mean relative weights (Wr) in South Holston Reservoir, spring 2008.

<b>Length Group</b>	<b>Mean Wr</b>	<b>Std. Error</b>	<b>N</b>
150	86.923	2.025	5
175	83.078	2.724	4
200	91.025	2.182	4
225	91.798	3.611	7
250	90.261	1.204	11
275	99.778	5.128	6
300	96.038	1.308	13
325	94.069	1.978	14
350	100.219	2.167	21
375	97.644	3.732	26
400	107.303	7.090	18
425	99.427	2.529	18
450	99.555	4.690	17
475	104.024	3.958	6
500	108.990	11.120	2
525	98.634	7.500	2
550	105.621		1
575			
600	86.065		1
<b>Total =</b>			<b>176</b>

Table 6. Smallmouth bass mean relative weights (Wr) in South Holston Reservoir, spring 2008.

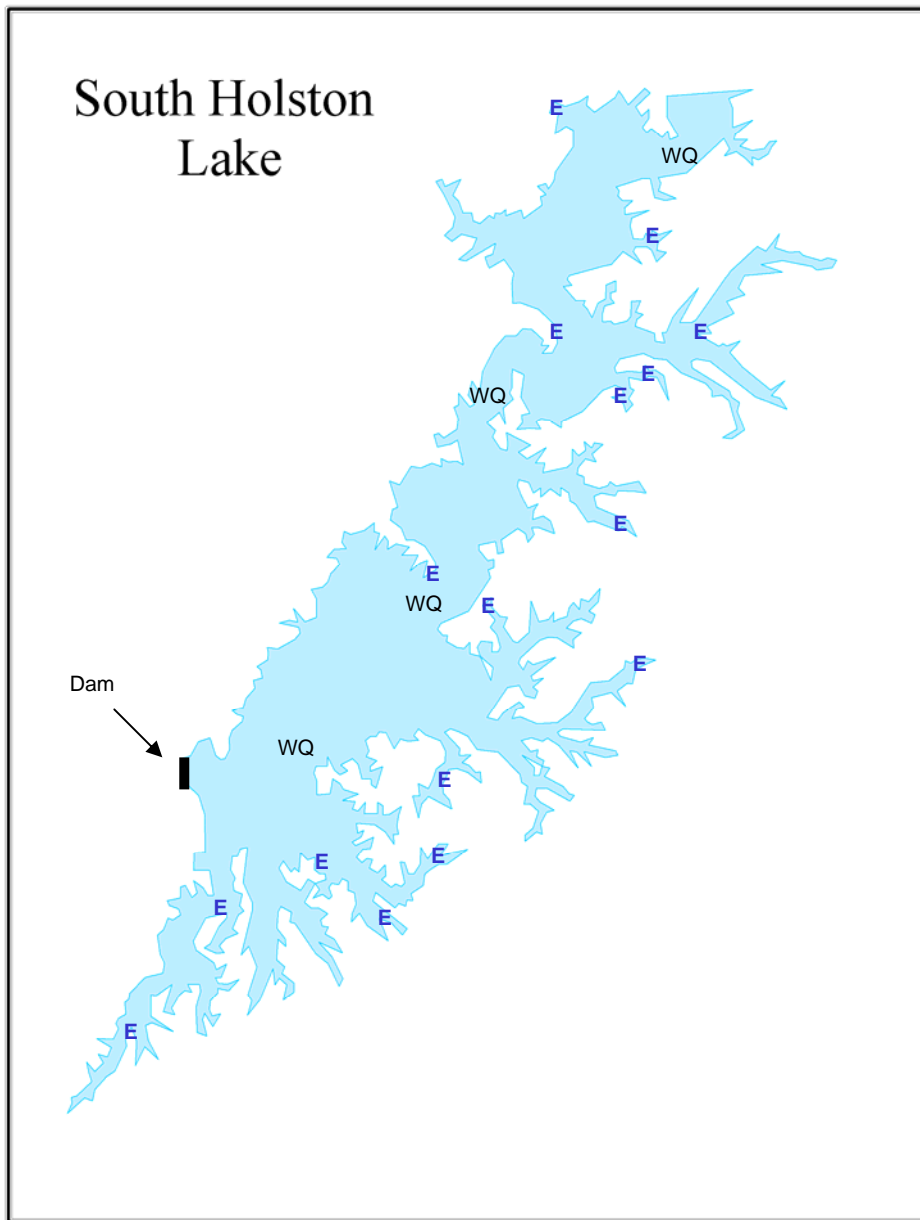
<b>Length Group</b>	<b>Mean Wr</b>	<b>Std. Error</b>	<b>N</b>
150	83.348	1.679	4
175	83.345	2.018	8
200	86.213	1.743	5
225	89.871	2.759	6
250	95.561	6.235	5
275	98.563	3.519	10
300	96.846	1.728	18
325	98.619	1.817	17
350	94.569	1.640	16
375	96.512	2.620	11
400	92.349	2.825	12
425	91.690	3.332	6
450	94.218	4.300	4
475	88.650	3.336	6
500	85.296	4.513	3
525	81.537	7.969	2
550			
<b>Total =</b>			<b>133</b>

Table 7. Black crappie mean relative weights (Wr) in South Holston Reservoir, spring 2008.

<b>Length Group</b>	<b>Mean Wr</b>	<b>Std. Error</b>	<b>N</b>
150	96.662		1
175	94.852		1
200	90.673	3.601	4
225	97.583	1.744	18
250	97.980	1.207	42
275	93.595	1.173	41
300	92.068	0.931	52
325	88.035	2.542	11
350	90.275	4.516	2
375	86.859		1
<b>Total =</b>			<b>173</b>

## Figures

Figure 1. South Holston Reservoir with sites sampled in 2008.



E = Spring Electrofishing  
WQ = Water Quality

## Largemouth Bass

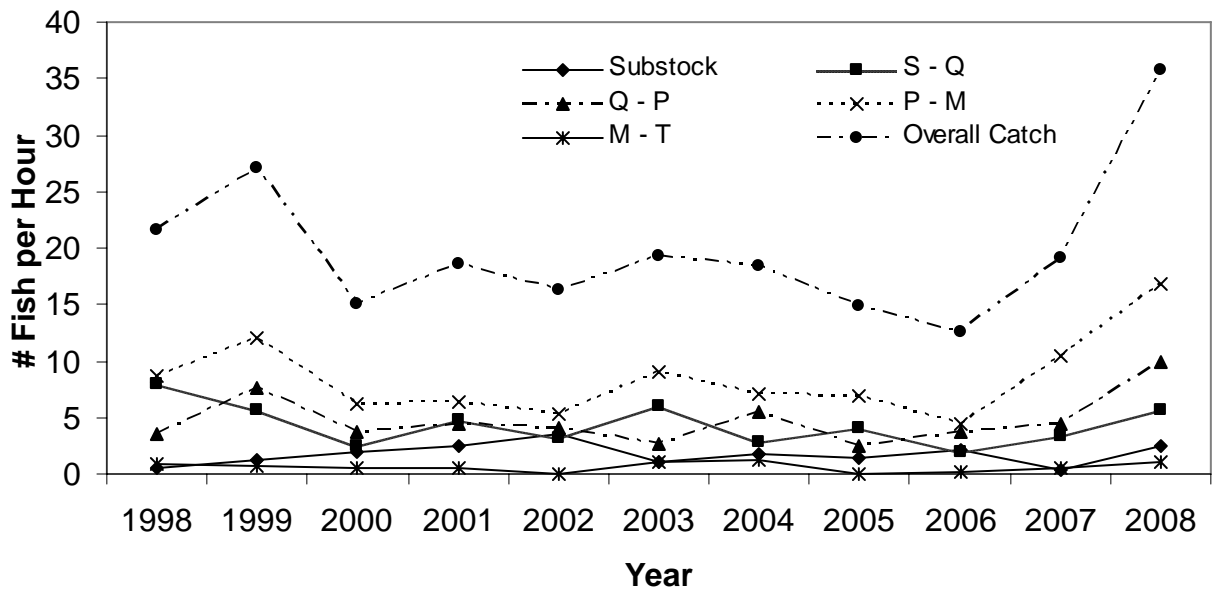


Figure 2. Largemouth bass CPUE by incremental length category in South Holston Reservoir, 1998 - 2008.

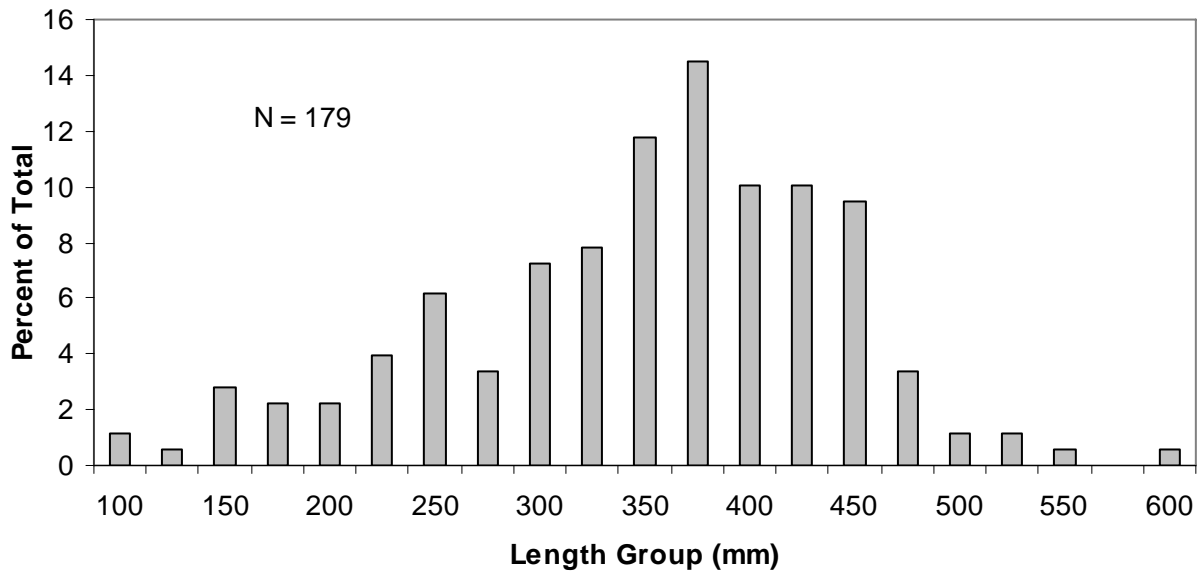


Figure 3. Largemouth bass length frequency by percent in South Holston Reservoir, spring 2008.

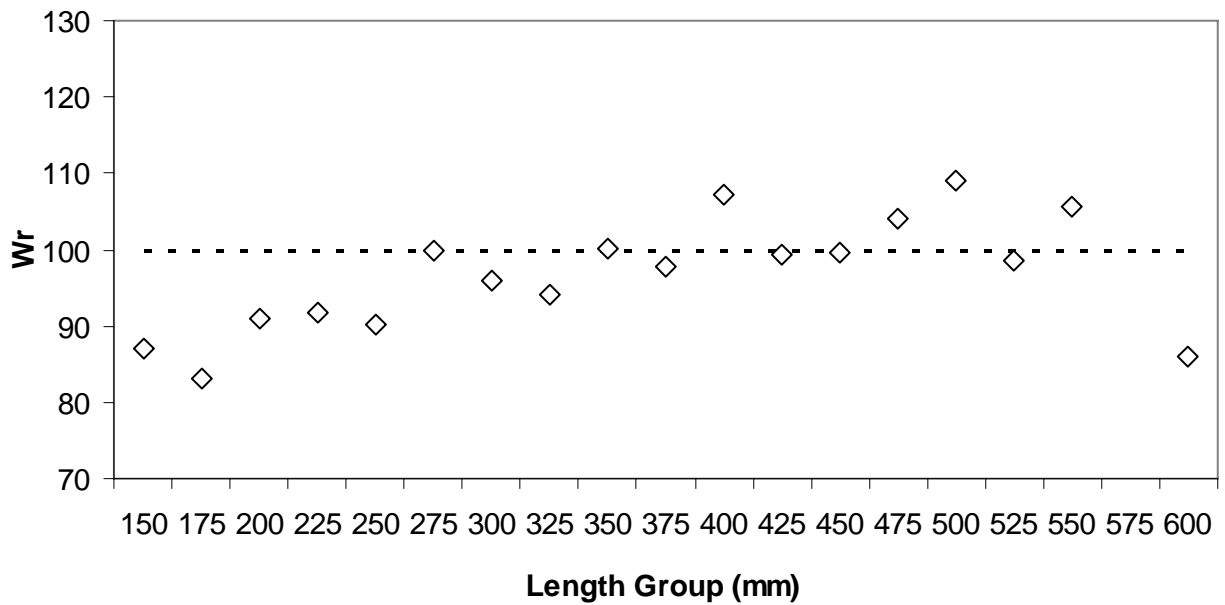


Figure 4. Largemouth bass mean relative weights (Wr) in South Holston Reservoir, spring 2008.

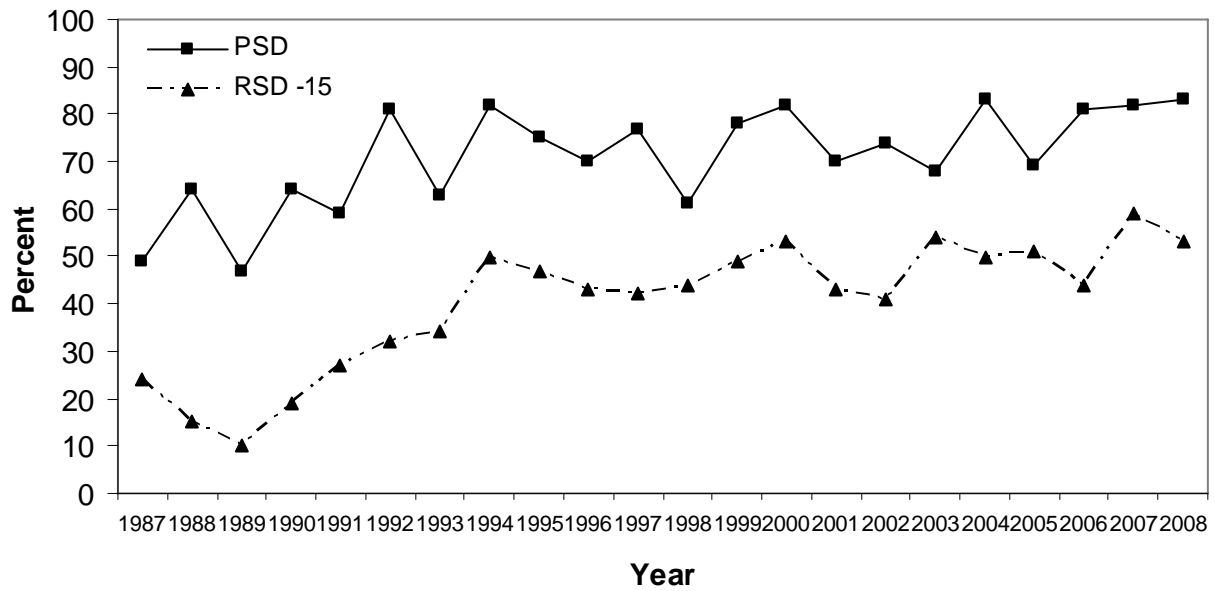


Figure 5. Largemouth bass traditional PSD and RSD -15 values in South Holston Reservoir 1987 – 2008.

### Smallmouth Bass

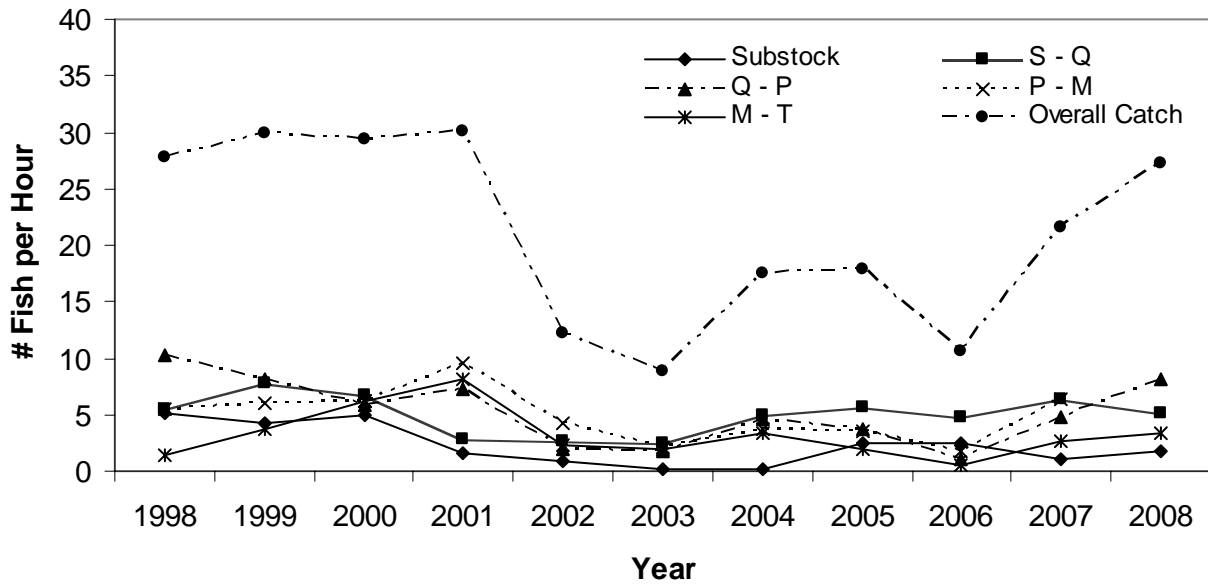


Figure 6. Smallmouth bass CPUE by incremental length category in South Holston Reservoir, 1998 - 2008.

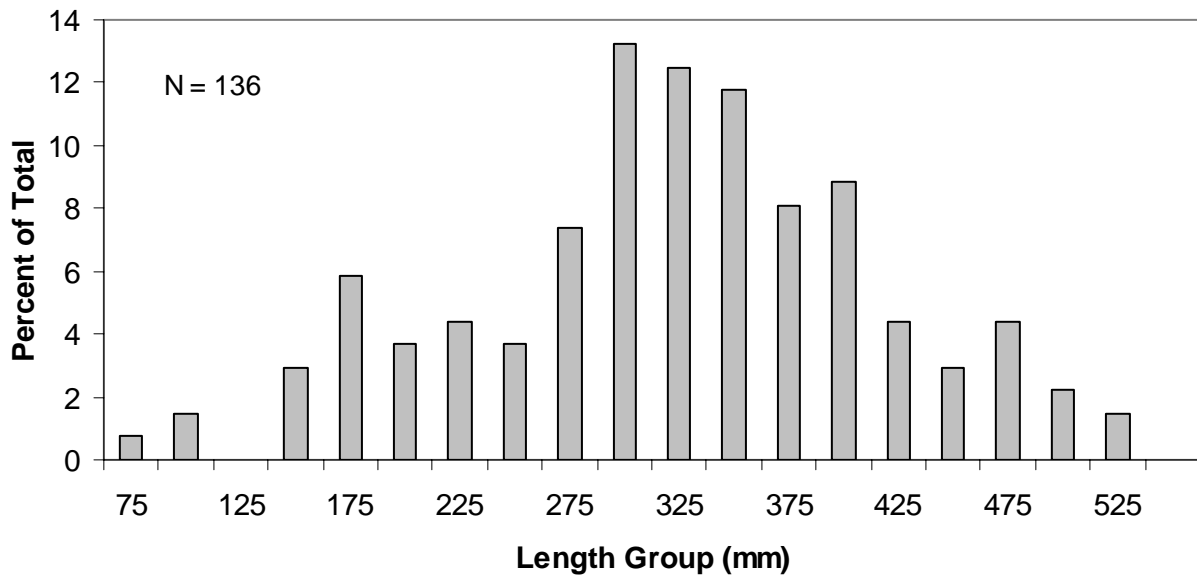


Figure 7. Smallmouth bass length frequency by percent in South Holston Reservoir, spring 2008.

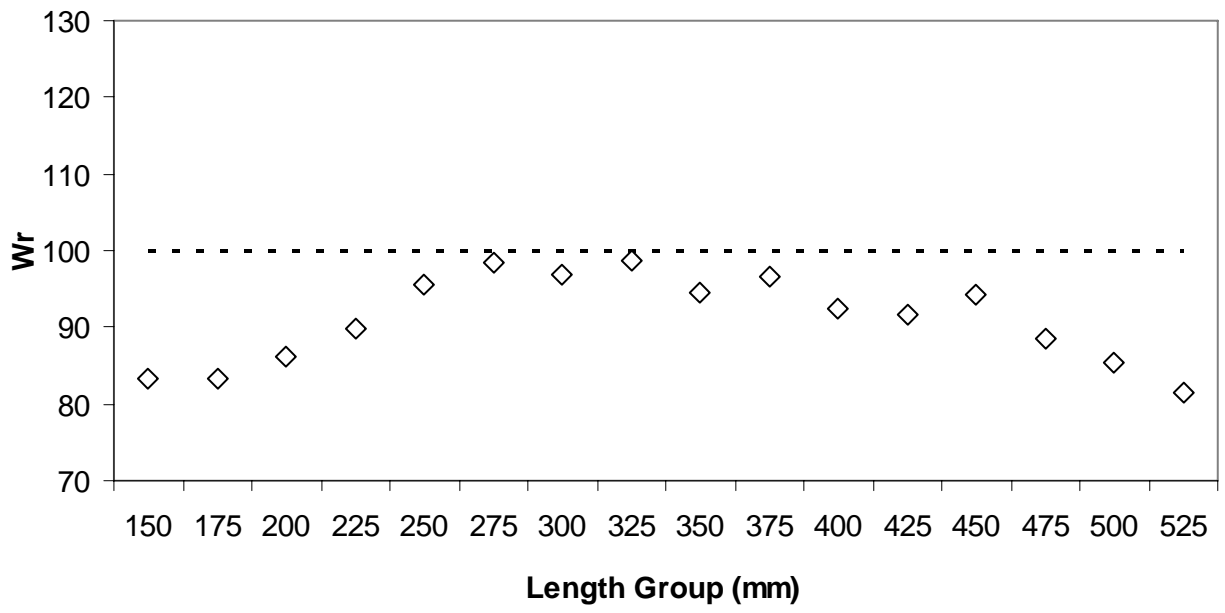


Figure 8. Smallmouth bass mean relative weights (Wr) in South Holston Reservoir, spring 2008.

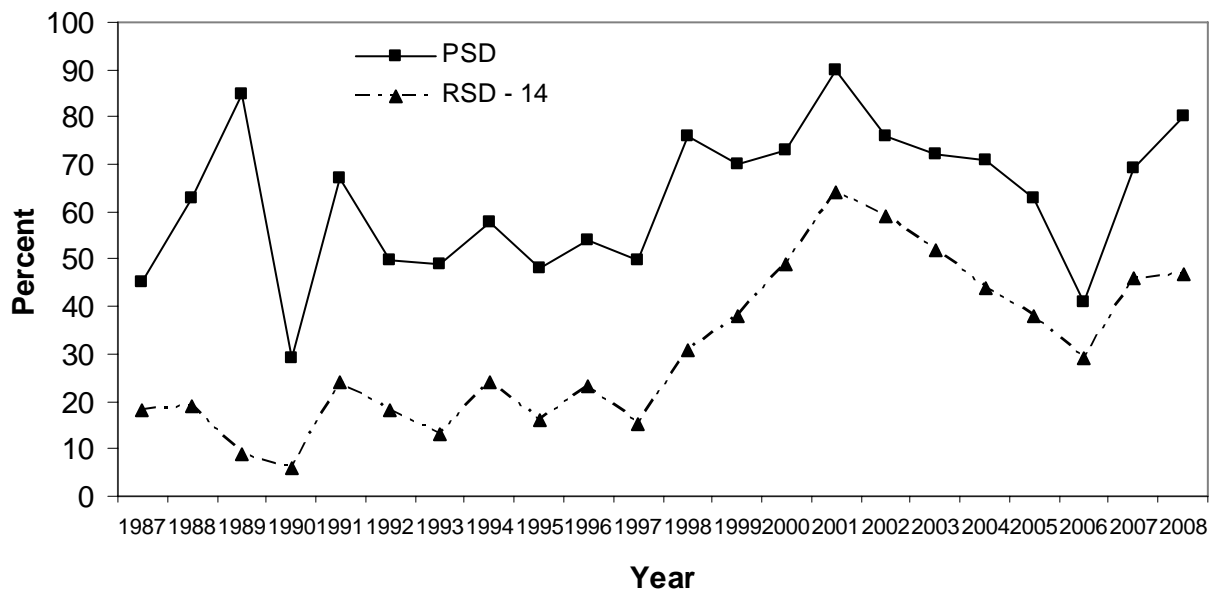


Figure 9. Smallmouth bass traditional PSD and RSD - 14 values in South Holston Reservoir 1987 – 2008.

## Black Crappie

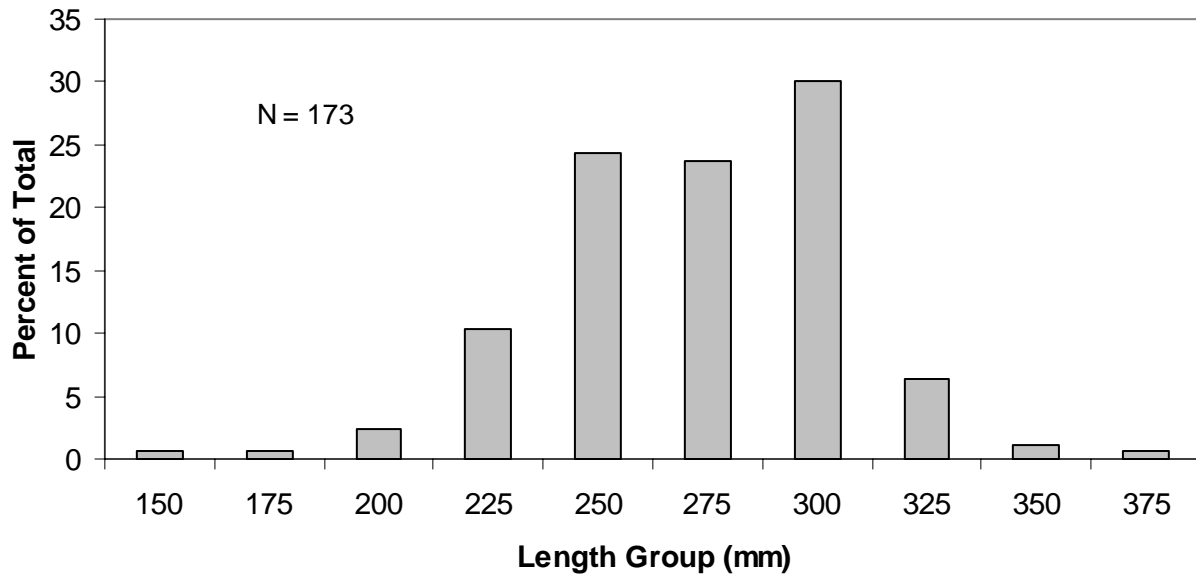


Figure 10. Black crappie length frequency by percent in South Holston Reservoir, spring 2008.

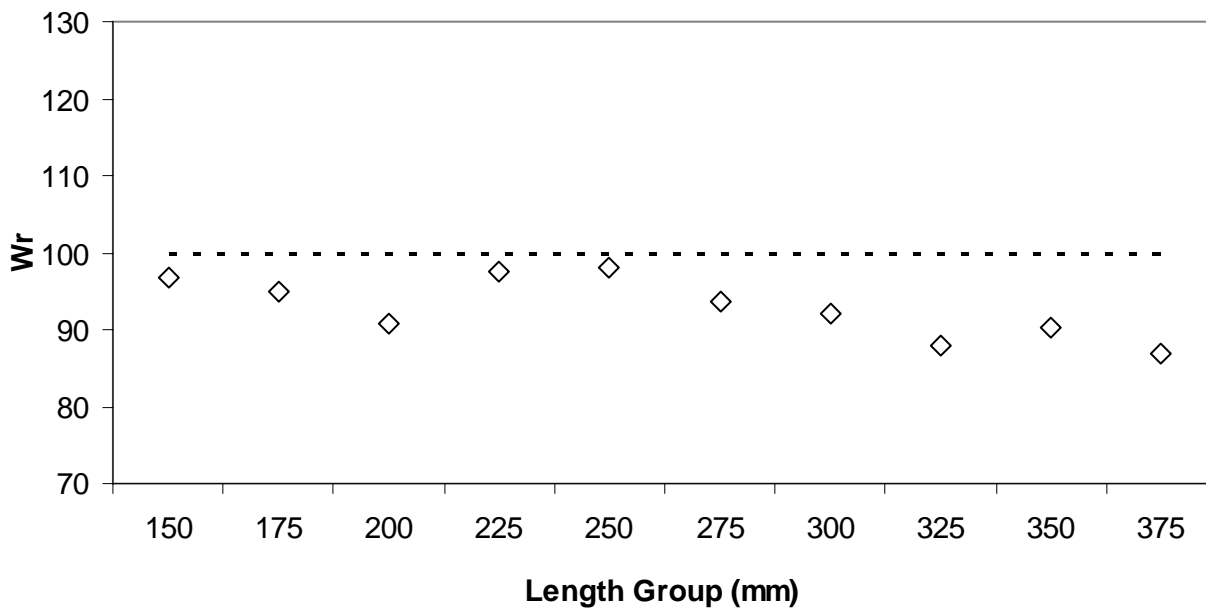


Figure 11. Black crappie mean relative weights (Wr) in South Holston Reservoir, spring 2008.

Appendix A  
Water Quality

Table A1. South Holston Reservoir, water quality summary at SFHRM 51, July 1, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	24.7	251	9.0	HRM51	4.6	1250
1	24.7	251	9.0			
2	24.6	251	9.1			
3	24.5	250	9.2			
4	24.4	250	9.2			
5	24.4	250	9.3			
6	22.2	256	10.0			
7	20.1	254	11.7			
8	18.9	256	10.9			
9	17.8	257	10.4			
10	16.6	259	9.3			
11	15.9	260	9.3			
12	14.8	264	8.1			
13	13.7	268	8.1			
14	12.5	270	8.1			
15	11.7	271	8.0			
16	11.2	270	7.9			
17	10.6	270	7.9			
18	10.2	270	7.9			
19	9.8	271	7.8			
20	9.4	271	7.8			
21	9.0	271	7.8			
22	8.8	271	7.7			
23	8.5	271	7.6			
24	7.9	272	7.6			
25	7.8	272	7.4			
26	7.4	272	7.3			
27	7.3	272	7.3			
28	7.2	272	7.3			
29	7.1	272	7.2			
30	7.0	273	7.1			

Table A2. South Holston Reservoir, water quality summary at SFHRM 55, July 1, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	24.9	249	8.8	HRM55	4.3	1330
1	24.9	248	8.9			
2	24.8	248	8.9			
3	24.6	248	9.0			
4	24.6	248	9.0			
5	24.5	249	9.0			
6	24.4	250	9.0			
7	20.1	263	7.7			
8	18.7	258	9.4			
9	17.7	258	8.9			
10	16.7	259	9.1			
11	16.1	262	7.7			
12	14.6	268	7.7			
13	13.5	268	7.2			
14	12.8	269	7.2			
15	11.8	270	7.4			
16	10.8	269	7.7			
17	10.4	269	7.7			
18	10.0	268	7.7			
19	9.6	269	7.7			
20	9.4	267	7.4			
21	8.9	267	7.4			
22	8.7	267	7.2			
23	8.3	268	7.2			
24	8.1	268	7.0			
25	8.0	269	6.7			
26	7.7	270	6.5			
27	7.4	271	6.4			
28	7.3	271	6.2			
29	7.0	272	6.1			
30	7.0	272	6.0			

Table A3. South Holston Reservoir, water quality summary at SFHRM 58, July 1, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.2	250	8.7	HRM58	3.0	1410
1	25.1	249	8.9			
2	24.9	249	8.9			
3	24.7	249	9.1			
4	24.6	249	9.1			
5	24.5	250	9.1			
6	24.1	259	8.0			
7	21.8	290	4.2			
8	19.6	276	2.8			
9	17.9	268	2.8			
10	16.7	265	3.3			
11	15.4	267	4.3			
12	14.2	269	4.4			
13	13.3	270	4.5			
14	12.7	271	4.6			
15	11.6	272	5.0			
16	11.0	272	5.5			
17	10.6	272	5.9			
18	10.3	271	6.3			
19	9.6	271	6.5			
20	9.2	271	6.6			
21	8.9	271	6.5			
22	8.7	271	6.5			
23	8.4	271	6.3			
24	8.1	272	6.2			
25	8.0	272	6.1			
26	7.8	272	6.0			
27	7.4	274	5.9			
28	7.2	274	5.6			
29	7.1	275	5.4			
30	7.0	276	5.1			

Table A4. South Holston Reservoir, water quality summary at SFHRM 64, July 1, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	25.5	254	9.3	HRM64	1.7	1455
1	25.4	254	9.3			
2	25.4	254	9.3			
3	25.3	254	9.3			
4	24.8	254	9.4			
5	24.7	255	8.9			
6	24.5	257	8.5			
7	24.0	270	7.2			
8	20.8	316	2.4			
9	17.6	280	1.5			
10	16.6	276	1.7			
11	14.8	272	2.2			
12	13.7	270	2.6			
13	13.1	270	2.8			
14	11.5	275	4.0			
15	10.8	275	4.4			
16	10.4	275	4.7			
17	10.1	274	4.9			
18	9.8	274	5.2			
19	9.5	277	5.2			
20	9.2	278	4.3			
21	8.8	278	3.8			
22	8.6	278	3.7			
23	8.4	281	1.7			
24	Bottom					
25						
26						
27						
28						
29						
30						

Table A5. South Holston Reservoir, water quality summary at SFHRM 51, August 4, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.8	236	8.8	HRM51	6.1	1035
1	26.8	236	8.8			
2	26.8	236	8.8			
3	26.8	235	8.8			
4	26.8	235	8.8			
5	26.7	235	8.8			
6	26.7	235	8.8			
7	26.7	235	8.9			
8	24.8	239	11.0			
9	21.9	241	11.4			
10	20.4	240	10.6			
11	18.3	243	9.4			
12	17.3	243	8.4			
13	16.1	246	8.0			
14	14.7	249	7.2			
15	14.1	251	6.5			
16	13.0	252	6.0			
17	12.3	252	6.0			
18	11.6	252	6.1			
19	10.9	253	6.2			
20	10.4	253	6.4			
21	10.0	253	6.4			
22	9.6	253	6.3			
23	9.3	253	6.2			
24	8.9	253	6.1			
25	8.5	253	6.0			
26	8.2	253	5.8			
27	7.8	254	5.8			
28	7.6	255	5.8			
29	7.4	255	5.9			
30	7.1	256	5.9			

Table A6. South Holston Reservoir, water quality summary at SFHRM 55, August 4, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.8	238	8.3	HRM55	4.5	1115
1	27.0	237	8.3			
2	26.9	238	8.4			
3	26.9	238	8.5			
4	26.8	237	8.4			
5	26.8	238	8.4			
6	26.7	239	8.4			
7	26.0	253	8.8			
8	24.0	251	9.5			
9	22.8	251	9.3			
10	21.0	248	8.8			
11	18.6	245	8.5			
12	17.3	247	7.6			
13	15.5	250	6.2			
14	14.6	251	5.5			
15	13.5	253	4.8			
16	12.7	254	4.8			
17	12.2	254	4.9			
18	11.5	254	5.2			
19	11.0	254	5.5			
20	10.5	254	5.7			
21	10.3	254	5.7			
22	9.8	254	5.6			
23	9.4	254	5.4			
24	9.1	254	5.2			
25	8.8	255	5.0			
26	8.3	255	4.7			
27	8.1	255	4.6			
28	7.8	256	4.4			
29	7.5	256	4.2			
30	7.3	257	4.1			

Table A7. South Holston Reservoir, water quality summary at SFHRM 58, August 4, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	27.7	234	8.4	HRM58	3	12:30
1	27.2	234	8.5			
2	26.9	234	8.5			
3	26.8	235	8.5			
4	26.8	235	8.4			
5	26.8	236	8.4			
6	26.8	236	8.4			
7	26.2	248	7.2			
8	24.5	273	5.1			
9	22.8	269	4.2			
10	19.8	257	4.4			
11	18.8	247	4.4			
12	17.2	249	4.4			
13	15.9	252	2.3			
14	14.8	253	1.5			
15	14.1	253	1.6			
16	12.9	255	1.7			
17	12.4	256	1.8			
18	11.8	256	2.1			
19	11.3	257	3.0			
20	11.0	257	3.3			
21	10.4	257	3.5			
22	9.9	258	3.7			
23	9.5	258	3.4			
24	9.0	260	4.0			
25	8.5	260	3.4			
26	8.5	260	3.3			
27	8.3	260	3.2			
28	7.8	261	3.1			
29	7.6	262	1.9			
30	7.3	263	1.6			

Table A8. South Holston Reservoir, water quality summary at SFHRM 64, August 4, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	27.5	241	9.1	HRM64	1.5	1300
1	27.2	239	9.2			
2	26.9	239	9.1			
3	26.8	240	9.1			
4	26.7	242	8.3			
5	26.6	244	8.2			
6	26.4	253	6.6			
7	25.1	297	1.4			
8	23.9	309	0.4			
9	21.8	299	0.1			
10	20.7	291	0.1			
11	18.4	276	0.1			
12	17.8	270	0.1			
13	16.2	267	0.0			
14	15.0	263	0.0			
15	14.2	262	0.0			
16	13.3	260	0.1			
17	12.2	261	1.2			
18	11.9	262	1.5			
19	11.2	266	1.6			
20	10.8	268	1.2			
21	10.5	274	1.0			
22	Bottom					
23						
24						
25						
26						
27						
28						
29						
30						

Table A9. South Holston Reservoir, water quality summary at SFHRM 51, September 2, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.7	230	8.5	HRM51	3.7	1240
1	26.1	230	8.8			
2	25.9	229	8.8			
3	25.8	229	8.9			
4	25.7	230	8.9			
5	25.5	229	9.0			
6	25.2	230	9.1			
7	25.1	230	9.2			
8	25.0	232	9.1			
9	24.5	236	8.1			
10	23.0	249	7.4			
11	21.3	249	6.5			
12	19.9	245	5.3			
13	18.5	240	5.4			
14	17.0	239	5.5			
15	16.1	240	5.6			
16	15.4	241	5.1			
17	14.2	243	4.9			
18	13.4	244	4.5			
19	12.8	244	3.8			
20	12.1	245	3.8			
21	11.5	245	3.9			
22	10.9	245	4.2			
23	10.3	245	4.4			
24	9.9	246	4.5			
25	9.3	246	4.5			
26	9.0	246	4.4			
27	8.4	247	4.3			
28	8.1	247	4.2			
29	7.9	248	4.2			
30	7.6	248	4.1			

Table A10. South Holston Reservoir, water quality summary at SFHRM 55, September 2, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.5	235	9.6	HRM55	3.5	1315
1	25.8	235	9.7			
2	25.7	233	9.8			
3	25.6	233	9.7			
4	25.6	233	9.7			
5	25.4	234	9.8			
6	25.1	233	9.9			
7	24.9	234	9.4			
8	24.8	236	9.3			
9	24.6	242	8.0			
10	23.4	258	4.1			
11	21.4	265	2.4			
12	20.1	246	4.0			
13	18.4	243	2.7			
14	17.0	241	1.7			
15	16.1	241	1.7			
16	15.0	243	1.9			
17	14.0	243	2.2			
18	13.5	245	2.2			
19	12.8	246	1.8			
20	12.0	247	1.7			
21	11.4	247	2.1			
22	10.8	248	2.4			
23	10.4	248	2.7			
24	9.8	248	2.8			
25	9.5	248	2.9			
26	9.0	248	2.9			
27	8.6	248	2.8			
28	8.1	250	2.5			
29	7.9	250	2.0			
30	7.5	250	1.5			

Table A11. South Holston Reservoir, water quality summary at SFHRM 58, September 2, 2008.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.7	241	9.4	HRM58	2.5	1350
1	25.9	241	9.7			
2	25.7	240	9.8			
3	25.6	239	9.8			
4	25.5	239	9.8			
5	25.4	238	9.9			
6	25.1	238	9.9			
7	24.8	239	9.8			
8	24.6	242	8.8			
9	24.3	246	8.0			
10	23.7	259	4.7			
11	22.1	276	1.8			
12	19.9	264	0.4			
13	18.5	248	0.4			
14	17.2	243	0.4			
15	16.2	244	0.4			
16	15.2	245	0.3			
17	14.2	246	0.2			
18	13.4	246	0.2			
19	12.9	247	0.3			
20	12.1	247	0.4			
21	11.5	247	0.8			
22	10.9	242	1.2			
23	10.3	250	1.5			
24	9.8	251	1.5			
25	9.3	252	1.4			
26	8.8	254	1.0			
27	8.4	254	0.6			
28	8.0	256	0.3			
29	7.9	256	0.2			
30	7.6	257	0.1			

No measurements taken at SFHRM 64 in September 2008.

Figure A1. South Holston Reservoir water quality at HRM 51, July 2008.

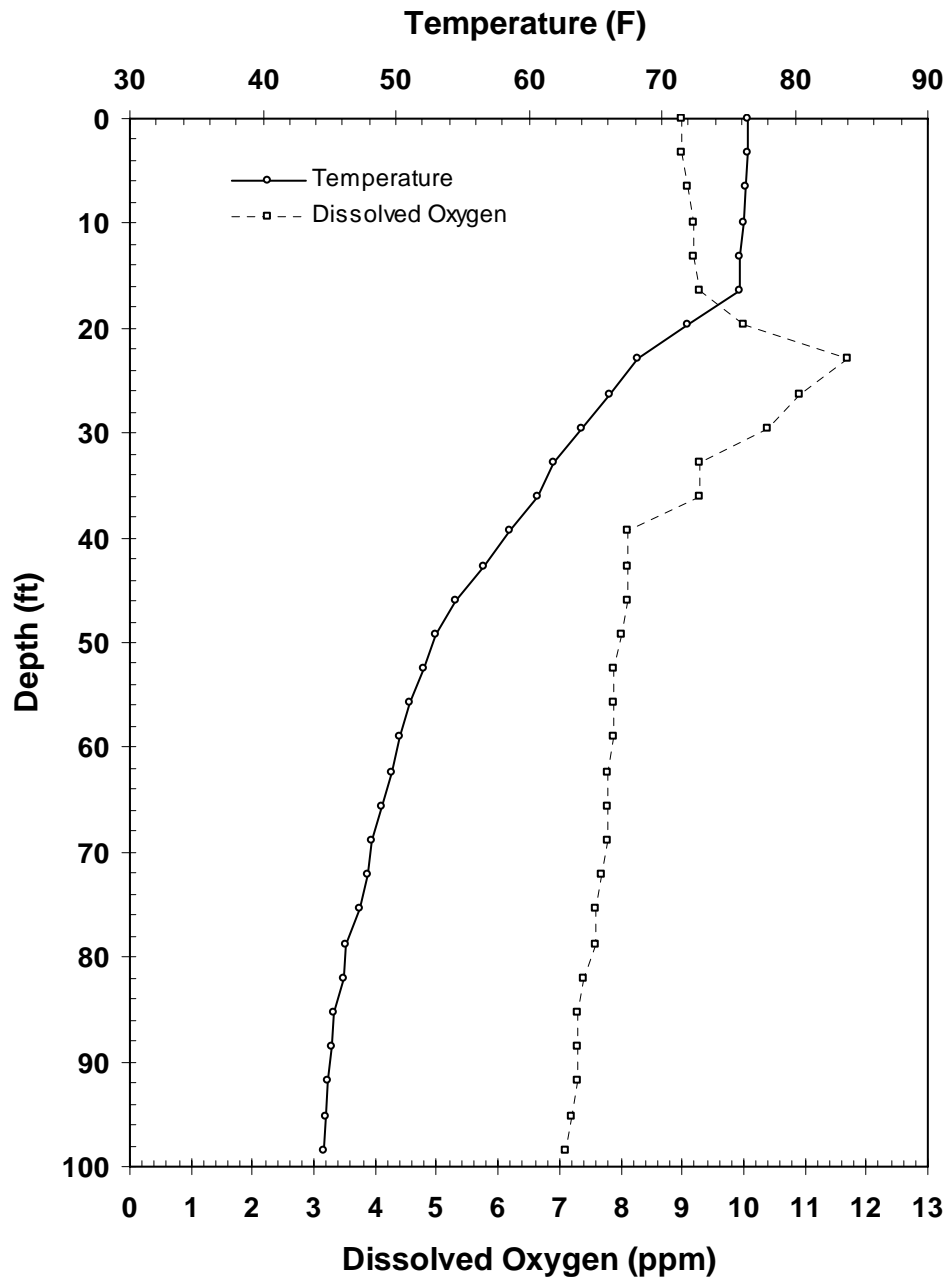


Figure A2. South Holston Reservoir water quality at HRM 55, July 2008.

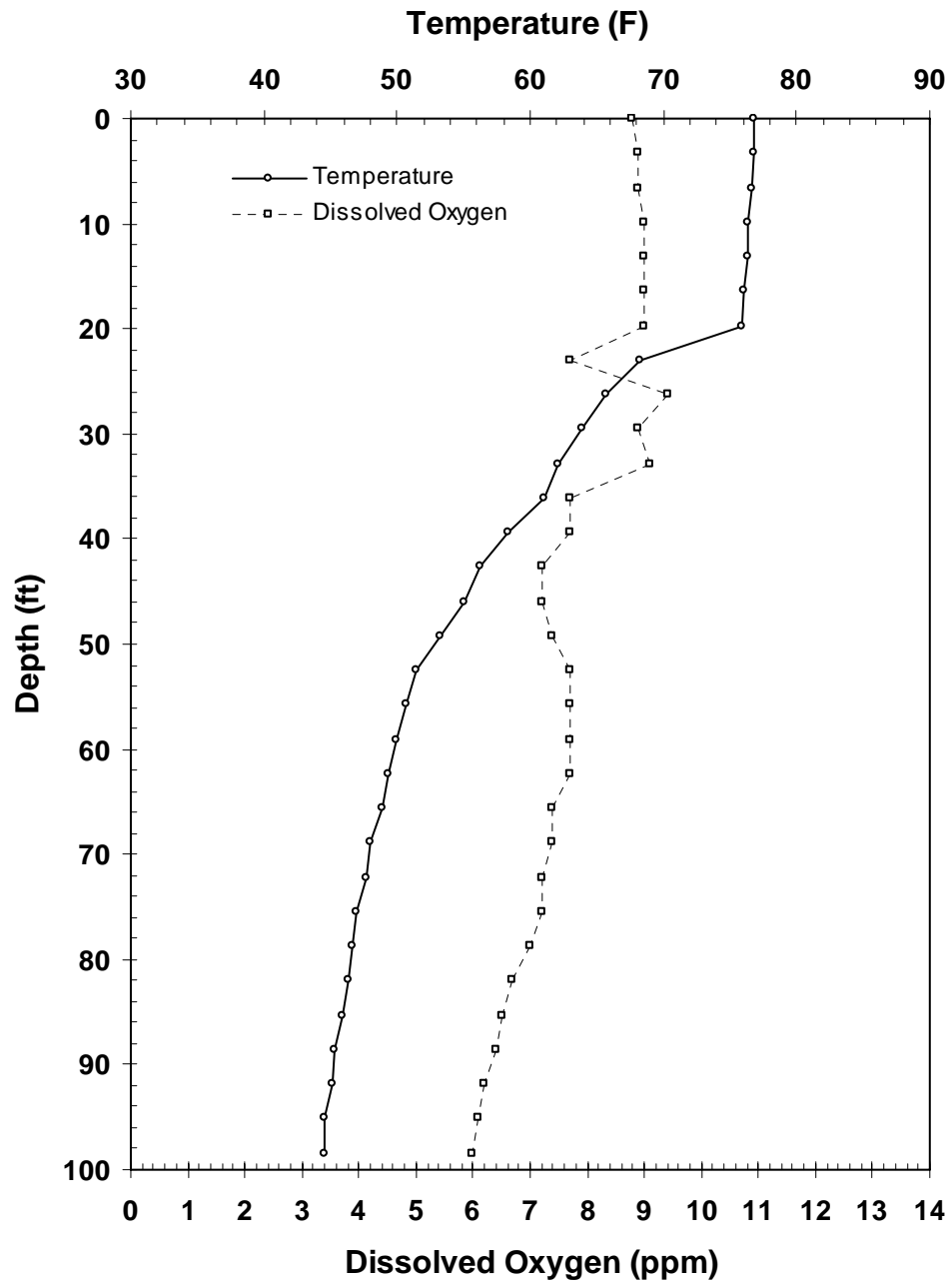


Figure A3. South Holston Reservoir water quality at HRM 58, July 2008.

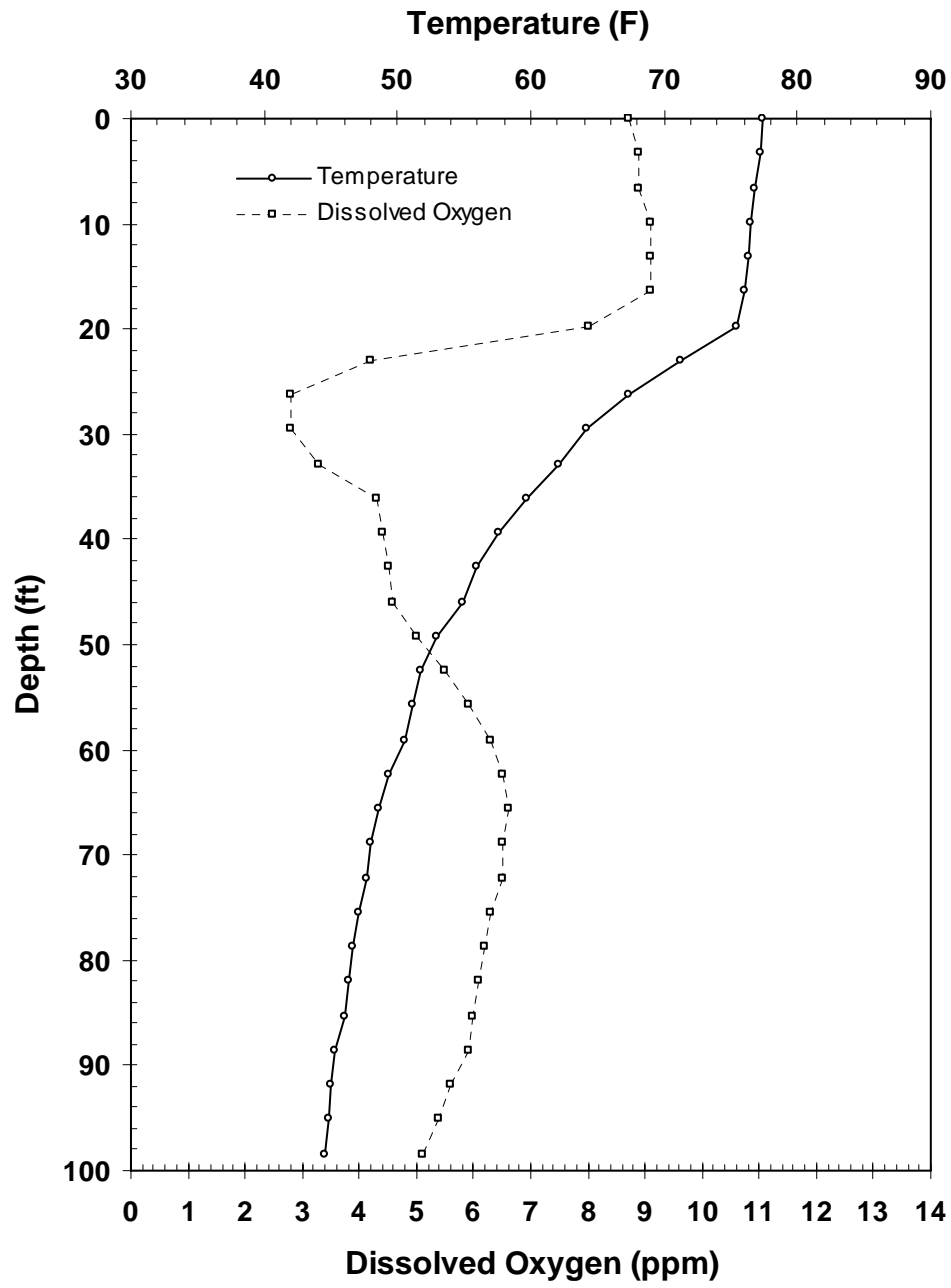


Figure A4. South Holston Reservoir water quality at HRM 64, July 2008.

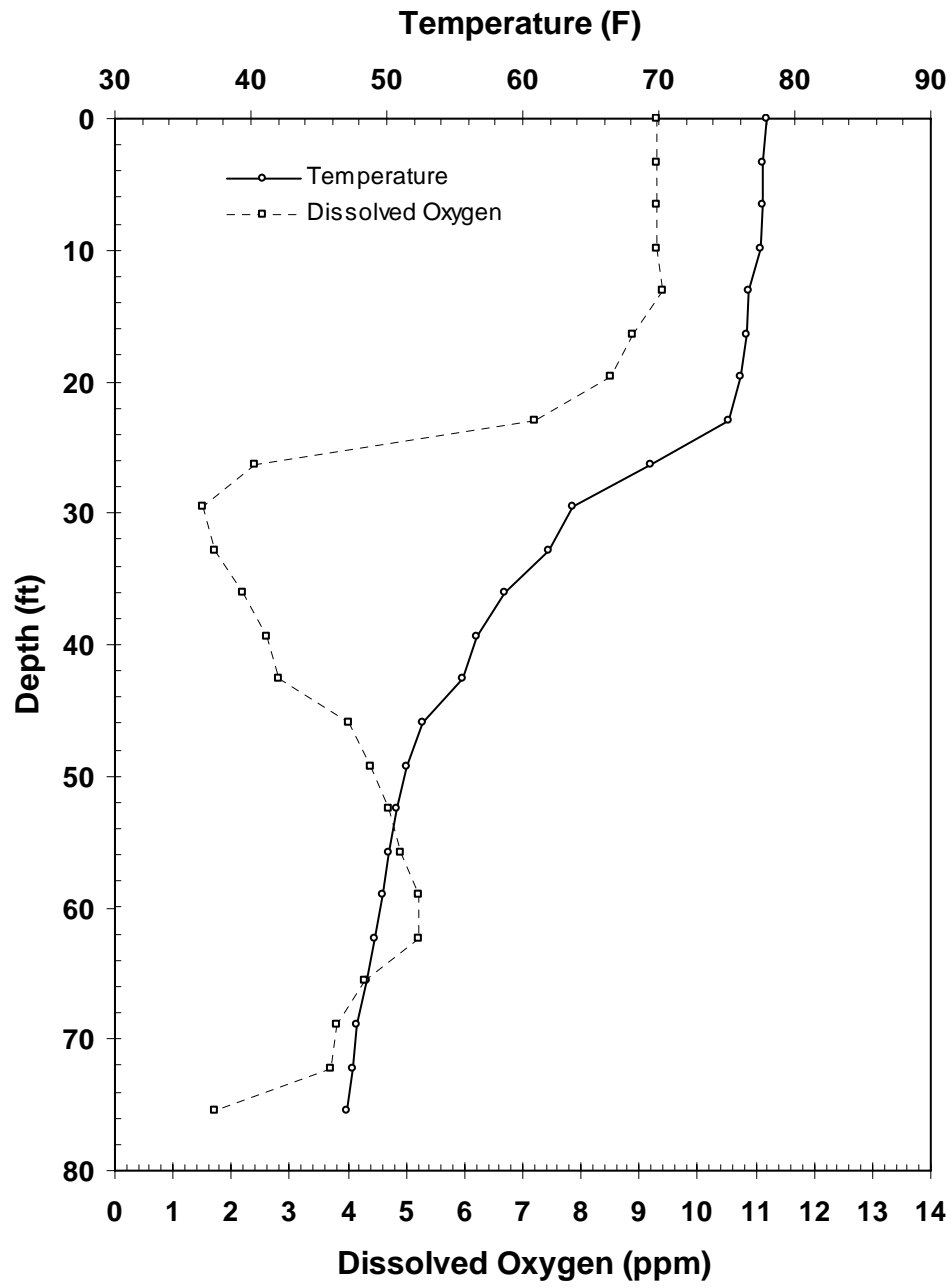


Figure A5. South Holston Reservoir water quality at HRM 51, August 2008.

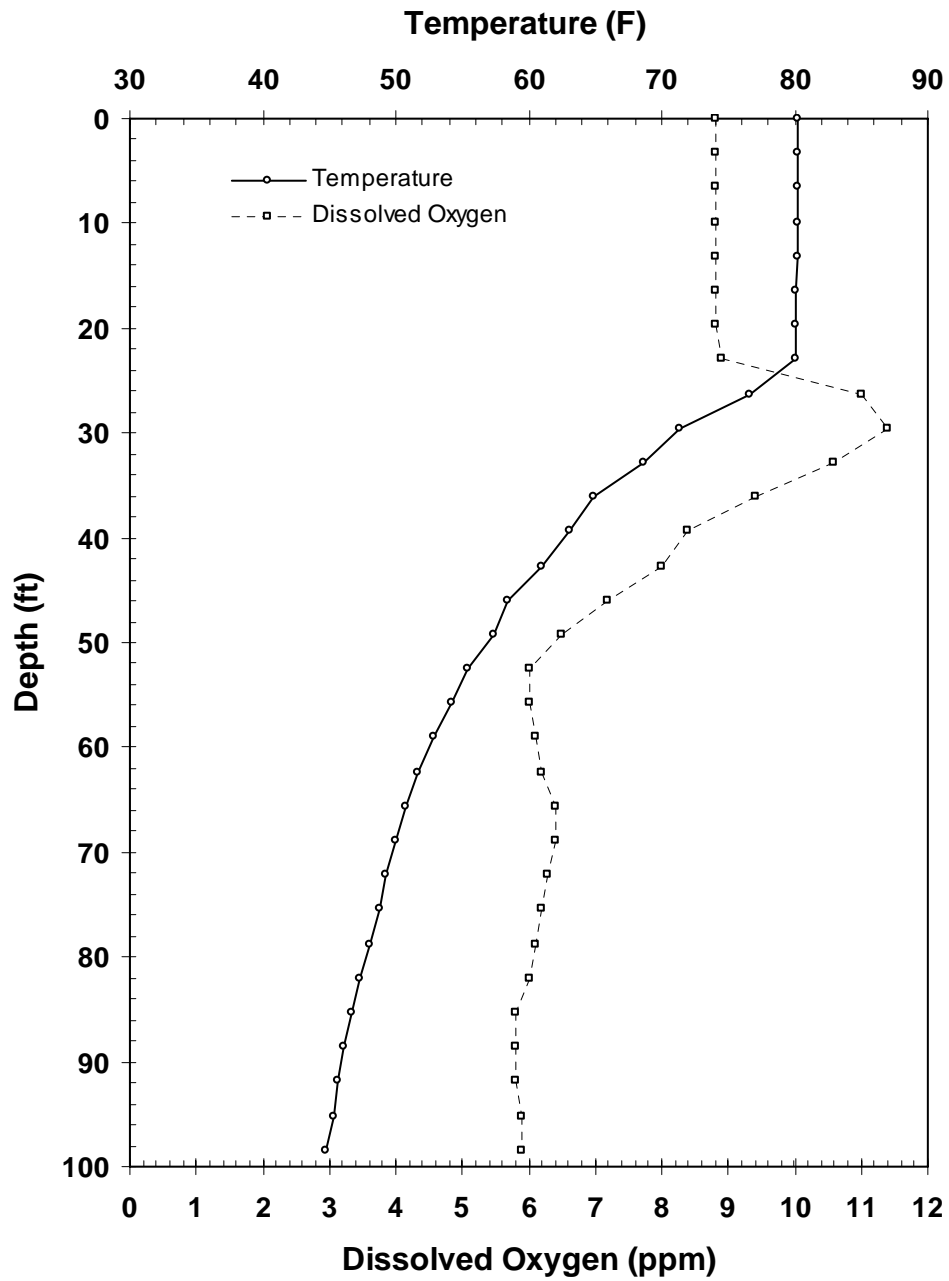


Figure A6. South Holston Reservoir water quality at HRM 55, August 2008.

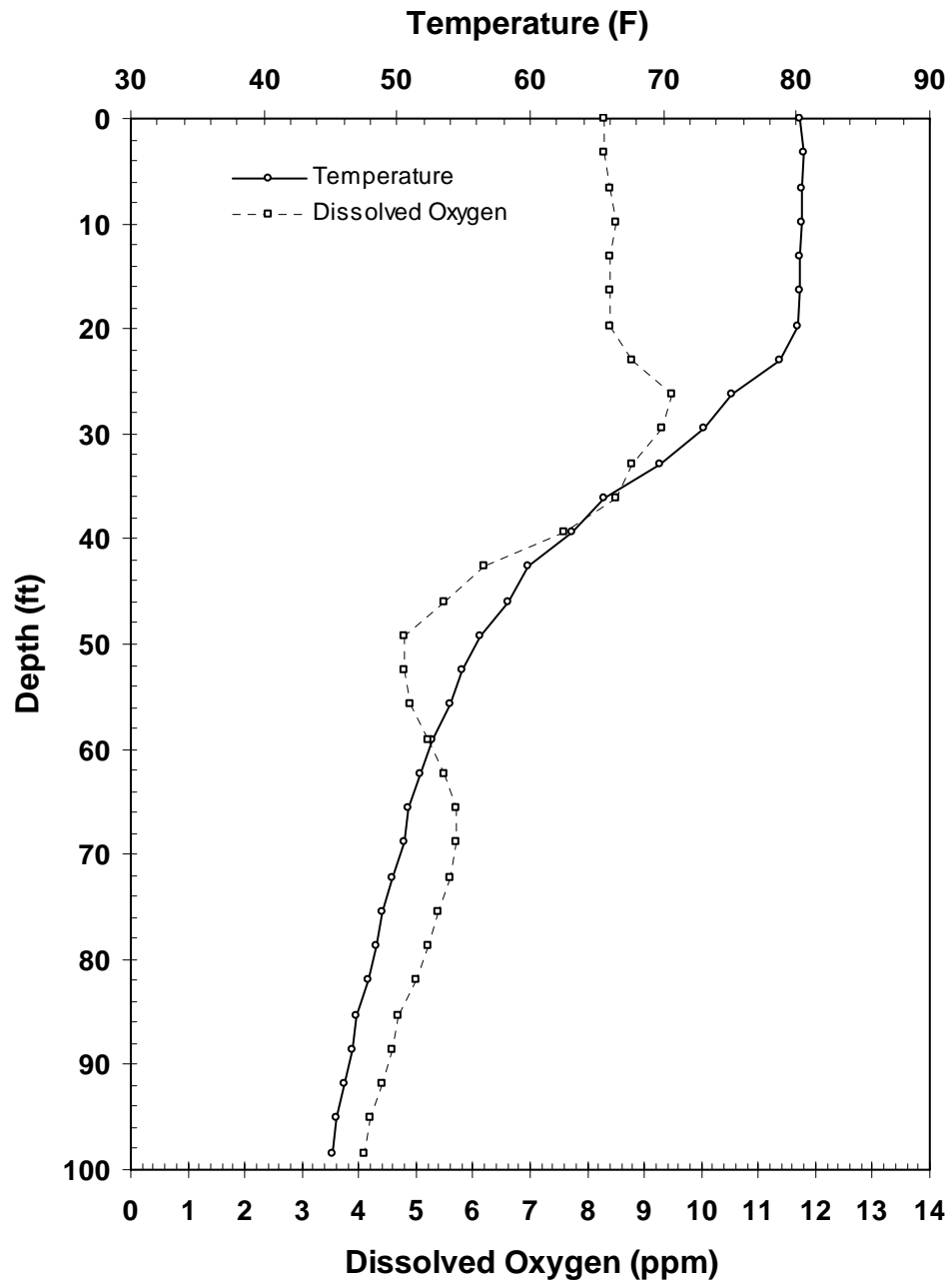


Figure A7. South Holston Reservoir water quality at HRM 58, August 2008.

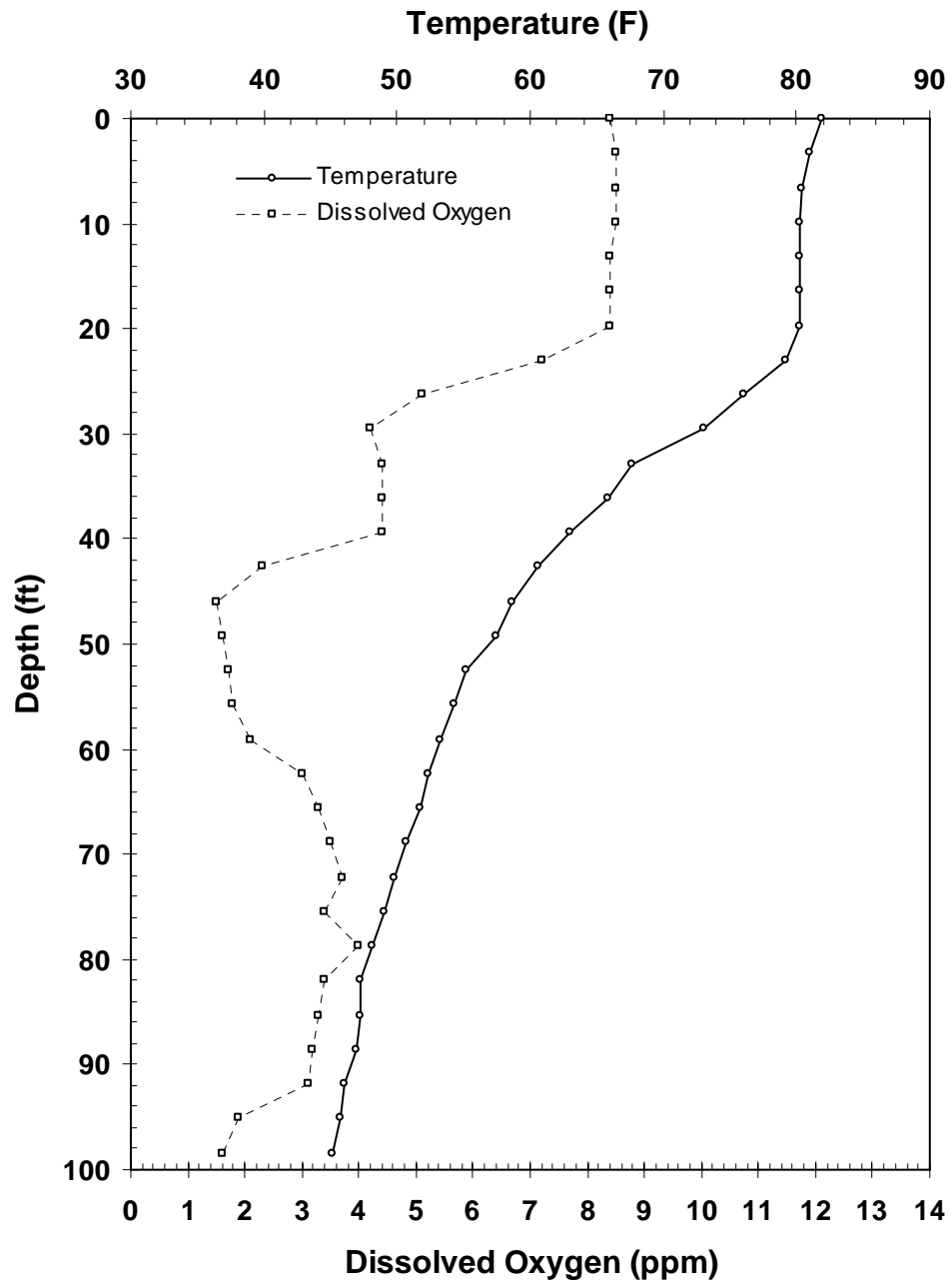


Figure A8. South Holston Reservoir water quality at HRM 64, August 2008.

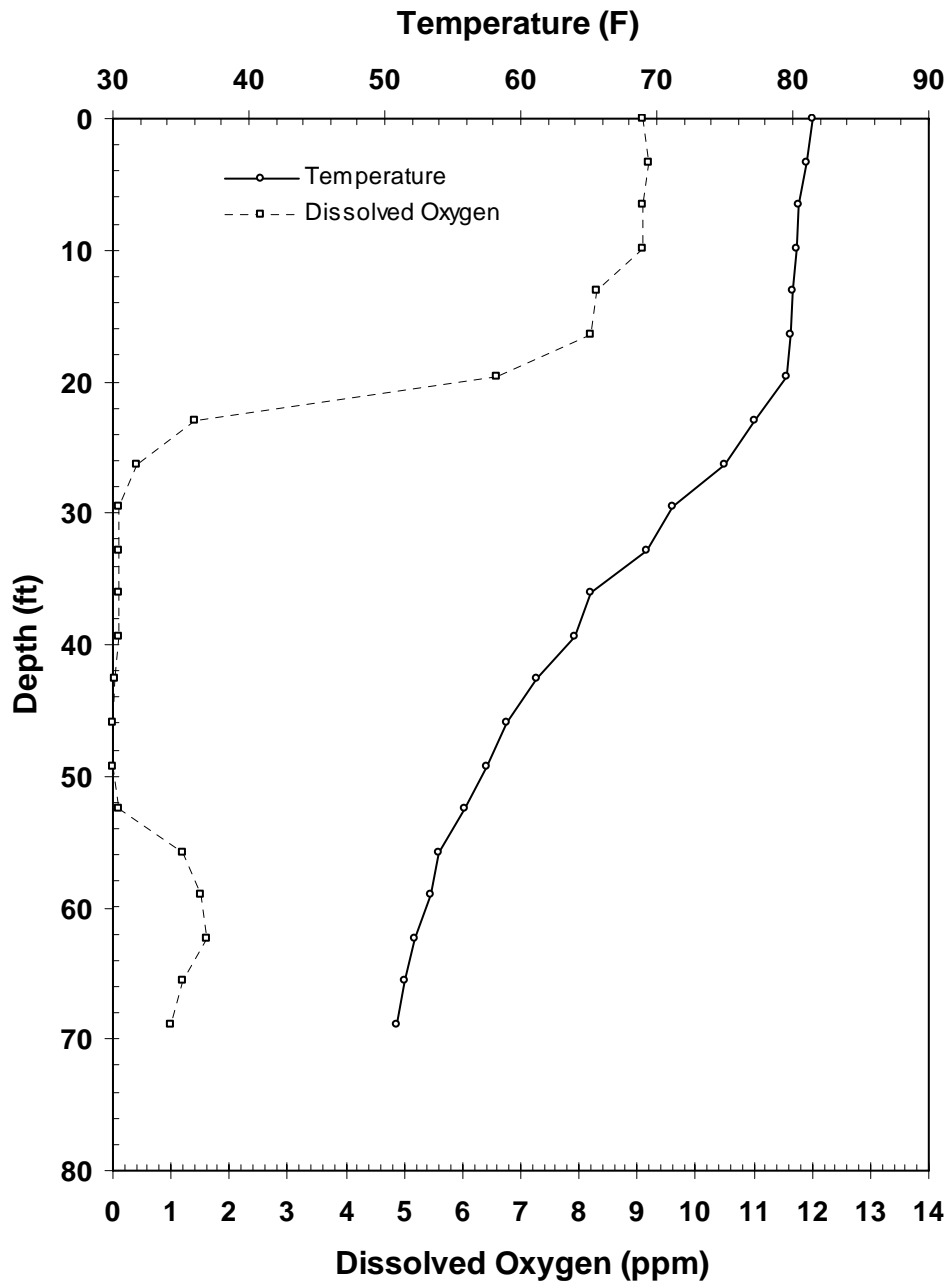


Figure A9. South Holston Reservoir water quality at HRM 51, Sept. 2008.

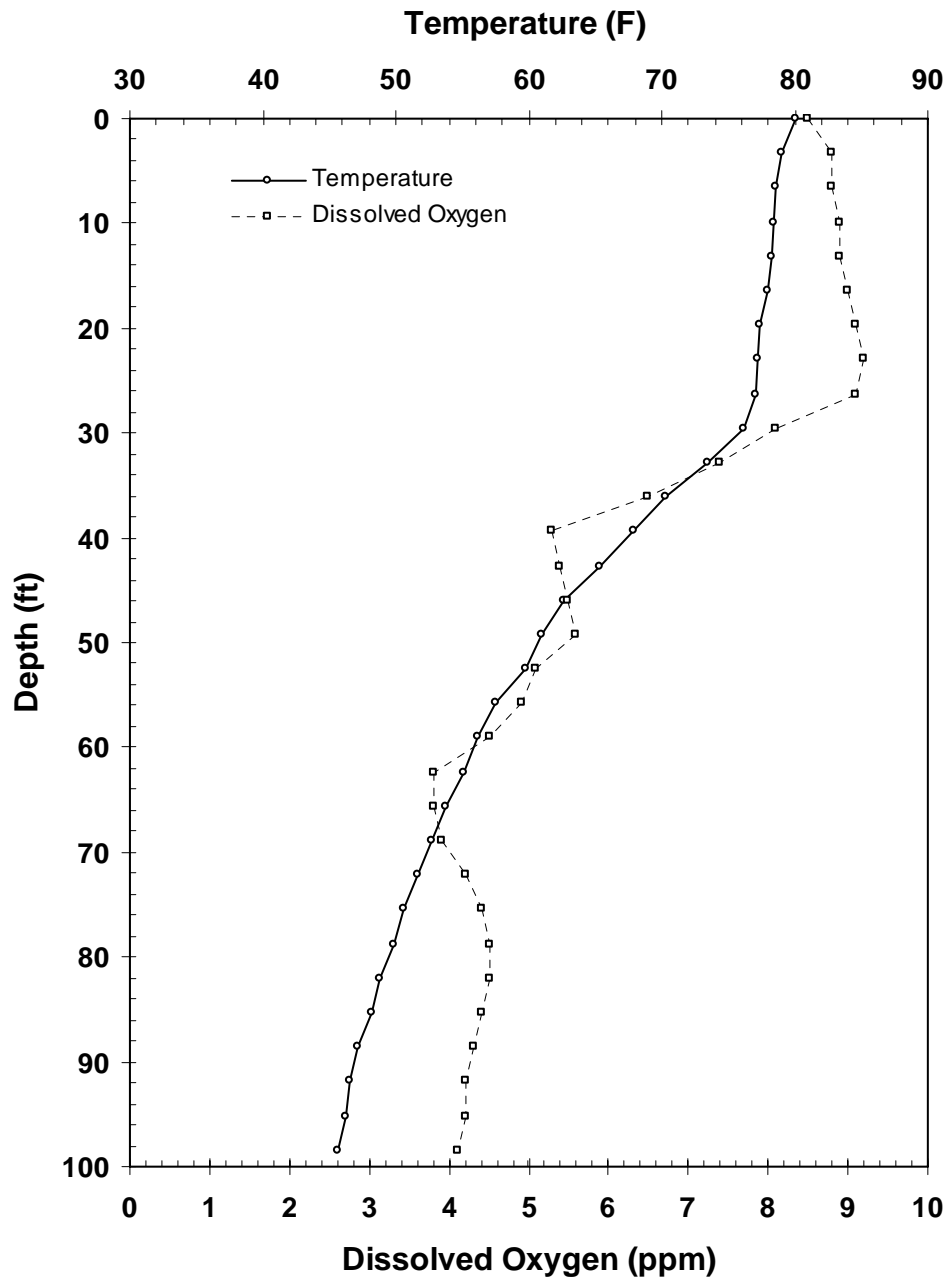


Figure A10. South Holston Reservoir water quality at HRM 55, Sept. 2008.

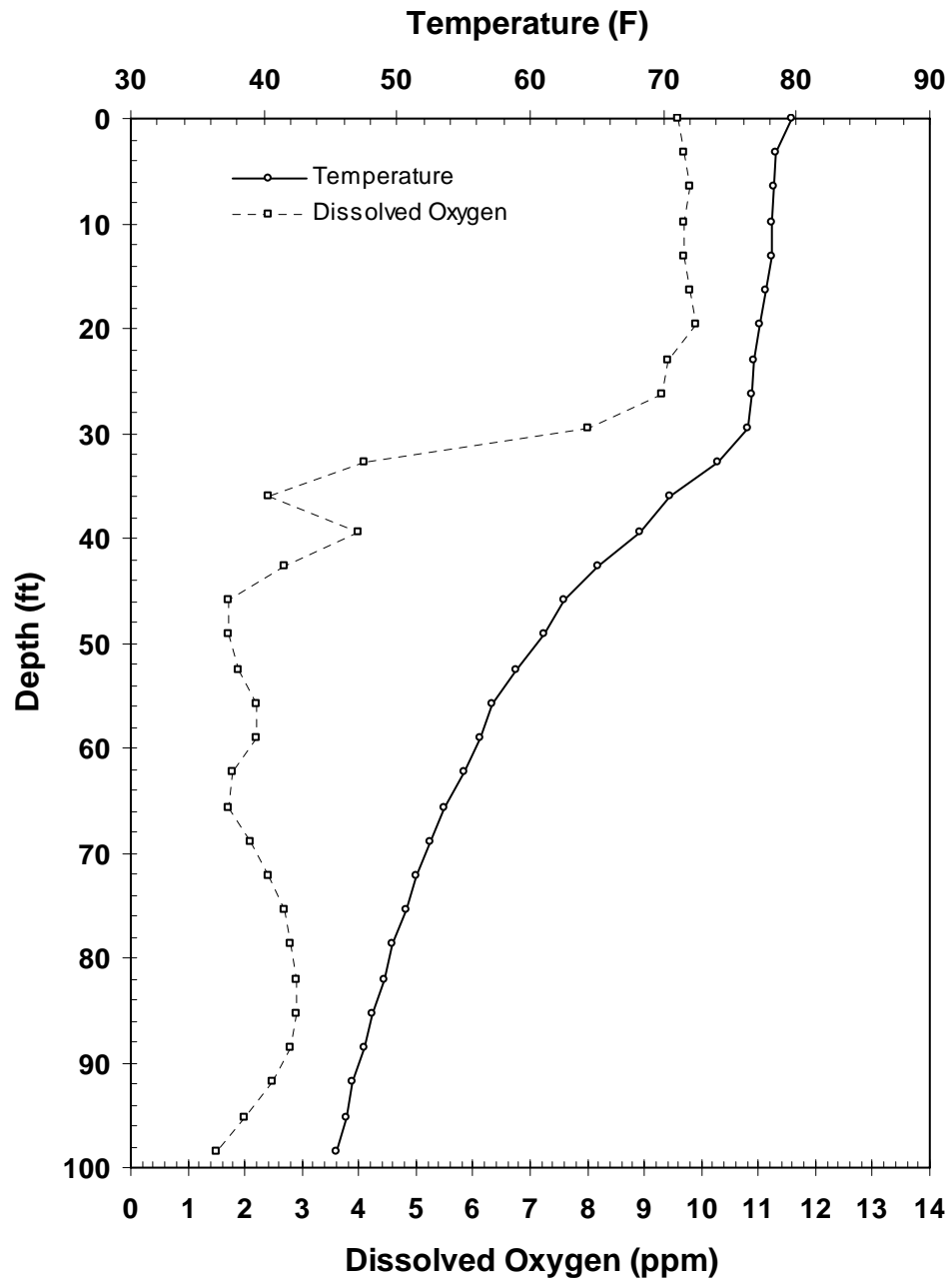
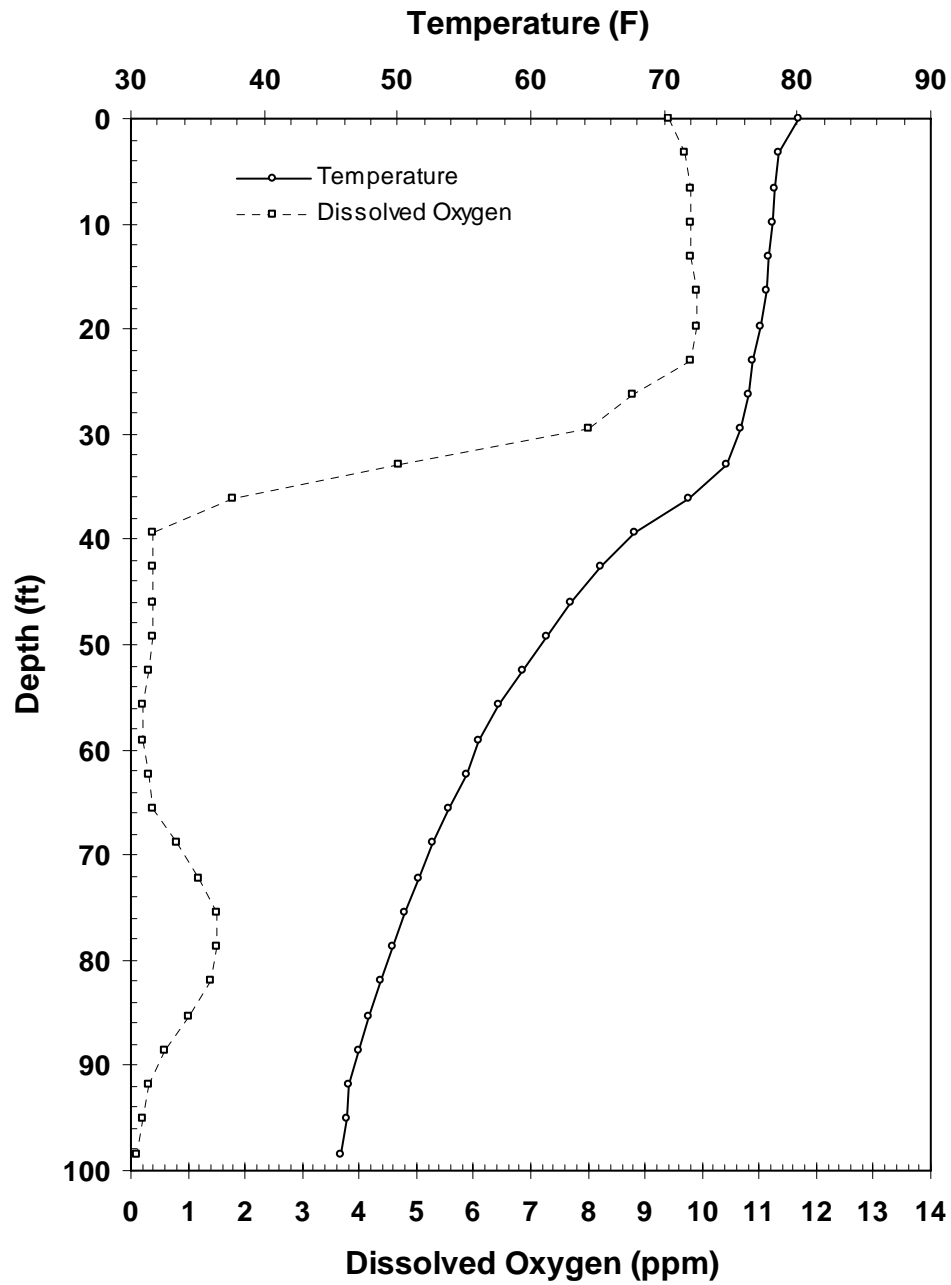


Figure A11. South Holston Reservoir water quality at HRM 58, Sept. 2008.



Appendix B  
South Holston Daily Elevations

Table B1. S. Holston Reservoir elevation data for 2008. Data is courtesy of TVA.

Elevation	Month	Day	Elevation	Month	Day	Elevation	Month	Day
1691.32	January	1	1699.03	February	24	1714.34	April	18
1691.39	January	2	1699.02	February	25	1714.45	April	19
1691.46	January	3	1699.05	February	26	1714.56	April	20
1691.52	January	4	1699.08	February	27	1714.67	April	21
1691.58	January	5	1699.12	February	28	1714.68	April	22
1691.67	January	6	1699.18	February	29	1714.70	April	23
1691.63	January	7	1699.39	March	1	1714.68	April	24
1691.61	January	8	1699.63	March	2	1714.65	April	25
1691.58	January	9	1699.69	March	3	1714.66	April	26
1691.70	January	10	1700.34	March	4	1714.72	April	27
1692.20	January	11	1702.46	March	5	1715.17	April	28
1692.71	January	12	1703.37	March	6	1715.79	April	29
1693.00	January	13	1703.92	March	7	1716.19	April	30
1693.20	January	14	1704.32	March	8	1716.48	May	1
1693.35	January	15	1704.62	March	9	1716.72	May	2
1693.49	January	16	1704.88	March	10	1716.90	May	3
1693.64	January	17	1705.09	March	11	1717.03	May	4
1693.77	January	18	1705.30	March	12	1717.14	May	5
1693.88	January	19	1705.49	March	13	1717.22	May	6
1693.95	January	20	1705.67	March	14	1717.31	May	7
1694.01	January	21	1705.95	March	15	1717.40	May	8
1694.12	January	22	1706.36	March	16	1717.48	May	9
1694.21	January	23	1706.69	March	17	1717.59	May	10
1694.29	January	24	1706.98	March	18	1717.71	May	11
1694.35	January	25	1707.34	March	19	1717.89	May	12
1694.42	January	26	1707.92	March	20	1718.14	May	13
1694.48	January	27	1708.45	March	21	1718.31	May	14
1694.39	January	28	1708.85	March	22	1718.47	May	15
1694.30	January	29	1709.16	March	23	1718.59	May	16
1694.23	January	30	1709.40	March	24	1718.72	May	17
1694.13	January	31	1709.60	March	25	1718.86	May	18
1694.08	February	1	1709.78	March	26	1718.83	May	19
1694.19	February	2	1709.94	March	27	1718.77	May	20
1694.30	February	3	1710.12	March	28	1718.71	May	21
1694.55	February	4	1710.28	March	29	1718.64	May	22
1694.97	February	5	1710.44	March	30	1718.59	May	23
1695.52	February	6	1710.57	March	31	1718.67	May	24
1696.07	February	7	1710.70	April	1	1718.65	May	25
1696.48	February	8	1710.80	April	2	1718.69	May	26
1696.76	February	9	1710.95	April	3	1718.68	May	27
1696.96	February	10	1711.19	April	4	1718.64	May	28
1697.13	February	11	1711.52	April	5	1718.58	May	29
1697.29	February	12	1712.01	April	6	1718.50	May	30
1697.45	February	13	1712.50	April	7	1718.44	May	31
1697.56	February	14	1712.86	April	8	1718.37	June	1
1697.67	February	15	1713.13	April	9	1718.37	June	2
1697.78	February	16	1713.36	April	10	1718.31	June	3
1697.92	February	17	1713.55	April	11	1718.38	June	4
1698.11	February	18	1713.69	April	12	1718.32	June	5
1698.30	February	19	1713.82	April	13	1718.28	June	6
1698.47	February	20	1713.95	April	14	1718.22	June	7
1698.63	February	21	1714.06	April	15	1718.16	June	8
1698.79	February	22	1714.16	April	16	1717.94	June	9
1698.91	February	23	1714.25	April	17	1717.80	June	10

Table B1. Continued.

Elevation	Month	Day	Elevation	Month	Day	Elevation	Month	Day
1717.61	June	11	1705.21	August	4	1696.26	September	27
1717.41	June	12	1704.99	August	5	1696.23	September	28
1717.34	June	13	1704.73	August	6	1696.18	September	29
1717.25	June	14	1704.52	August	7	1696.13	September	30
1717.14	June	15	1704.41	August	8	1696.05	October	1
1716.80	June	16	1704.18	August	9	1695.98	October	2
1716.42	June	17	1704.02	August	10	1695.92	October	3
1716.02	June	18	1703.70	August	11	1695.91	October	4
1715.64	June	19	1703.41	August	12	1695.91	October	5
1715.28	June	20	1703.15	August	13	1695.92	October	6
1714.97	June	21	1702.87	August	14	1695.88	October	7
1714.65	June	22	1702.54	August	15	1695.84	October	8
1714.30	June	23	1702.26	August	16	1695.83	October	9
1713.96	June	24	1701.98	August	17	1695.80	October	10
1713.60	June	25	1701.65	August	18	1695.79	October	11
1713.35	June	26	1701.33	August	19	1695.73	October	12
1713.08	June	27	1700.99	August	20	1695.67	October	13
1712.81	June	28	1700.64	August	21	1695.45	October	14
1712.65	June	29	1700.27	August	22	1695.24	October	15
1712.28	June	30	1699.93	August	23	1695.03	October	16
1711.93	July	1	1699.61	August	24	1694.82	October	17
1711.51	July	2	1699.25	August	25	1694.75	October	18
1711.12	July	3	1699.31	August	26	1694.69	October	19
1710.76	July	4	1699.27	August	27	1694.52	October	20
1710.61	July	5	1699.27	August	28	1694.34	October	21
1710.43	July	6	1699.19	August	29	1694.16	October	22
1710.14	July	7	1699.09	August	30	1693.97	October	23
1709.83	July	8	1699.07	August	31	1693.87	October	24
1709.65	July	9	1698.94	September	1	1693.86	October	25
1709.70	July	10	1698.70	September	2	1693.83	October	26
1709.65	July	11	1698.47	September	3	1693.65	October	27
1709.70	July	12	1698.23	September	4	1693.47	October	28
1709.72	July	13	1698.03	September	5	1693.42	October	29
1709.55	July	14	1697.85	September	6	1693.32	October	30
1709.44	July	15	1697.69	September	7	1693.09	October	31
1709.27	July	16	1697.56	September	8	1693.10	November	1
1709.12	July	17	1697.55	September	9	1693.12	November	2
1708.98	July	18	1697.46	September	10	1692.95	November	3
1708.83	July	19	1697.36	September	11	1692.77	November	4
1708.65	July	20	1697.38	September	12	1692.57	November	5
1708.37	July	21	1697.40	September	13	1692.38	November	6
1708.07	July	22	1697.41	September	14	1692.21	November	7
1707.70	July	23	1697.33	September	15	1692.19	November	8
1707.32	July	24	1697.23	September	16	1692.17	November	9
1707.10	July	25	1697.14	September	17	1691.95	November	10
1706.88	July	26	1697.06	September	18	1691.74	November	11
1706.65	July	27	1696.97	September	19	1691.75	November	12
1706.28	July	28	1696.86	September	20	1691.80	November	13
1706.00	July	29	1696.77	September	21	1691.82	November	14
1705.72	July	30	1696.69	September	22	1691.89	November	15
1705.47	July	31	1696.59	September	23	1691.88	November	16
1705.53	August	1	1696.47	September	24	1691.77	November	17
1705.60	August	2	1696.36	September	25	1691.67	November	18
1705.63	August	3	1696.30	September	26	1691.59	November	19

Table B1. Continued.

<b>Elevation</b>	<b>Month</b>	<b>Day</b>
1691.47	November	20
1691.33	November	21
1691.33	November	22
1691.34	November	23
1691.30	November	24
1691.24	November	25
1691.13	November	26
1691.08	November	27
1691.02	November	28
1691.05	November	29
1691.12	November	30
1691.10	December	1
1691.09	December	2
1691.14	December	3
1691.20	December	4
1691.25	December	5
1691.29	December	6
1691.32	December	7
1691.28	December	8
1691.24	December	9
1691.39	December	10
1691.62	December	11
1691.85	December	12
1692.02	December	13
1692.15	December	14
1692.30	December	15
1692.42	December	16
1692.64	December	17
1692.92	December	18
1693.15	December	19
1693.36	December	20
1693.56	December	21
1693.75	December	22
1693.92	December	23
1694.15	December	24
1694.39	December	25
1694.64	December	26
1694.89	December	27
1695.12	December	28
1695.25	December	29
1695.34	December	30
1695.29	December	31

Figure B1. S. Holston Reservoir daily reservoir elevations for 2008 (TVA data).

