

**Watauga Reservoir**  
**Annual Report 2009**

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## Table of contents

	<b>Page</b>
<b>Reservoir Characteristics and Information</b> .....	3
<b>Habitat</b> .....	3
<b>Species Summaries</b> .....	4-12
<b>Tables</b>	
1. Fish stocked in Watauga Reservoir.....	14
2. Number of species collected by gear type .....	15
3. Largemouth and smallmouth bass CPUE and RSD by category .....	16
4. Walleye CPUE and RSD by category .....	17
5. Largemouth bass mean relative weights (Wr).....	18
6. Smallmouth bass mean relative weights (Wr).....	18
<b>Figures</b>	
1. Sites sampled on Watauga 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
<b>Appendix A – Water Quality</b>	
Tables A1 – A8. Summer water quality sampling data .....	26 – 33
Figures A1 – A8. Summer water quality sampling data .....	34 – 41
<b>Appendix B – Reservoir Elevations</b>	
Table B1. Daily reservoir elevation data .....	43
Figure B1. Daily reservoir elevation data with guide curve .....	46

## Watauga Reservoir

### Description

<b>Surface Area:</b> 6,430 acres	<b>Shoreline Distance:</b> 105 miles
<b>Counties:</b> Carter, Johnson	<b>Drainage Area:</b> 468 square miles
<b>Full Pool Elevation:</b> 1,959 feet above mean sea level	<b>Mean Annual Fluctuation:</b> 44 feet
<b>Maximum Depth:</b> 312 feet	<b>Thermocline Depth:</b> 30 feet
<b>Mean Chlorophyll (Forebay):</b> 4.0 parts per million	<b>Shoreline Development:</b> 21%
<b>Trophic Status (Forebay):</b> Mesotrophic	<b>Trophic Index, Carlson (1977):</b> 44.3
<b>Hydraulic Retention Time:</b> 400 days	<b>Reservoir Age:</b> 61 years (dam completed 1948)
<b>Total Fishing Effort:</b> N/A in 2009	<b>Total Value by Anglers:</b> N/A in 2009

### Habitat Enhancement and Monitoring

Location	New Sites			Renovated Sites			Expanded Sites		
	Number	Units	Acres	Number	Units	Acres	Number	Units	Acres
WRM 37.15 R*				1	450	9.00			
WRM 36.25 R*							1	200	4.00
WRM 38.00 L*							1	100	2.00
WRM 46.25 R*							1	50	1.00
WRM 45.00 L*							1	600	12.00
WRM 46.10 L*							1	200	4.00
WRM 47.10 R*							1	400	8.00
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>450</b>	<b>9</b>	<b>6</b>	<b>1550</b>	<b>31</b>

\*Christmas Trees with Cable Drives

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
<b>Angling Pressure</b> (creel survey data)												
All Black Bass	(hrs)	178,485	N o	126,408	N o	109,991	87,482	N o	N o	64,427	N o	113,359
	(hrs/acre)	27.8		19.7		17.1	13.6			10.0		17.6
Any Black Bass	(hrs)	155,509	S u r v e y	118,076	S u r v e y	97,770	78,384	S u r v e y	S u r v e y	62,941	S u r v e y	102,536
	(hrs/acre)	24.2		18.4		15.2	12.2			9.8		15.9
Largemouth Bass	(hrs)	1,803	S u r v e y	0	S u r v e y	0	0	S u r v e y	S u r v e y	360	S u r v e y	433
	(hrs/acre)	0.3		0.0		0.0	0.0			0.1		0.1
Smallmouth Bass	(hrs)	21,173	S u r v e y	8,332	S u r v e y	12,075	9,098	S u r v e y	S u r v e y	1,126	S u r v e y	10,361
	(hrs/acre)	3.3		1.3		1.9	1.4			0.2		1.6
Spotted Bass	(hrs)	0	S u r v e y	0	S u r v e y	146	0	S u r v e y	S u r v e y	0	S u r v e y	29
	(hrs/acre)	0.0		0.0		0.0	0.0			0.0		0.0
<b>Tournaments</b> (BITE program & creel survey data)												
# Tournaments (BITE)			9	8	5	none reported	1	1	none reported	none reported	none reported	4.8
Pounds/Angler Day (BITE)			3.30	2.38	3.97	none reported	2.74	2.46	none reported	none reported	none reported	2.97
Bass/Angler Day (BITE)			1.80	1.30	2.41	none reported	1.46	1.43	none reported	none reported	none reported	1.68
<b>Value of Fishery</b> (creel survey data - trip expenditures)												
All Black Bass		\$377,620	No Survey	\$191,500	No Survey	\$216,730	\$172,120	No Survey	No Survey	\$259,440	No Survey	\$243,482
Any Black Bass		\$326,480		\$181,620		\$202,160	\$161,580			\$254,040		\$225,176
Largemouth Bass		\$5,630	No Survey	\$0	No Survey	\$0	\$0	No Survey	No Survey	\$4,320	No Survey	\$1,990
Smallmouth Bass		\$45,510		\$9,880		\$14,570	\$10,540			\$1,080		\$16,316
Spotted Bass		\$0	No Survey	\$0	No Survey	\$0	\$0	No Survey	No Survey	\$0	No Survey	\$0

## Largemouth Bass

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	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	N/A
Substock CPUE	0.7	0.0	1.7	0.5	0.2	0.6	0.4	0.8	0.6	1.0	0.6
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	70%	72%	79%	80%	91%	82%	78%	82%	94%	91%	81.9%
RSD - Preferred	41%	50%	58%	64%	64%	64%	48%	55%	75%	68%	58.7%
CPUE	10.3	16.8	17.5	9.4	14.6	15.1	15.1	20.0	21.2	23.0	16.3
CPUE ≥ Stock	9.6	16.8	15.8	8.9	14.4	14.5	14.7	19.2	20.6	22.0	15.7
CPUE ≥ MSL (12")	3.9	7.9	7.7	5.5	12.9	11.9	11.2	15.6	19.4	20	11.6
<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	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	93.0	90.3	87.4	92.5	101.5	88.5	84.2	84.2	86.4	83.7	89.2
Quality - Preferred	100.0	88.6	91.7	92.1	90.9	88.7	90.9	91.2	88.3	89.4	91.2
Preferred - Memorable	100.6	96.6	95.0	94.6	96.5	95.7	95.7	93.6	95.5	95.9	96.0
Memorable - Trophy	109.8	101.7	107.8	109.0	106.1	91.7	94.5	97.5	97.8	94.7	101.1
Trophy	none	none	none	none	none	none	none	none	none	none	N/A
<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>Fishing Success</b> (creel survey data)											
Catch Rate	not calculate	No	0.06	No	0.08	0.08	No	No	0.13	No	0.09
Harvest Rate	not calculate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Percent Harvested	7.1%	Survey	7.4%	Survey	5.2%	5.2%	Survey	Survey	6.3%	Survey	6.2%
Mean Weight (pounds)	3.89	Survey	1.95	Survey	2.04	2.55	Survey	Survey	2.29	Survey	2.54

## Fishery Forecast

Due to the low primary production of Watauga Reservoir, the largemouth bass densities have never been high. However, densities have remained stable and were at record high numbers again this year, with the highest largemouth densities that have been recorded since standardized sampling began in 1998. Also, the percentage of largemouth bass over 381 mm (15-inches) has been above 40% since 1993, indicating a very good quality and stable largemouth bass fishery. The quality of the fishery is excellent and should remain stable for the 2010 season.

## Management Recommendations

No change to the current 305 mm (12-inch) minimum length limit. Gather age, growth, and mortality data.

## Smallmouth Bass

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	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	N/A
Substock CPUE	1.8	5.8	5.0	1.3	0.4	0.4	1.2	3.8	0.6	1.0	2.1
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	74%	79%	76%	77%	90%	88%	77%	66%	87%	85%	79.9%
RSD - Preferred	37%	52%	57%	51%	71%	71%	54%	47%	56%	60%	55.6%
CPUE	24.2	36.8	27.5	15.5	21.5	14.1	19.9	28.2	30.8	24.6	24.3
CPUE ≥ Stock	22.5	31.1	22.5	14.2	21.1	13.7	18.7	24.4	30.2	23.6	22.2
CPUE ≥ MSL (15")*	12.7	21.4	16.2	6.2	17.9	10.9	12.7	14.6	8.2	8.8	13.0
<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	246
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	93.2	96.2	91.3	87.7	92.3	92.9	93.1	82.1	84.6	90.2	90.4
Quality - Preferred	90.9	87.6	88.1	89.7	92.9	171.9	90.5	83.1	86.8	91.5	97.3
Preferred - Memorable	85.7	85.2	86.6	87.5	90.0	81.6	86.2	86.6	88.1	84.5	86.2
Memorable - Trophy	84.2	84.3	83.4	84.2	86.3	80.8	84.5	84.3	86.3	84.1	84.2
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	N/A	N/A	N/A	48.0%
<b>Fishing Success</b> (creel survey data)											
Catch Rate	not calculated	No	0.17	No	0.17	0.17	No	No	0.24	No	0.19
Harvest Rate	not calculated		0.02		0.02	0.01			0.01		0.02
Percent Harvested	14.2%	Survey	12.5%	Survey	9.6%	7.1%	Survey	Survey	5.7%	Survey	9.8%
Mean Weight (pounds)	3.00		2.32		2.51	2.41			2.72		2.59

\* 18" MLL in effect in 2008

## Fishery Forecast

In 2009, smallmouth bass catch rates were right about average. Also, the percentage of larger size fish in the population was excellent where 45% of the smallmouth collected were over 15-inches and more than 10% of them were over 18-inches. We also saw a good group of smallmouth between 14 and 16-inches, which should recruit into the larger inch groups (16 to 18-inches) during the 2010 season. As always, the quality of the smallmouth bass fishery is excellent and also very stable. We consistently collect large fish in our electrofishing samples and the data shows no decline in the percent of larger (>14-inches) smallmouth bass in the population. The smallmouth bass fishery should remain in good quality for the 2010 season.

## Management Recommendations

Monitor the impact of the new 15-inch minimum length limit regulation to the smallmouth bass population. Continue to monitor the same concern about the "trout minnows" that seems to be an issue on Watauga as well as South Holston.

## Spotted Bass

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
<b>Recruitment</b> (electrofishing data)											
Substock CPUE	0.18	0.00	1.42	0.30	0.36	0.20	0.40	0.00	1.00	2.00	0.6
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	0%	33%	61%	48%	35%	50%	52%	82%	49%	57%	47%
RSD - Preferred	0%	0%	17%	26%	10%	36%	4%	29%	7%	14%	14%
CPUE	0.18	2.52	6.38	4.61	4.18	2.98	5.76	3.40	16.20	16.80	6.3
CPUE ≥ Stock	0.00	2.52	4.96	4.31	3.81	2.78	5.36	3.40	15.20	14.80	5.7
CPUE ≥ MSL	N o M i n i m u m S i z e L i m i t										
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	none	101.904	115.162	96.798	115.4	89.8	101.3	96.4	98.7	100.9	101.8
Quality - Preferred	none	111.726	110.614	104.028	105.2	99.1	101.1	95	95.4	95.0	101.9
Preferred - Memorable	none	none	121.898	96.931	126.1	101.2	104.7	115.8	102.3	104.1	109.1
Memorable - Trophy	none	none	none	none	none	none	none	none	none	none	N/A
Trophy	none	none	none	none	none	none	none	none	none	none	N/A
<b>Fishing Success</b> (creel survey data)											
Catch Rate	0.35	No	0.01	No	0.03	0.02	No	No	0.15	No	0.11
Harvest Rate	0.02		0.00		0.00	0.00			0.04		0.01
Percent Harvested	0.9%	Survey	2.8%	Survey	2.7%	5.2%	Survey	Survey	27.5%	Survey	7.8%
Mean Weight (pounds)	1.15		3.00		2.97	2.55			1.23		2.18

## Fishery Forecast

After increasing in density the last 5 years, spotted bass densities in 2009 seemed to level off. While high densities of spotted bass are not completely detrimental to the existing black bass population, it can be problematic. For example, spotted bass are usually more aggressive and easier to catch than the other black bass species, therefore making the more desirable largemouth and smallmouth bass even harder to catch. It is difficult to say if the densities will keep increasing in Watauga, but similar systems show a steady increase in density until they reach densities similar to smallmouth bass and right now, spotted bass densities are lower than smallmouth bass densities.

## Management Recommendations

Possibly implement a no creel limit and no size limit fishery in the future to reduce competition with smallmouth bass.

## White Crappie

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	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	none	none	none	none	none	none	none	none	none	N/A
RSD - Preferred	none	none	none	none	none	none	none	none	none	none	N/A
CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CPUE ≥ Stock	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CPUE ≥ MSL (10")	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<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	none	none	none	none	none	N/A
Quality - Preferred	none	none	none	none	none	none	none	none	none	none	N/A
Preferred - Memorable	none	none	none	none	none	none	none	none	none	none	N/A
Memorable - Trophy	none	none	none	none	none	none	none	none	none	none	N/A
Trophy	none	none	none	none	none	none	none	none	none	none	N/A
<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	20,656		7,737		7,374	7,553			1,821		9,028
Angler Hours/Acre	3.2	N	1.2	N	1.1	1.2	N	N	0.3	N	1.4
<b>Fishing Success</b> (creel survey data)											
Catch Rate	0.00	S	0.00	S	0.00	0.00	S	S	0.00	S	0.00
Harvest Rate	0.00	u	0.00	u	0.00	0.00	u	u	0.00	u	0.00
Percent Harvested	none	r	none	r	none	none	r	r	none	r	N/A
Mean Weight (pounds)	none	v	none	v	none	none	v	v	none	v	N/A
<b>Value of Fishery</b> (creel survey data)											
		e	penditures)	e			e	e		e	
Any Crappie	\$27,300	y	\$11,140	y	\$15,720	\$11,240	y	y	\$2,080	y	\$13,496

## Fishery Forecast

Watauga is a very clear cool, low productive reservoir. These conditions are not very suited for white crappie. While this fish still is part of the overall fishery of Watauga reservoir, it will never be a significant part. The population does, however, seem to remain stable.

## Management Recommendations

Maintain current regulations.

## Black Crappie

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	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	90%	100%	100%	100%	100%	100%	none	none	100%	98.6%
RSD - Preferred	none	20%	50%	67%	100%	50%	75%	none	none	33%	56.4%
CPUE	0.00	2.86	1.12	0.64	0.57	0.40	0.80	0.00	0.00	0.60	0.70
CPUE ≥ Stock	0.00	2.86	1.12	0.64	0.57	0.40	0.80	0.00	0.00	0.60	0.70
CPUE ≥ MSL (10")	0.00	0.29	0.55	0.47	0.57	0.20	0.60	0.00	0.00	0.20	0.29
<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	108.3	none	none	none	none	none	none	none	none	none
Quality - Preferred	none	93.5	98.6	93.9	none	110.3	98.1	none	none	98.7	98.8
Preferred - Memorable	none	91.5	93.6	none	91.7	none	84.7	none	none	53.8	83.1
Memorable - Trophy	none	none	99.2	83.9	85.4	90.4	89.3	none	none	none	89.6
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	10.0*	8.1 *	1.8
<b>Angling Pressure</b> (creel survey data - any crappie)											
Angler Hours	20,656		7,737		7,374	7,553			1,821		9,028
Angler Hours/Acre	3.2	N	1.2	N	1.1	1.2	N	N	0.3	N	0.3
<b>Fishing Success</b> (creel survey data)											
Catch Rate	0.66	S	0.30	S	0.24	0.08	S	S	0.00	S	0.26
Harvest Rate	0.22	u	0.15	u	0.15	0.07	u	u	0.00	u	0.12
Percent Harvested	44.1%	r	46.6%	r	70.1%	69.2%	r	r	none	r	57.5%
Mean Weight (pounds)	1.14	v	0.96	v	0.97	0.95	v	v	none	v	1.01
<b>Value of Fishery</b> (creel survey data - expenditures)											
Any Crappie	\$27,300	y	\$11,140	y	\$15,720	\$11,240	y	y	\$2,080	y	\$13,496

\* Black and Blacknose Crappie

## Fishery Forecast

Watauga is a very clear cool, low productive reservoir. These conditions are more suited for black crappie than white crappie, but because of the low productivity, the black crappie population remains low. Same as with the white crappie, the black crappie are part of the overall fishery of Watauga reservoir, but they will never be a significant part. The population is not increasing but appears to be somewhat stable, despite stocking efforts over the past couple of years.

## Management Recommendations

Maintain current regulations.

## Walleye

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
<b>Recruitment</b> (winter gill net data)											
Substock CPUE	0.29	No Sample	0.04	No Sample	0.00	No Sample	0.04	0.00	0.00	0.00	0.05
<b>Density</b> (winter gill net data - CPUE = # fish/net night)											
PSD	97%		97%		100%		99%	95%	82%	90%	94.3%
RSD - Preferred	35%	No	54%	No	85%	No	51%	38%	43%	34%	48.6%
CPUE	11.57		9.08		5.20		6.29	9.43	12.30	22.29	10.88
CPUE ≥ Stock	11.29	Sample	9.04	Sample	5.20	Sample	6.25	9.43	12.25	22.29	10.82
CPUE ≥ MSL (18")	7.71		6.92		4.80		5.00	5.14	9.00	9.00	6.796286
<b>Growth</b> (winter gill net data)											
Mean TL at Age-1 (mm)		No	271	No		No	424	429	431	416	394.2
Mean TL at Age-3 (mm)		Sample	496	Sample		Sample	494	485	534	537	509.2
<b>Relative Weight</b> (winter gill net data)											
Stock - Quality	106.2				none		102.7	98.4	93.3	97.0	99.5
Quality - Preferred	97.9	No		No	92.5	No	97.3	93.0	96.6	95.6	95.5
Preferred - Memorable	96.2				90.0		94.9	93.1	94.2	95.4	94.0
Memorable - Trophy	114.4	Sample		Sample	none	Sample	90.0	87.7	90.4	91.1	94.7
Trophy	none				none		none	none	none	none	
<b>Mortality</b> (winter gill net data)											
Total Mortality											
<b>Stocking</b>											
# per Acre	0.0	155.5*	14.2	5.4	9.6	15.4	11.9	5.5	6.4	7.4	8.4
<b>Angling Pressure</b> (creel survey data)											
Angler Hours	41,205	N o	25,722	N o	19,361	16,980	N o	N o	13,148	N o	23,283
Angler Hours/Acre	6.41		4.00		3.01	2.64			2.04		3.62
<b>Fishing Success</b> (creel survey data)											
Catch Rate	not calculated	S u r v e y	not calculated	S u r v e y	not calculated	not calculated	S u r v e y	S u r v e y	not calculated	S u r v e y	
Harvest Rate	not calculated		not calculated		not calculated	not calculated			not calculated		
Percent Harvested	63.6%		36.7%		61.9%	71.2%			71.6%		61.0%
Mean Weight (pounds)	4.12		3.64		3.16	3.96			3.85		3.75
<b>Value of Fishery</b> (creel survey data)											
Walleye Data Only	\$80,250		\$42,370		\$28,600	\$30,220			\$47,990		\$45,886

\* Fry - Not calculated in the mean

## Fishery Forecast

The quality of the walleye fishery is excellent. It is an underutilized opportunity for anglers wishing to catch very good quality fish. The samples taken in Watauga consistently have excellent percentages and numbers of quality size walleye. The fishery should remain stable for the 2010 season, due to stocking efforts.

## Management Recommendations

Maintain current regulations and current stocking rates.

## Trout

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
<b>Angling Pressure</b> (creel survey data)												
All Trout	(hrs)	67,984	No	42,182	No	29,313	16,566	No	No	34,101	No	38,029
	(hrs/acre)	10.6		6.6		4.6	2.6			5.3		5.9
Any Trout	(hrs)	67,984	Survey	31,240	Survey	11,218	6,709	Survey	Survey	28,146	Survey	29,059
	(hrs/acre)	10.6		4.9		1.7	1.0			4.4		4.5
Rainbow Trout	(hrs)	0	Survey	1,276	Survey	4,585	3,663	Survey	Survey	558	Survey	2,016
	(hrs/acre)	0.0		0.2		0.7	0.6			0.1		0.3
Brown Trout	(hrs)	0	Survey	0	Survey	0	0	Survey	Survey	0	Survey	0
	(hrs/acre)	0.0		0.0		0.0	0.0			0.0		0.0
Lake Trout	(hrs)	0	Survey	9,666	Survey	13,510	6,194	Survey	Survey	5,397	Survey	6,953
	(hrs/acre)	0.0		1.5		2.1	1.0			0.8		1.1
<b>Value of Fishery</b> (creel survey data - trip expenditures)												
All Trout		\$90,230	No Survey	\$69,230	No Survey	\$45,520	\$24,430	No Survey	No Survey	\$91,220	No Survey	\$64,126
Any Trout		\$90,230		\$49,150		\$13,260	\$7,470			\$64,770		\$44,976
Rainbow Trout		\$0		\$2,040		\$4,730	\$4,010			\$720		\$2,300
Brown Trout		\$0		\$0		\$0	\$0			\$0		\$0
Lake Trout		\$0		\$18,040		\$27,530	\$12,950			\$25,730		\$16,850

## Fishery Forecast

The quality of the trout fishery should remain stable, due to TWRA stocking efforts. Tennessee Technological University is conducting a research project on trout species in Watauga 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
<b>Fishing Success</b> (creel survey data)												
Catch Rate	not calculated			0.13	No	0.05	0.02	No	No	0.23	No	0.11
Harvest Rate	not calculated	No		0.03	No	0.00	0.02	No	No	0.16	No	0.05
Percent Harvested	67.1%	Survey		20.2%	Survey	30.0%	72.0%	Survey	Survey	71.0%	Survey	52.1%
Mean Weight (pounds)	1.02			1.14		1.33	0.53			1.3		1.1

## Brown Trout

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
<b>Fishing Success</b> (creel survey data)												
Catch Rate	not calculated	No		none	No	none	none	No	No	0.00	No	0.00
Harvest Rate	not calculated	No		none	No	none	none	No	No	0.00	No	0.00
Percent Harvested	none	Survey		none	Survey	none	none	Survey	Survey	0.0%	Survey	0.0%
Mean Weight (pounds)	none			none		none	none			N/A		

## Lake Trout

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
<b>Fishing Success</b> (creel survey data)												
Catch Rate	not calculated	No		not calculated	No	not calculated	not calculated	No	No	not calculated	No	
Harvest Rate	not calculated			not calculated		not calculated	not calculated			not calculated		
Percent Harvested	55.1%	Survey		60.1%	Survey	7.7%	58.6%	Survey	Survey	64.7%	Survey	49.2%
Mean Weight (pounds)	8.5			4.18		6.55	6.68			3.09		5.8

## Sunfish

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
<b>Angling Pressure</b> (creel survey data - any sunfish)											
Angler Hours	* 29,143		10,494		2,016	1,529			5,821		9,801
Angler Hours/Acre	4.53	N	1.63	N	0.31	0.24	N	N	0.91	N	1.52
<b>Fishing Success</b> (creel survey data - bluegill only)											
Catch Rate (bluegill)	2.84	S	1.39	S	1.54	1.52	S	S	2.40	S	1.94
Harvest Rate (bluegill)	0.57	u	0.17	u	0.12	0.28	u	u	0.42	u	0.31
% Harvested (bluegill)	9.1%	r	3.7%	r	6.8%	9.6%	r	r	7.5%	r	7.3%
Mean Weight (bluegill)	0.34	v	0.24	v	0.20	0.02	v	v	0.20	v	0.20
<b>Value of Fishery</b> (creel survey data - expenditures)											
Any Sunfish	\$20,720	e	\$9,680	e	\$1,640	\$880	e	e	\$21,080	e	\$10,800

\* Bluegill only

## Catfish

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
<b>Angling Pressure</b> (creel survey data - any catfish)											
Angler Hours	665		1,141		1,684	1,810			2,222		1,504
Angler Hours/Acre	0.10	N	0.18	N	0.26	0.28	N	N	0.35	N	0.05
<b>Fishing Success</b> (creel survey data - channel cat)											
Catch Rate (channel cat)	0.13	S	0.15	S	0.19	0.10	S	S	0.22	S	0.16
Harvest Rate (channel cat)	0.00	u	0.09	u	0.19	0.10	u	u	0.10	u	0.10
% Harvested (channel cat)	14.6%	r	27.2%	r	68.4%	56.1%	r	r	43.3%	r	41.9%
Mean Weight (channel cat)	3.5	v	2.75	v	3.6	3.91	v	v	2.98	v	3.35
<b>Value of Fishery</b> (creel survey data - expenditures)											
Any Catfish	\$1,610	e	\$1,580	e	\$2,470	\$4,010	e	e	\$4,060	e	\$2,746

## Tables

Table 1. Watauga Reservoir fish stockings 2000 – 2009.

<b>Species</b>	<b>Date</b>	<b>Rate (per acre)</b>	<b>Mean Length (in.)</b>	<b>Number</b>
Walleye	May 2001	155.5	Fry	1,000,000
	May 2002	5.7	1.0 – 2.5	91,119
	May 2003	5.4	1.5	34,821
	May 2005	15.4	1.0 – 1.5	99,079
	May 2006	11.9	1.0 – 2.0	76,728
	May 2007	5.5	0.75 – 1.25	35,061
	May 2008	6.4	1.0 – 1.5	40,936
	May 2009	7.4	0.75 – 1.25	47,376
Blacknose	Oct. 2007	12.7	1.5 – 5.0	81,599
Black Crappie	Oct. 2008	10.02	1.5 – 5.0	64,443
	Oct. 2009	8.1	1.0 – 4.0	52,338
Rainbow Trout	2000	6.2	Adult	39,950
	2001	6.2	Adult	40,022
	2002	6.2	Adult	40,012
	2003	5.9	Adult	38,048
	2004	9.2	Adult	58,968
	2005	5.7	Adult	36,925
	2006	3.8	9.0 – 12.0	24,164
	Jan., Dec. 2007	8.8	9.0 – 10.0	56,629
	2008	5.6	7.9 – 10.0	35,964
2009	4.2	8.0 – 9.0	26,855	
Brown Trout	2008	6.2	5.7	40,084
	2009	0		0
Lake Trout	2000	14.9	Advanced Fing.	95,784
	2001	16.1	Advanced Fing.	103,592
	2002	11.4	Advanced Fing.	73,356
	2003	7.7	Advanced Fing.	49,811
	2004	16.1	Advanced Fing.	103,495
	2005	20.3	Advanced Fing.	130,695
	2006	7.3	3.0 – 7.0	46,635
	Jan. 2007	12.6	5.0 – 6.0	80,937
	2008	7.3	5.6 – 5.9	47,110
2009	4.3	6.0 – 7.0	27,712	

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

Species	Winter Gill Netting			Spring Electrofishing		
	No.	CPUE (# fish / net night)	Total Effort	No.	CPUE (# fish / hour)	Total Effort
Largemouth Bass	X	X	X	115	23.0	5.0
Smallmouth Bass	X	X	X	123	24.6	5.0
Spotted Bass	X	X	X	84	16.8	5.0
Black Crappie	X	X	X	3	0.6	5.0
Black-Nose Crappie	X	X	X	0	0.0	5.0
White Crappie	X	X	X	0	0	5.0
Walleye	156	22.3	7	42	8.4	5.0
White Bass	0	0	0	0	0	5.0

X = non targeted species

Table 3. Catch; mean CPUE and relative stock density by incremental RSD category for largemouth and smallmouth bass in Watauga Reservoir, 1999 – 2009.

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	%	#	CPUE	%	#	CPUE	%	#	CPUE	%	#	CPUE	%	#	CPUE	%	%	#	CPUE
Largemouth Bass	1999	EL	16	9	2.3	<b>21</b>	13	3.3	<b>39</b>				19	4.8	<b>56</b>	2	0.5	<b>6</b>				<b>62</b>	43	10.8
	2000	EL	22	4	0.7	<b>6.9</b>	16	9.5	<b>30</b>	16	2.8	<b>30</b>	19	3.4	<b>35</b>	3	0.5	<b>6</b>				<b>71</b>	58	10.2
	2001	EL	14	0	0	<b>0</b>	17	4.8	<b>28</b>	13	3.6	<b>22</b>	27	7.6	<b>45</b>	3	0.8	<b>5</b>				<b>72</b>	60	16.8
	2002	EL	14	6	1.7	<b>10</b>	12	3.3	<b>21</b>	12	3.3	<b>21</b>	32	8.9	<b>56</b>	1	0.2	<b>2</b>				<b>79</b>	63	12.4
	2003	EL	24	3	0.5	<b>5</b>	11	1.7	<b>20</b>	9	1.5	<b>16</b>	32	5.3	<b>58</b>	3	0.5	<b>5</b>				<b>79</b>	58	9.4
	2004	EL	20	1	0.2	<b>1</b>	7	1.4	<b>9</b>	20	3.8	<b>27</b>	45	8.6	<b>60</b>	3	0.6	<b>4</b>	0	0	<b>0</b>	<b>91</b>	76	14.6
	2005	EL	20	3	0.6	<b>4</b>	13	2.6	<b>18</b>	13	2.6	<b>18</b>	41	8.2	<b>56</b>	6	1.2	<b>8</b>	0	0	<b>0</b>	<b>82</b>	76	15.1
	2006	EL	20	2	0.4	<b>3</b>	16	3.2	<b>22</b>	22	4.4	<b>30</b>	32	6.4	<b>43</b>	4	0.8	<b>5</b>	0	0	<b>0</b>	<b>78</b>	76	15.1
	2007	EL	20	4	0.8	<b>4</b>	17	3.4	<b>18</b>	26	5.2	<b>27</b>	50	10	<b>52</b>	3	0.6	<b>3</b>	0	0	<b>0</b>	<b>82</b>	100	19.9
	2008	EL	20	3	0.6	<b>3</b>	6	1.2	<b>6</b>	20	4	<b>19</b>	70	14	<b>68</b>	7	1.4	<b>7</b>	0	0	<b>0</b>	<b>94</b>	106	21.2
2009	EL	20	5	1	<b>4</b>	10	2	<b>9</b>	25	5	<b>23</b>	70	14	<b>64</b>	5	1	<b>5</b>	0	0	<b>0</b>	<b>91</b>	115	23	
Smallmouth Bass	1999	EL	16	30	7.5	<b>19</b>	56	14	<b>43</b>	36	9	<b>28</b>	28	7	<b>21</b>	11	2.8	<b>8</b>				<b>57</b>	161	40.3
	2000	EL	22	10	1.8	<b>7</b>	33	5.8	<b>26</b>	47	8.3	<b>37</b>	35	6.2	<b>28</b>	11	1.9	<b>9</b>	1	0.2	<b>1</b>	<b>74</b>	137	24.2
	2001	EL	14	21	5.8	<b>16</b>	23	6.4	<b>21</b>	31	8.6	<b>28</b>	43	12	<b>38</b>	15	4.2	<b>13</b>				<b>79</b>	133	36.8
	2002	EL	14	18	5	<b>18</b>	20	5.5	<b>24</b>	15	4.1	<b>18</b>	32	8.7	<b>39</b>	15	4.1	<b>18</b>				<b>75</b>	100	27.5
	2003	EL	24	8	1.3	<b>8</b>	20	3.2	<b>23</b>	23	3.8	<b>26</b>	26	4.3	<b>30</b>	16	2.6	<b>18</b>				<b>74</b>	95	15.5
	2004	EL	20	2	0.4	<b>2</b>	11	2.1	<b>10</b>	21	4.1	<b>19</b>	43	8.2	<b>39</b>	33	6.3	<b>30</b>	0	0	<b>0</b>	<b>88</b>	112	21.5
	2005	EL	20	2	0.4	<b>3</b>	8	1.6	<b>12</b>	12	2.4	<b>17</b>	26	5.2	<b>38</b>	16	3.2	<b>23</b>	7	1.4	<b>10</b>	<b>88</b>	71	14.1
	2006	EL	20	6	1.2	<b>6</b>	22	4.4	<b>23</b>	21	4.2	<b>22</b>	31	6.2	<b>33</b>	13	2.6	<b>14</b>	7	1.4	<b>7</b>	<b>77</b>	100	19.9
	2007	EL	20	19	3.8	<b>13</b>	41	8.2	<b>34</b>	24	4.8	<b>20</b>	33	6.6	<b>27</b>	21	4.2	<b>17</b>	3	0.6	<b>3</b>	<b>66</b>	141	28.2
	2008	EL	20	3	0.6	<b>2</b>	19	3.8	<b>13</b>	47	9.4	<b>31</b>	53	11	<b>35</b>	27	5.4	<b>18</b>	5	1	<b>3</b>	<b>87</b>	154	30.8
2009	EL	20	5	1	<b>4</b>	18	3.6	<b>15</b>	29	5.8	<b>25</b>	49	9.8	<b>42</b>	15	3	<b>13</b>	7	1.4	<b>6</b>	<b>85</b>	123	24.6	

Table 4. Catch; mean CPUE and relative stock density by incremental RSD category for walleye in Watauga Reservoir, 1999 – 2009.

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	%	#	CPUE	%	#	CPUE	%	#	CPUE	%	#	CPUE	%	#	CPUE	%	%	#	CPUE
				Walleye	1999	GN	5				17	3.4	<b>11</b>	92	18	<b>58</b>	47	9.4	<b>29</b>	4	0.8	<b>3</b>		
	2000	GN	8	1	0.1	<b>2</b>	1	6.3	<b>2</b>	30	6.1	<b>60</b>	18	2.4	<b>36</b>	1	0.1	<b>2</b>				<b>98</b>	51	6.4
	2002	EL*	24	1	0		6	0.3	<b>3</b>	93	3.8	<b>43</b>	104	4.3	<b>48</b>	14	0.5	<b>6</b>				<b>97</b>	218	9.1
	2003	EL*	24	1	0.2	<b>2</b>	13	2.1	<b>27</b>	7	1.1	<b>14</b>	19	3.2	<b>39</b>	10	1.7	<b>20</b>	0	0	<b>0</b>	<b>73</b>	50	8.2
	2004	EL*	20	9	1.8	<b>12</b>	7	1.4	<b>10</b>	24	4.6	<b>36</b>	26	5	<b>39</b>	10	1.9	<b>15</b>	0	0	<b>0</b>	<b>90</b>	76	14.6
	2005	EL*	20	0	0	<b>0</b>	3	0.6	<b>9</b>	10	2	<b>29</b>	17	3.4	<b>49</b>	5	1	<b>14</b>	0	0	<b>0</b>	<b>91</b>	35	6.9
	2006	EL*	20	0	0	<b>0</b>	0	0	<b>0</b>	6	1.2	<b>35</b>	10	2	<b>59</b>	1	0.2	<b>6</b>	0	0	<b>0</b>	<b>100</b>	17	3.38
	2007	EL*	20	0	0	<b>0</b>	3	0.6	<b>9</b>	7	1.4	<b>22</b>	18	3.6	<b>56</b>	4	0.8	<b>13</b>	0	0	<b>0</b>	<b>91</b>	32	6.4
	2008	EL*	20	0	0	<b>0</b>	0	0	<b>0</b>	10	2	<b>32</b>	19	3.8	<b>61</b>	2	0.4	<b>6</b>	0	0	<b>0</b>	<b>100</b>	31	6.2
	2009	EL*	20	4	0.8	<b>10</b>	23	4.6	<b>61</b>	3	0.6	<b>8</b>	11	2.2	<b>29</b>	1	0.2	<b>3</b>	0	0	<b>0</b>	<b>39</b>	42	8.4

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

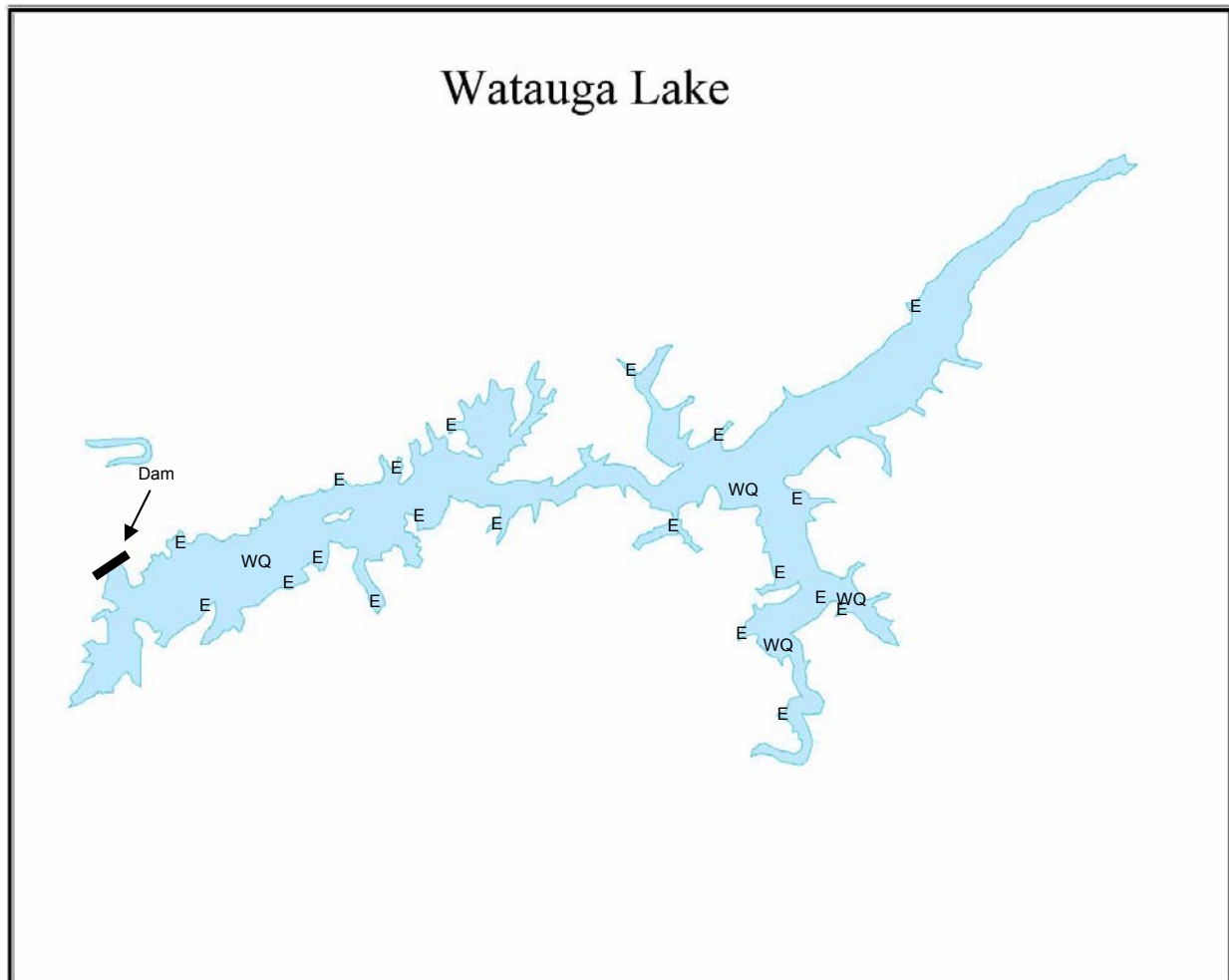
<b>Length Group</b>	<b>Mean Wr</b>	<b>Std. Error</b>	<b>N</b>
150			0
175	84.348	2.920	3
200	77.002	2.470	2
225	81.276	4.438	3
250	86.830	7.355	2
275	88.469	3.481	3
300	92.506	7.387	2
325	88.828	2.864	5
350	88.875	1.933	14
375	93.906	1.760	20
400	94.227	1.301	20
425	98.347	1.950	13
450	98.640	3.949	9
475	93.529	3.824	9
500	97.874	3.220	6
525			0
550	96.728	0.835	2
<b>Total =</b>			<b>113</b>

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

<b>Length Group</b>	<b>Mean Wr</b>	<b>Std. Error</b>	<b>N</b>
150	73.220	1.391	2
175	81.859	2.185	5
200	83.888	0.948	2
225	91.781	2.467	8
250	103.627	7.810	3
275	92.421	3.968	9
300	94.181	2.904	8
325	88.901	3.595	13
350	82.624	5.125	9
375	83.990	2.553	22
400	85.379	1.886	15
425	83.049	2.454	9
450	85.590	4.563	5
475	88.349	5.505	3
500	89.788	2.073	5
525	75.544	8.853	2
550			0
575			0
600			0
<b>Total =</b>			<b>120</b>

## Figures

Figure 1. Sites sampled on Watauga Reservoir in 2009.



E = Electrofishing  
WQ = Water Quality

## Largemouth Bass

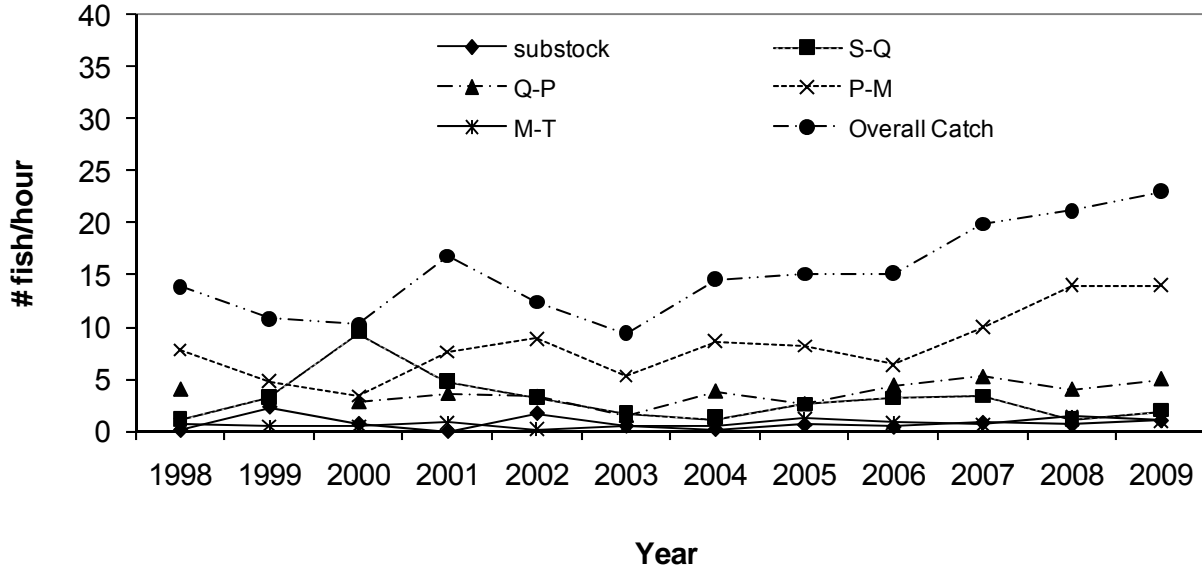


Figure 2. Largemouth bass CPUE values by incremental length category in Watauga Reservoir, 1998 - 2009.

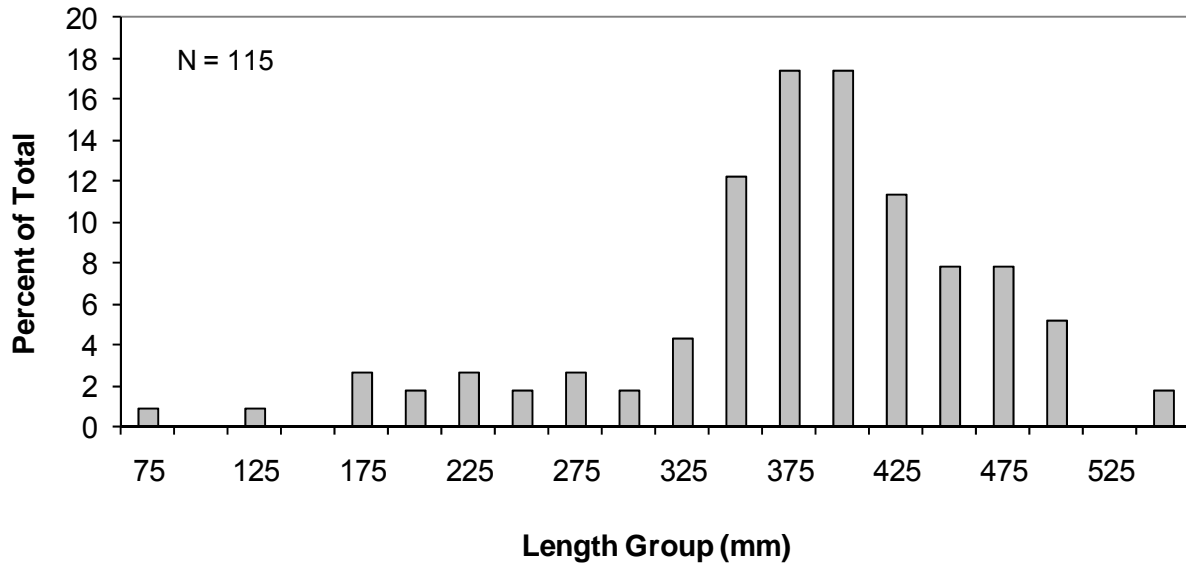


Figure 3. Largemouth bass length frequency by percent in Watauga Reservoir, spring 2009.

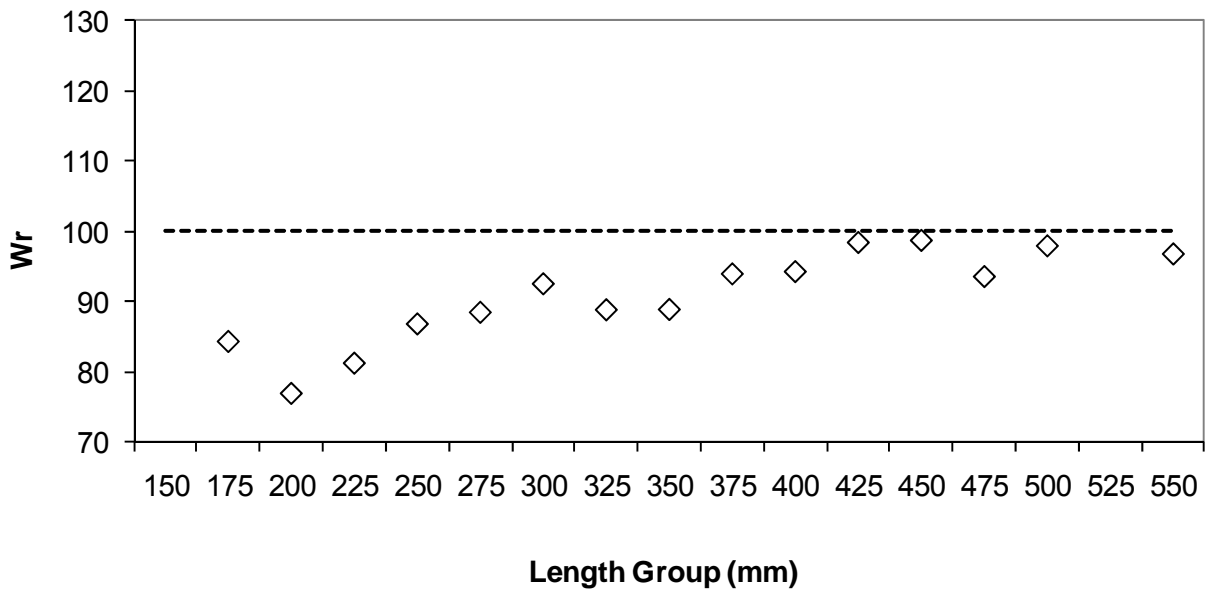


Figure 4. Largemouth bass mean relative weights (Wr) in Watauga Reservoir, spring 2009.

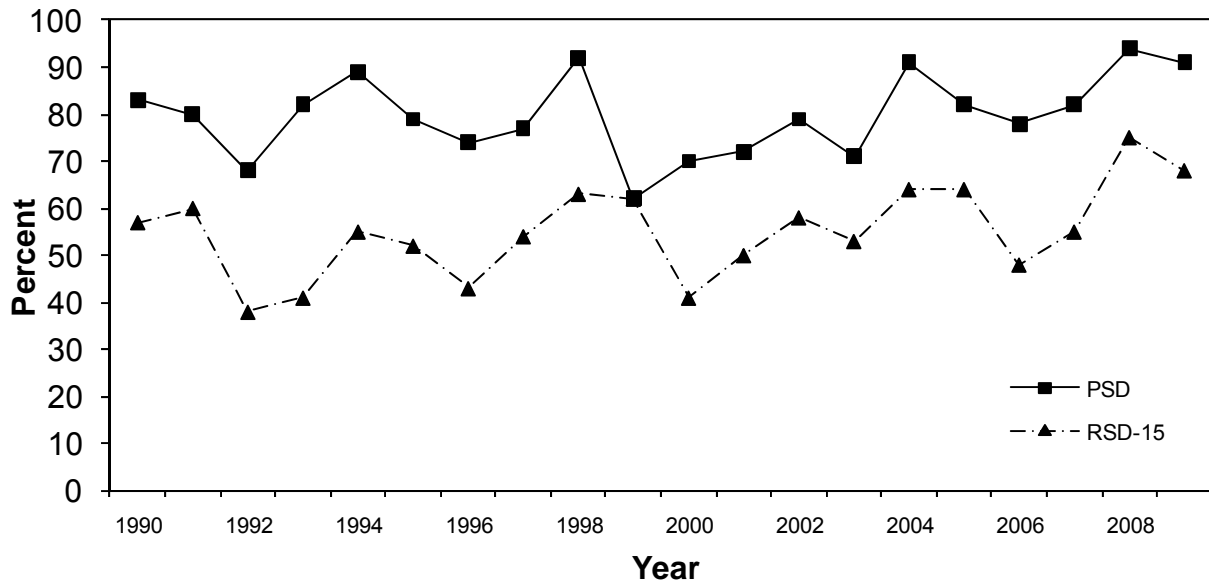


Figure 5. Largemouth bass traditional PSD and RSD-15 values in Watauga Reservoir 1990 – 2009.

## Smallmouth Bass

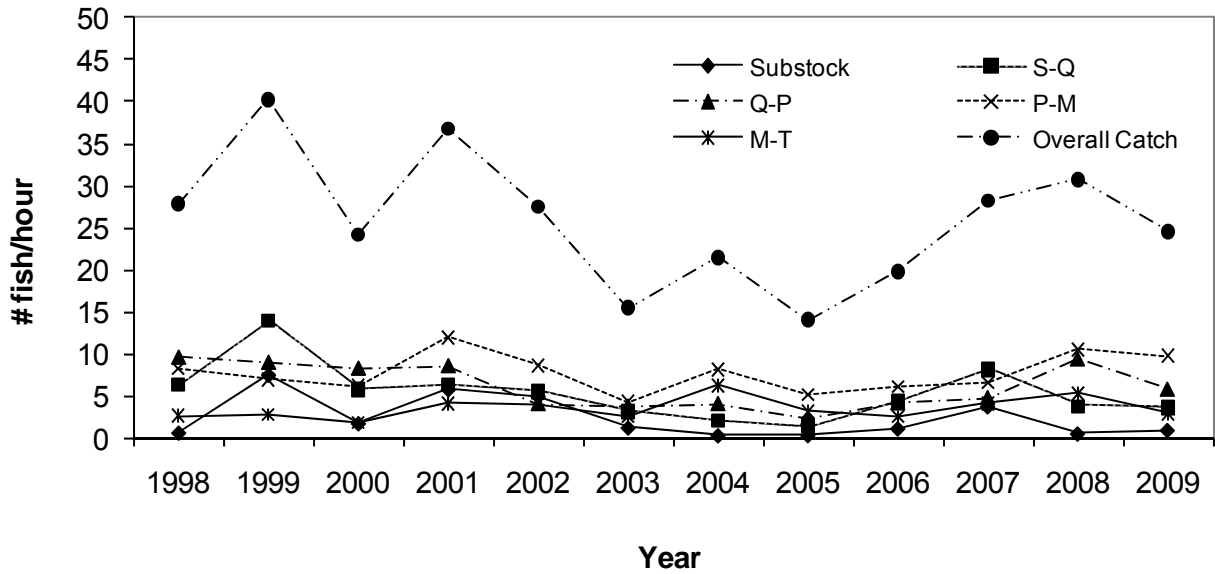


Figure 6. Smallmouth bass CPUE values by incremental length category in Watauga Reservoir, 1998 - 2009.

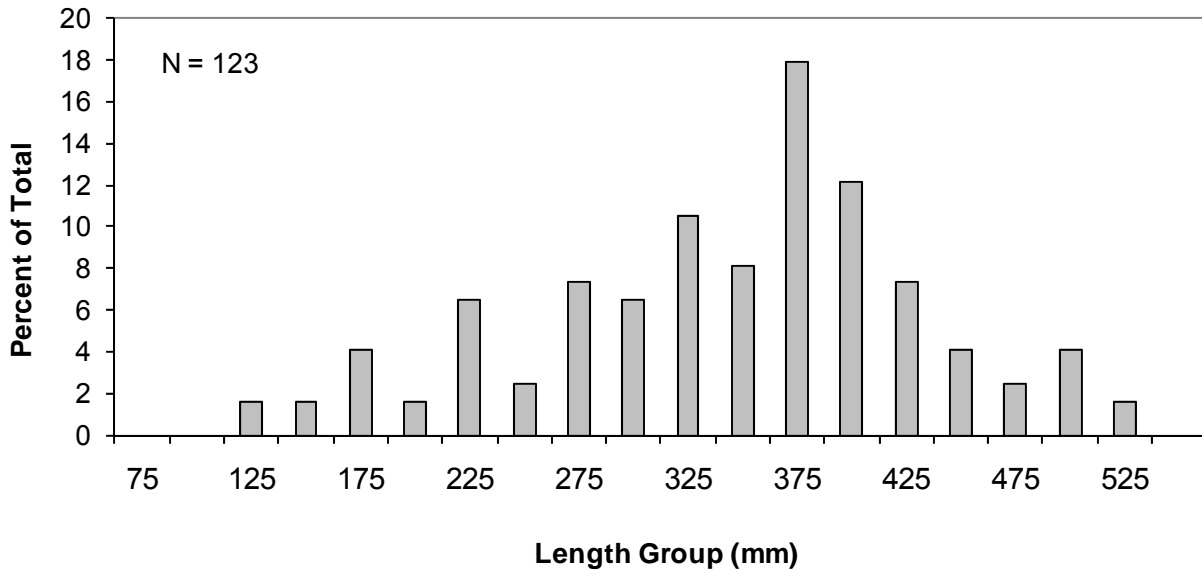


Figure 7. Smallmouth bass length frequency by percent in Watauga Reservoir, spring 2009.

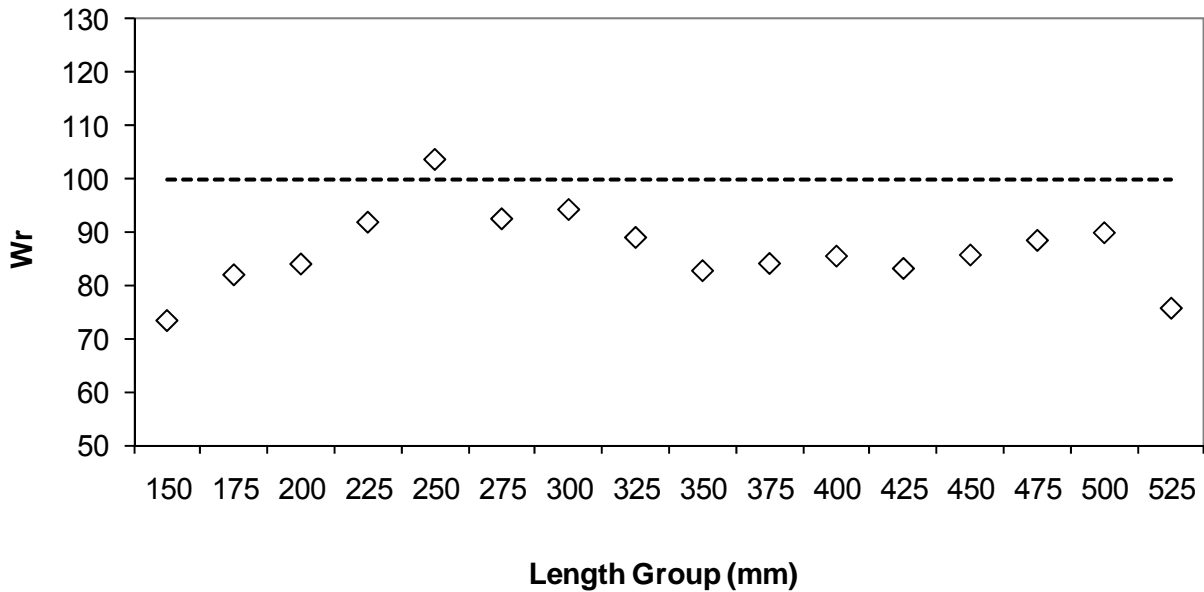


Figure 8. Smallmouth bass mean relative weights (Wr) in Watauga Reservoir, spring 2009.

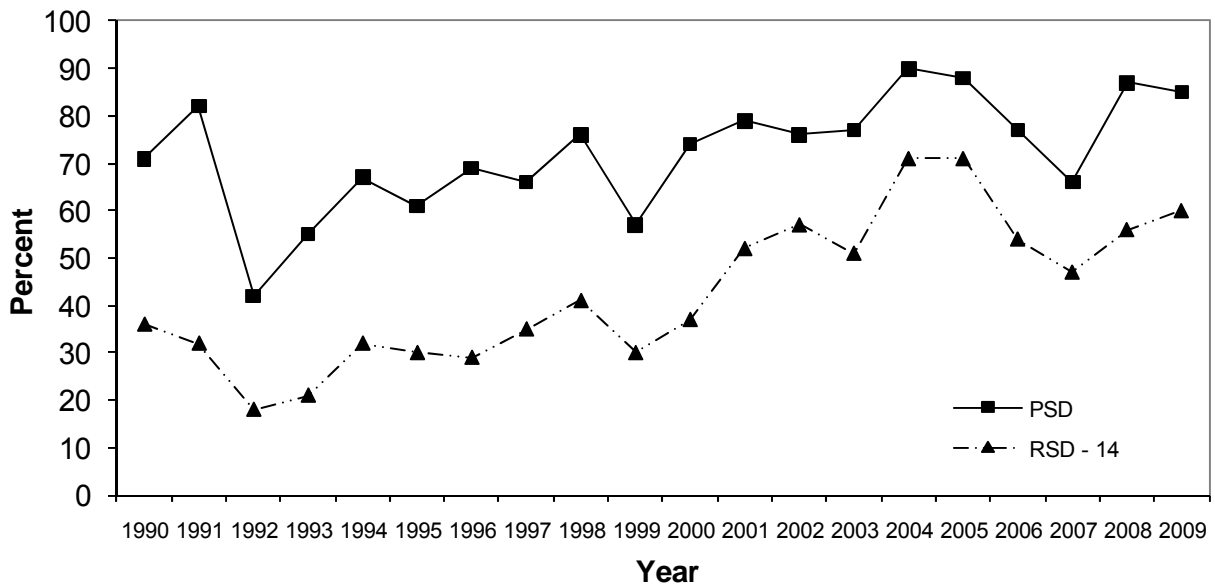


Figure 9. Smallmouth bass traditional PSD and RSD - 14 values in Watauga Reservoir 1990 – 2009.

Appendix A  
Water Quality

Table A1. Watauga Reservoir, water quality data at **WRM 39**, July 8, 2009.

<b>Depth (m)</b>	<b>Temp ©</b>	<b>Cond</b>	<b>DO</b>	<b>Site</b>	<b>Secchi (m)</b>	<b>Time</b>
0	24.6	123	9.7	W39	2.0	13:22
1	24.4	123	9.8			
2	24.2	123	9.8			
3	24.1	124	9.7			
4	24.0	125	9.7			
5	24.0	125	9.7			
6	23.9	125	9.7			
7	23.7	125	9.7			
8	19.5	125	7.7			
9	18.4	127	7.5			
10	16.9	128	6.6			
11	15.7	129	6.0			
12	15.2	129	5.9			
13	14.3	130	6.1			
14	13.3	133	6.4			
15	12.6	136	6.9			
16	11.3	140	8.0			
17	10.6	141	8.6			
18	9.9	142	9.3			
19	9.5	142	9.7			
20	9.3	142	9.8			
21	9.2	142	9.9			
22	9.0	142	9.9			
23	8.9	141	9.9			
24	8.8	141	9.9			
25	8.7	138	9.9			
26	8.6	138	9.9			
27	8.5	138	9.9			
28	8.4	138	9.9			
29	8.3	138	10.0			
30	8.3	134	10.1			

Table A2. Watauga Reservoir, water quality data at **WRM 45**, July 8, 2009.

Depth (m)	Temp C	Cond	DO	Site	Secchi (m)	Time
0	25.4	126	9.7	W45	1.8	14:00
1	24.9	127	9.9			
2	24.7	127	9.9			
3	24.6	127	9.9			
4	24.5	127	9.9			
5	24.3	126	9.9			
6	22.7	123	7.1			
7	21.3	122	6.7			
8	19.6	120	5.3			
9	18.6	119	5.0			
10	17.0	119	5.1			
11	16.0	122	5.2			
12	15.4	122	5.2			
13	14.0	119	5.6			
14	12.9	121	6.1			
15	11.7	125	6.8			
16	10.9	131	7.9			
17	10.3	132	8.3			
18	9.8	132	8.7			
19	9.5	133	9.1			
20	9.2	133	9.3			
21	9.1	134	9.3			
22	9.0	134	9.4			
23	8.8	133	9.3			
24	8.7	133	9.2			
25	8.6	134	9.2			
26	8.5	134	9.2			
27	8.4	134	9.1			
28	8.3	134	9.1			
29	8.2	135	8.9			
30	8.1	135	8.6			

Table A3. Watauga Reservoir, water quality data at **WRM 49**, July 8, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.5	120	9.5	W49	1.6	15:10
1	25.7	121	10.4			
2	25.3	121	10.5			
3	25.1	121	10.4			
4	24.6	121	8.8			
5	23.7	120	7.0			
6	22.5	113	5.6			
7	21.5	114	5.7			
8	19.7	103	5.6			
9	18.4	108	5.0			
10	17.7	106	4.9			
11	16.5	105	5.0			
12	15.2	108	5.3			
13	14.2	107	5.6			
14	13.6	106	5.9			
15	12.9	108	6.2			
16	11.6	117	6.5			
17	10.8	125	6.6			
18	10.0	132	6.3			
19	9.6	135	6.1			
20	9.4	137	5.6			
21	9.3	139	5.4			
22	9.1	141	5.2			
23	9.0	140	4.9			
24	9.0	140	4.7			
25	8.8	142	4.5			
26	Bottom					
27						
28						
29						
30						

Table A4. Watauga Reservoir, water quality data at **ERM 2**, July 8, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.3	125	9.6	E2	1.5	14:30
1	25.3	125	10.0			
2	25.1	125	10.1			
3	24.9	125	10.1			
4	24.7	125	10.1			
5	23.8	124	7.5			
6	23.1	125	6.2			
7	22.2	130	4.7			
8	20.2	128	4.0			
9	18.8	116	3.9			
10	17.4	114	4.0			
11	16.0	113	4.3			
12	15.2	113	4.6			
13	14.1	114	5.0			
14	13.3	115	5.4			
15	12.5	117	5.7			
16	11.4	123	6.0			
17	10.7	126	6.1			
18	10.1	130	6.0			
19	9.8	130	5.9			
20	9.0	131	5.9			
21	9.3	132	6.0			
22	9.1	132	6.1			
23	8.9	133	6.3			
24	8.9	133	6.4			
25	Bottom					
26						
27						
28						
29						
30						

Table A5. Watauga Reservoir, water quality data at **WRM 39**, August 5, 2009.

<b>Depth (m)</b>	<b>Temp ©</b>	<b>Cond</b>	<b>DO</b>	<b>Site</b>	<b>Secchi (m)</b>	<b>Time</b>
0	25.0	113	9.6	W39	3.2	11:45
1	24.9	111	9.7			
2	24.8	112	9.7			
3	24.6	112	9.7			
4	24.6	112	9.7			
5	24.5	112	9.7			
6	24.5	112	9.7			
7	24.4	112	9.6			
8	22.2	112	7.1			
9	20.8	112	4.9			
10	19.6	111	3.6			
11	18.1	110	3.5			
12	16.9	111	3.7			
13	16.0	112	4.0			
14	15.1	112	4.3			
15	14.0	114	4.8			
16	13.0	116	5.5			
17	12.0	119	6.9			
18	11.2	121	7.6			
19	10.3	122	9.1			
20	10.0	122	9.3			
21	9.7	122	9.5			
22	9.5	122	9.7			
23	9.3	122	9.8			
24	9.1	122	9.9			
25	9.0	122	10.0			
26	8.9	123	10.0			
27	8.8	122	10.1			
28	8.6	122	10.1			
29	8.5	123	10.1			
30	8.4	123	10.1			

Table A6. Watauga Reservoir, water quality data at **WRM 45**, August 5, 2009.

<b>Depth (m)</b>	<b>Temp ©</b>	<b>Cond</b>	<b>DO</b>	<b>Site</b>	<b>Secchi (m)</b>	<b>Time</b>
0	26.9	116	9.0	W45	3.2	12:30
1	25.8	116	9.6			
2	25.6	116	9.7			
3	25.5	116	9.8			
4	25.4	115	9.8			
5	25.3	116	9.8			
6	25.2	116	9.8			
7	23.4	116	6.9			
8	22.1	117	3.3			
9	21.2	119	2.3			
10	19.9	114	2.0			
11	18.7	110	2.0			
12	17.1	109	2.4			
13	15.9	109	3.5			
14	14.7	109	4.0			
15	13.6	111	4.5			
16	12.4	114	6.1			
17	11.5	118	7.1			
18	10.7	120	7.4			
19	10.2	120	7.9			
20	9.7	121	8.5			
21	9.5	122	8.8			
22	9.3	122	9.1			
23	9.2	122	9.2			
24	9.1	122	9.3			
25	8.9	123	9.3			
26	8.9	122	9.2			
27	8.8	123	9.2			
28	8.7	123	9.2			
29	8.6	123	9.1			
30	8.5	124	8.9			

Table A7. Watauga Reservoir, water quality data at **WRM 49**, August 5, 2009.

<b>Depth (m)</b>	<b>Temp ©</b>	<b>Cond</b>	<b>DO</b>	<b>Site</b>	<b>Secchi (m)</b>	<b>Time</b>
0	26.9	114	9.7	W49	2.7	13:30
1	26.7	114	10.0			
2	26.0	114	10.3			
3	25.8	114	10.4			
4	25.7	115	10.4			
5	25.5	114	10.4			
6	24.2	112	6.5			
7	23.3	110	5.8			
8	22.6	105	5.8			
9	21.3	107	4.3			
10	19.6	107	2.0			
11	18.0	102	2.0			
12	17.1	101	2.3			
13	15.7	101	2.5			
14	14.9	102	3.5			
15	14.2	102	3.9			
16	13.6	102	4.2			
17	12.7	105	4.4			
18	12.0	110	4.4			
19	11.2	116	4.1			
20	10.5	122	3.1			
21	10.2	130	3.2			
22	9.9	134	1.5			
23	9.5	137	0.8			
24	9.4	138	0.6			
25	9.3	137	0.6			
26	9.3	137	0.6			
27	Bottom					
28						
29						
30						

Table A8. Watauga Reservoir, water quality data at **ERM 2**, August 5, 2009.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.2	116	9.8	E2	2.0	11:00
1	25.7	116	9.9			
2	25.6	116	10.0			
3	25.6	116	10.0			
4	25.5	116	10.0			
5	24.8	117	9.6			
6	24.3	118	8.0			
7	23.3	122	5.6			
8	21.6	121	3.2			
9	20.8	118	2.1			
10	19.9	115	1.2			
11	18.2	109	1.3			
12	17.8	109	1.4			
13	16.0	107	1.5			
14	15.3	108	2.6			
15	13.8	110	2.8			
16	12.9	111	3.0			
17	11.7	114	3.3			
18	10.8	118	3.7			
19	10.2	121	4.0			
20	10.0	122	4.1			
21	9.5	123	4.2			
22	9.4	123	4.4			
23	9.2	123	4.7			
24	9.1	123	5.0			
25	Bottom					
26						
27						
28						
29						
30						

***No water quality taken in September 2009.***

Figure A1. Watauga Reservoir water quality at WRM 39, July 2009.

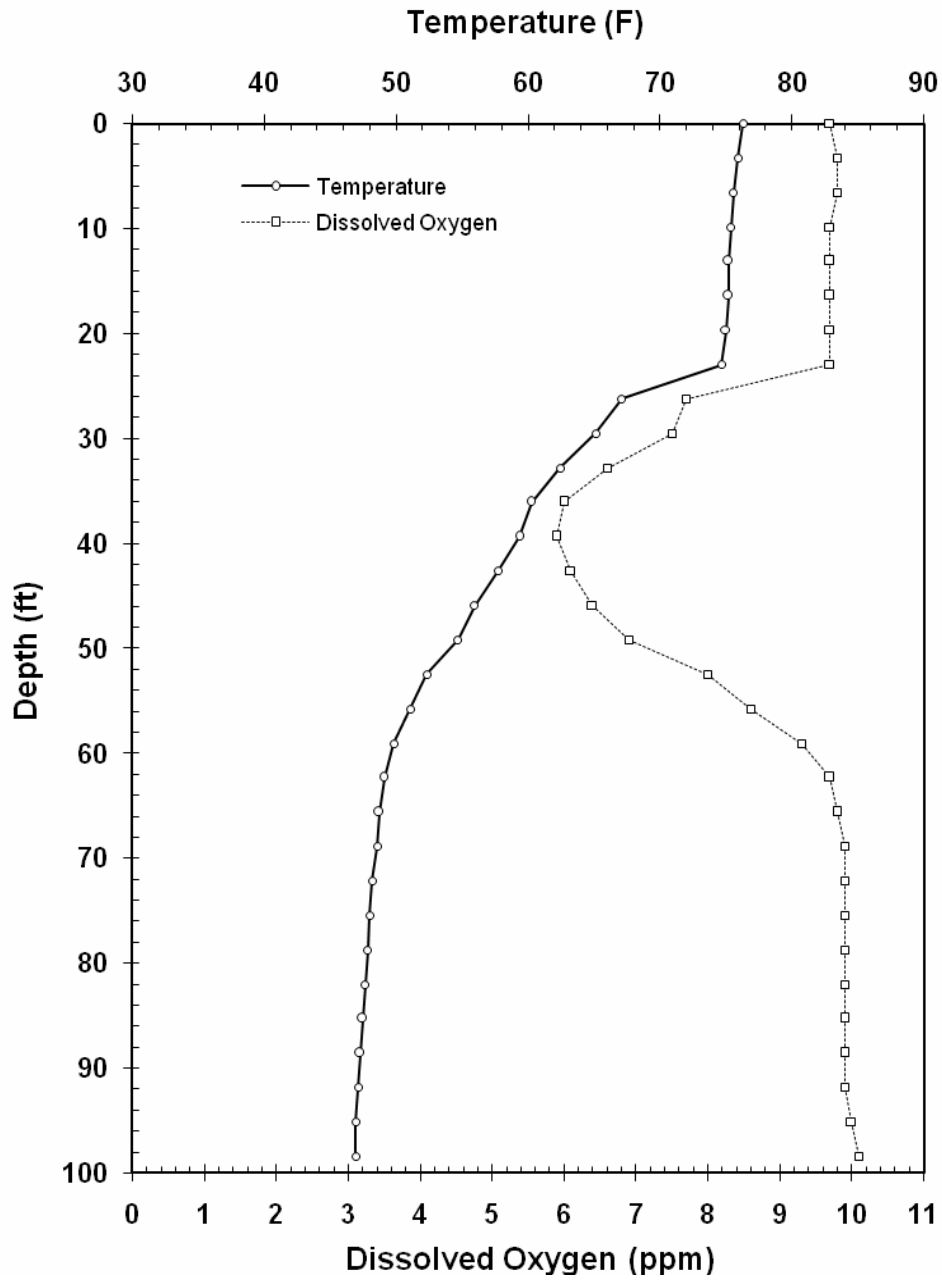


Figure A2. Watauga Reservoir water quality at WRM 45, July 2009.

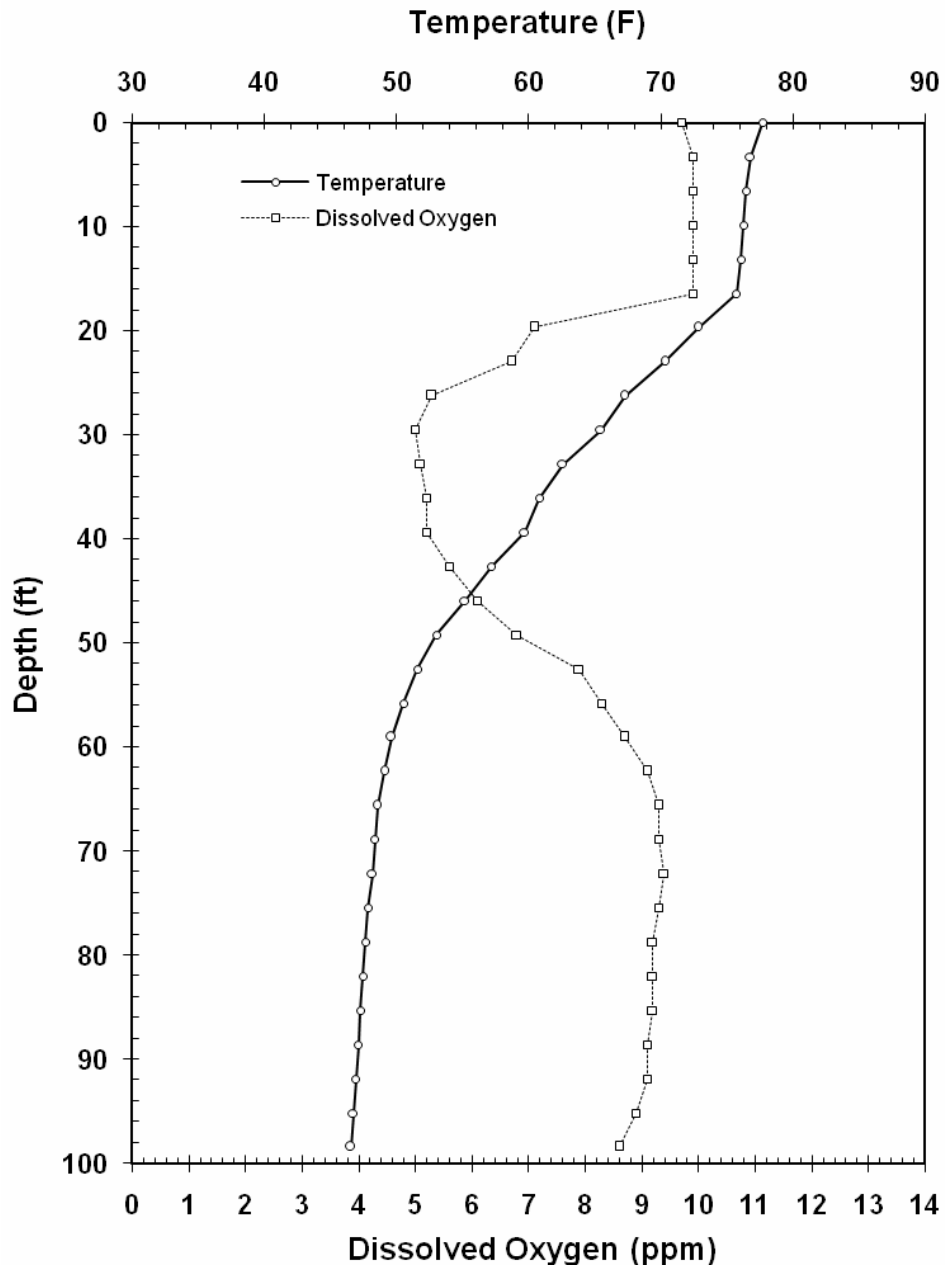


Figure A3. Watauga Reservoir water quality at WRM 49, July 2009.

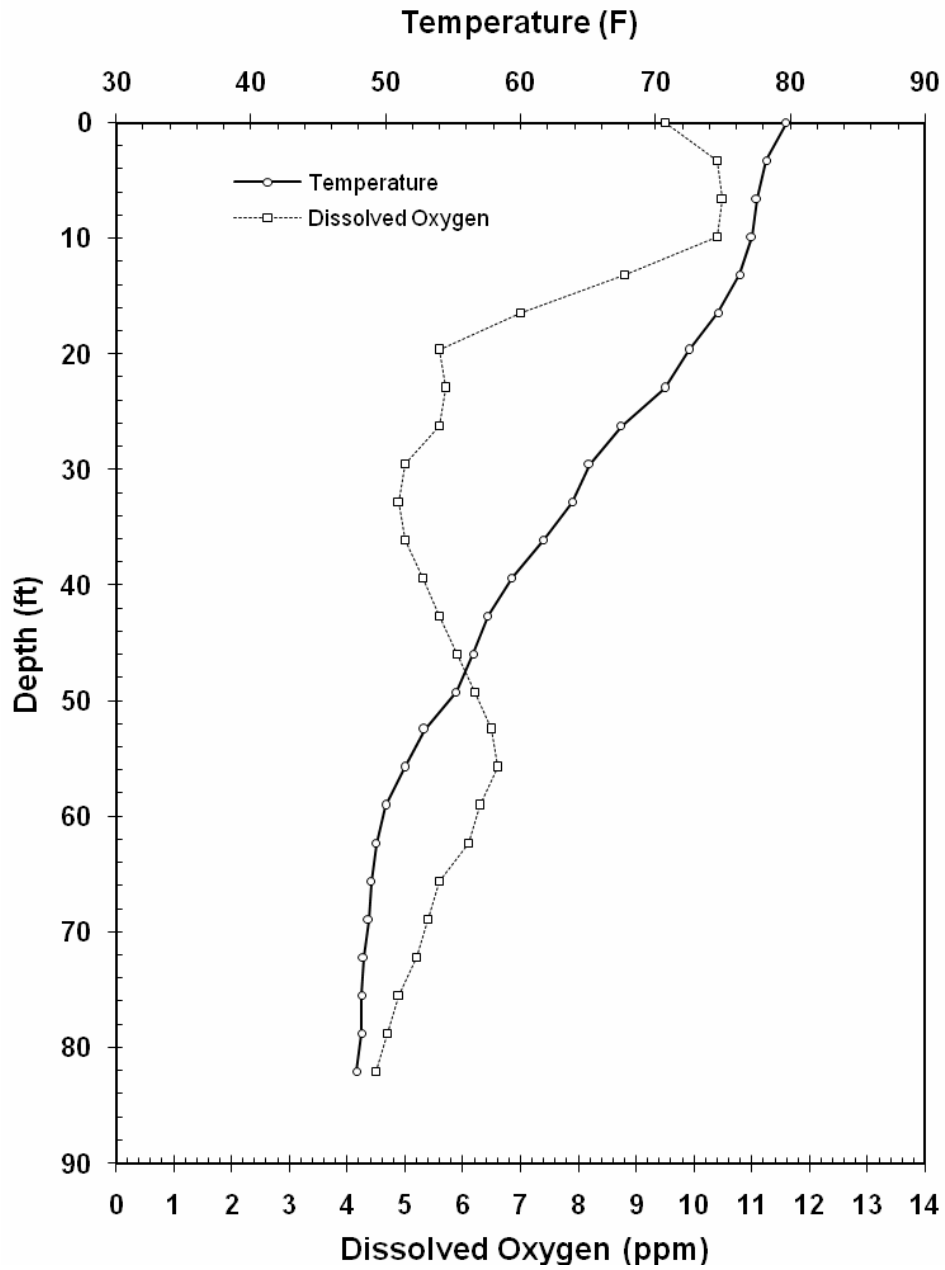


Figure A4. Watauga Reservoir water quality at ERM 2, July 2009.

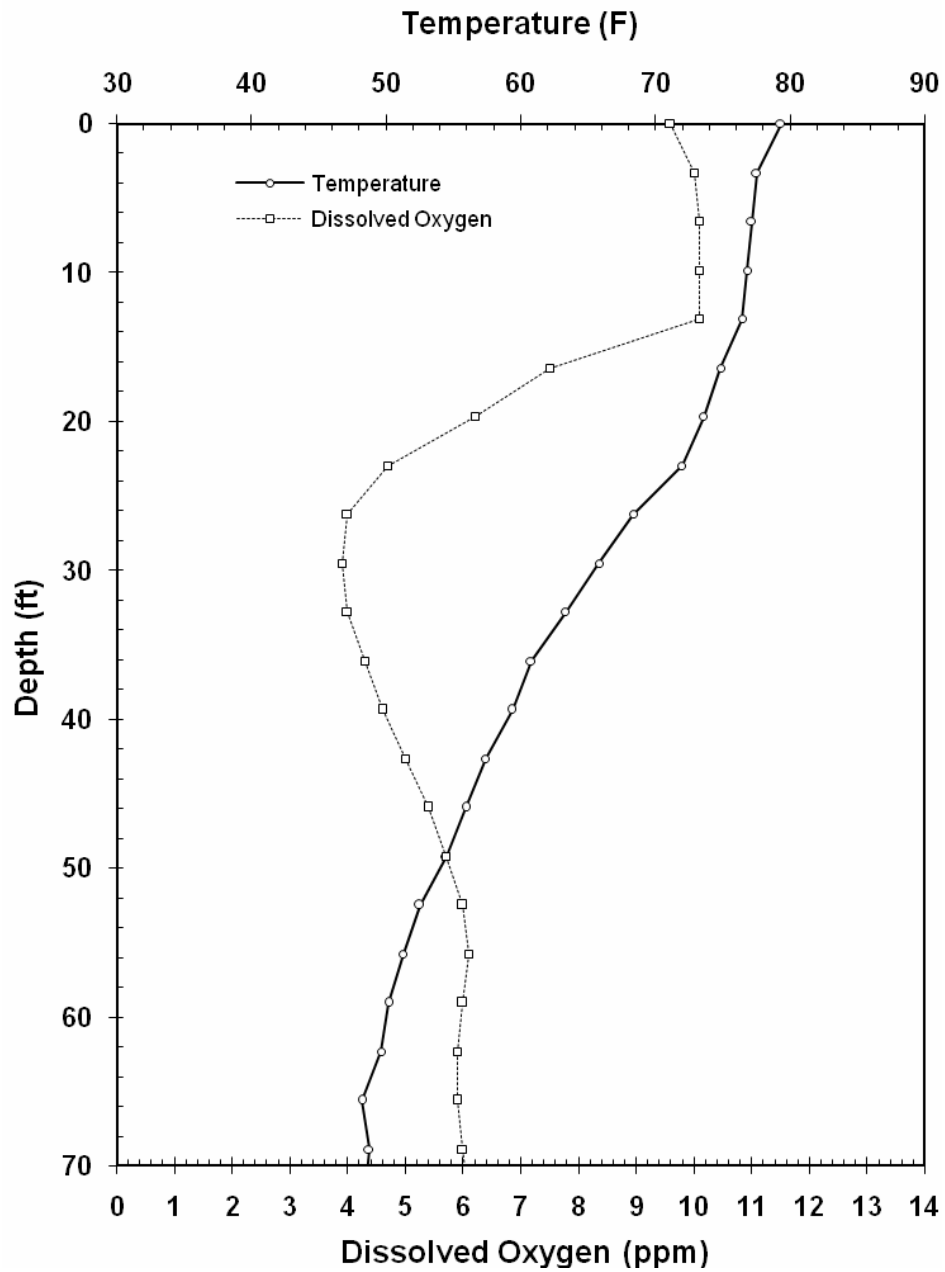


Figure A5. Watauga Reservoir water quality at WRM 39, August 2009.

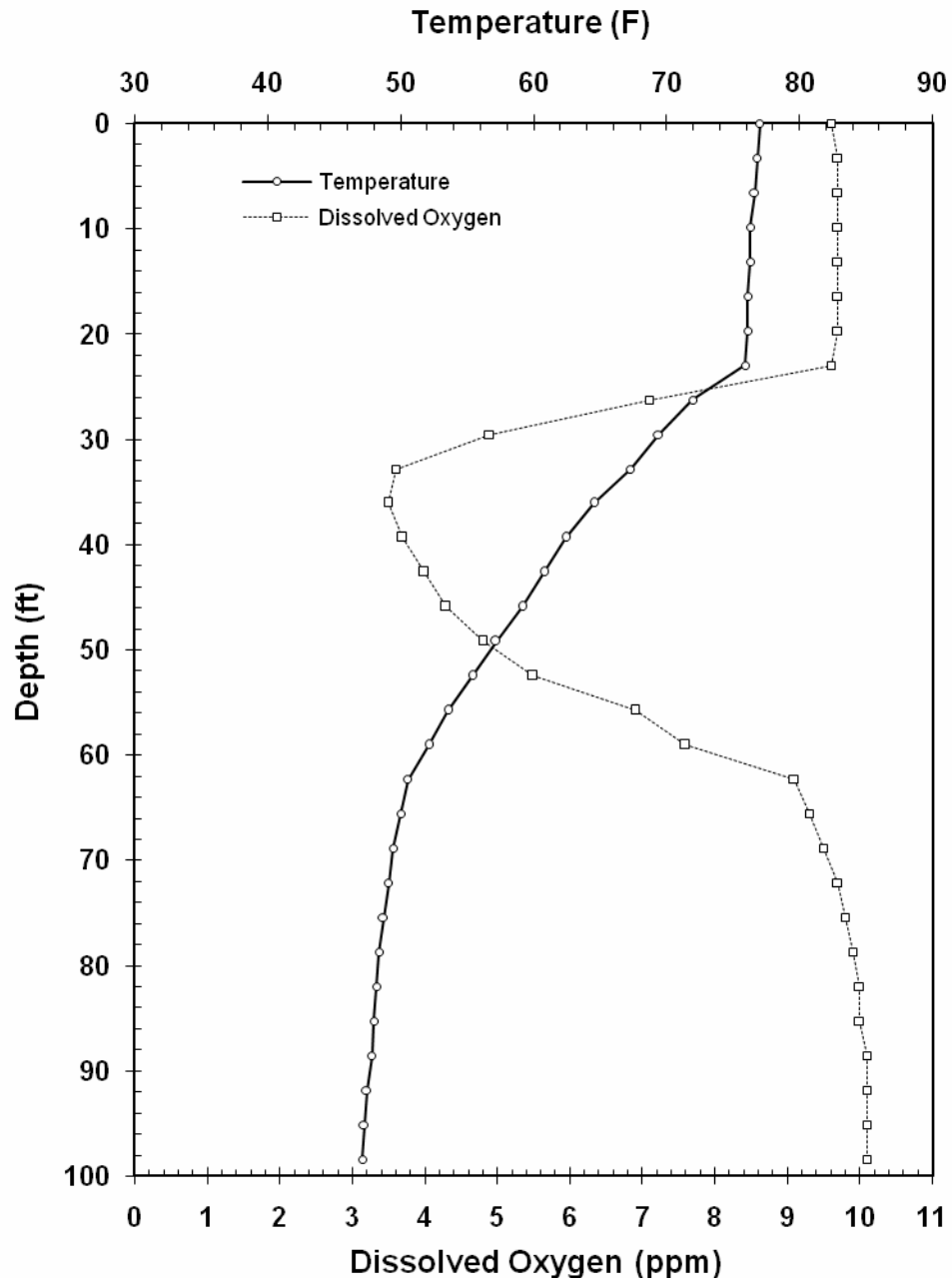


Figure A6. Watauga Reservoir water quality at WRM 45, August 2009.

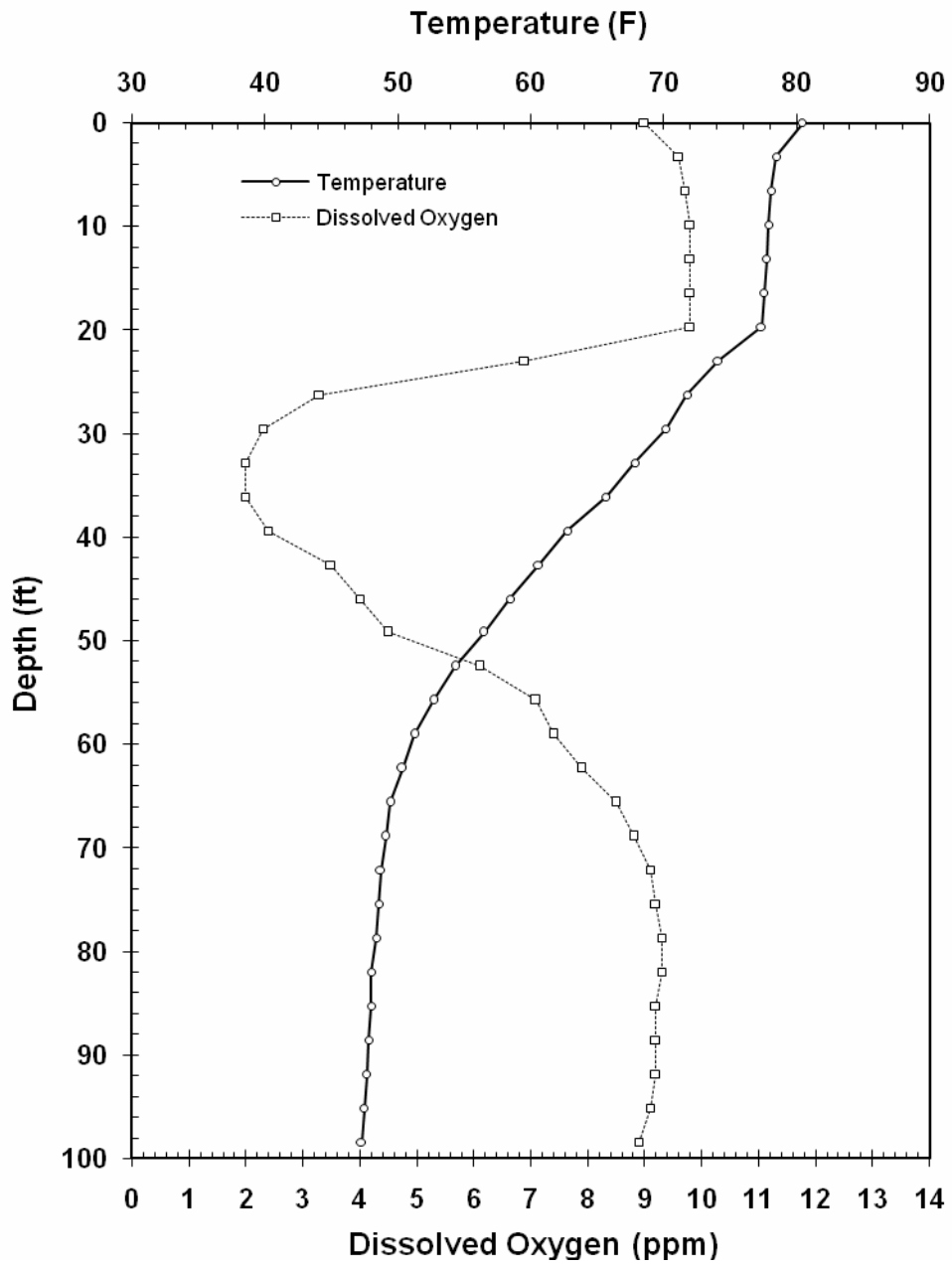


Figure A7. Watauga Reservoir water quality at WRM 49, August 2009.

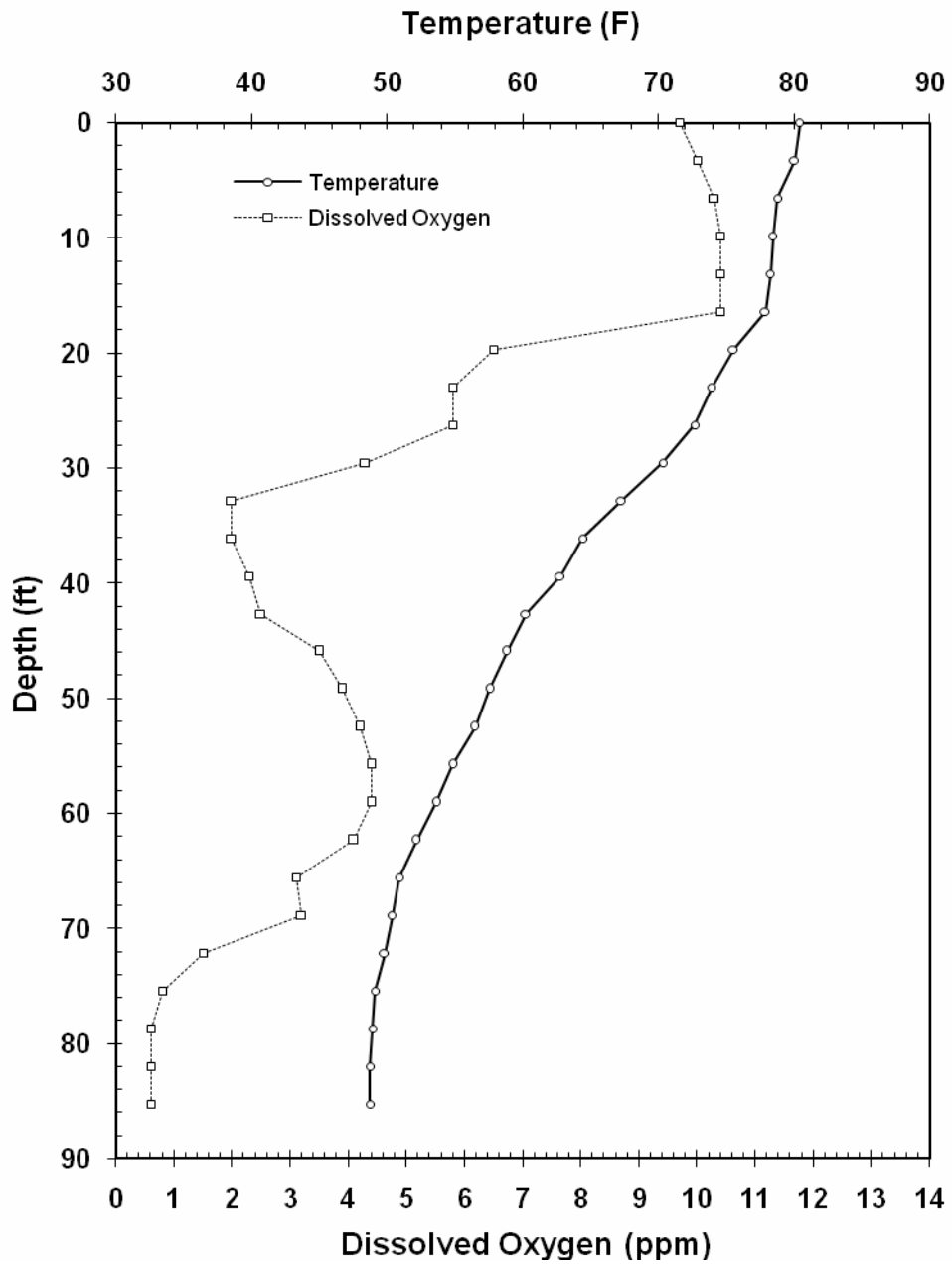
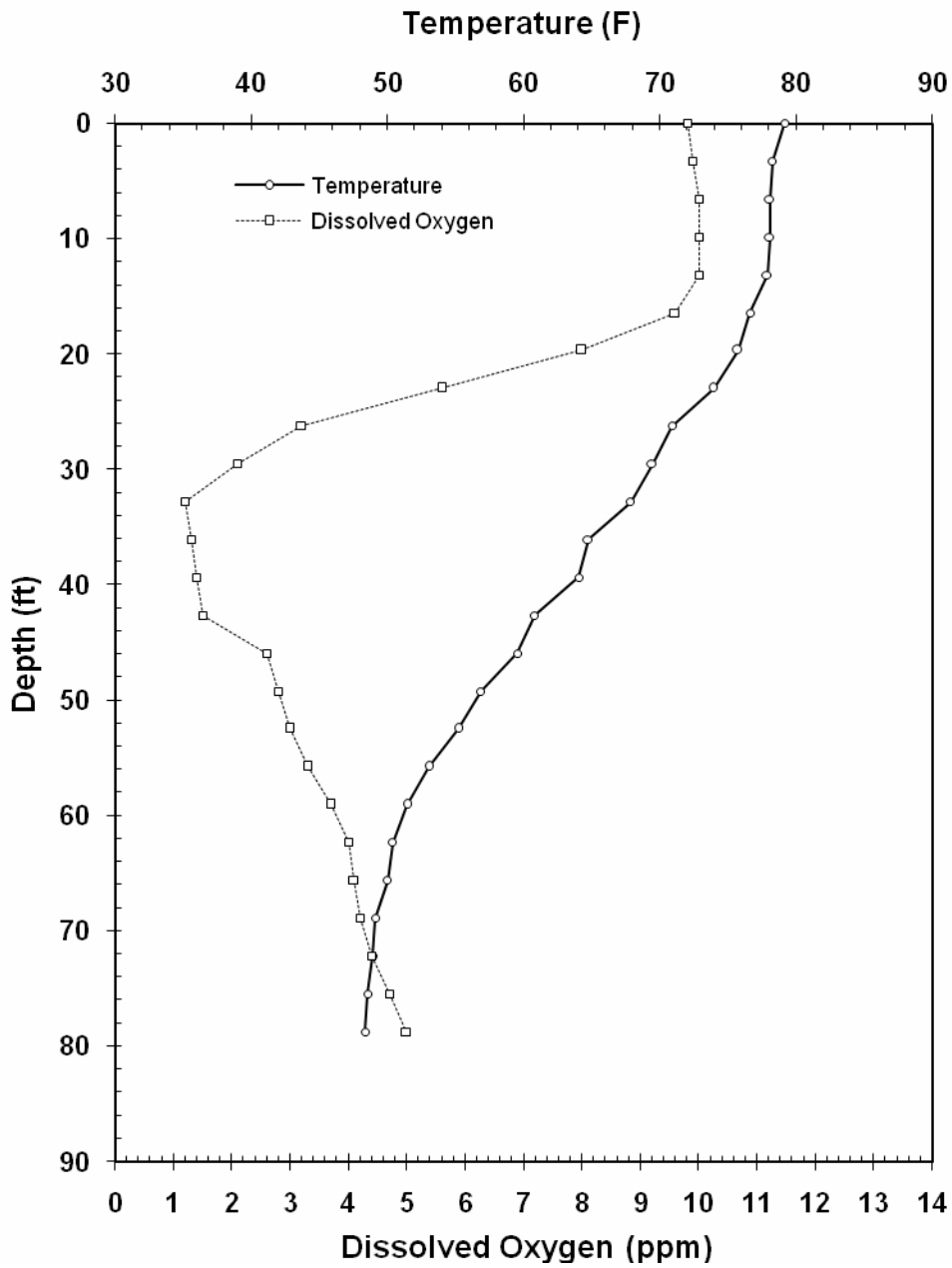


Figure A8. Watauga Reservoir water quality at ERM 2, August 2009.



Appendix B  
Reservoir Elevations

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

Elevation	Month	Day	Elevation	Month	Day	Elevation	Month	Day
1936.36	January	1	1947.48	February	24	1957.24	April	19
1936.41	January	2	1947.57	February	25	1957.51	April	20
1936.49	January	3	1947.70	February	26	1957.74	April	21
1936.59	January	4	1947.82	February	27	1957.91	April	22
1936.75	January	5	1947.96	February	28	1958.08	April	23
1937.28	January	6	1948.15	March	1	1958.23	April	24
1939.74	January	7	1948.27	March	2	1958.40	April	25
1940.59	January	8	1948.42	March	3	1958.53	April	26
1941.04	January	9	1948.54	March	4	1958.56	April	27
1941.46	January	10	1948.69	March	5	1958.61	April	28
1942.13	January	11	1948.87	March	6	1958.69	April	29
1942.60	January	12	1949.09	March	7	1958.78	April	30
1942.90	January	13	1949.29	March	8	1958.83	May	1
1943.14	January	14	1949.50	March	9	1958.89	May	2
1943.30	January	15	1949.64	March	10	1959.10	May	3
1943.41	January	16	1949.77	March	11	1959.29	May	4
1943.54	January	17	1949.92	March	12	1959.67	May	5
1943.66	January	18	1950.00	March	13	1960.41	May	6
1943.75	January	19	1950.17	March	14	1961.53	May	7
1943.86	January	20	1950.46	March	15	1961.66	May	8
1943.92	January	21	1950.79	March	16	1961.91	May	9
1944.00	January	22	1951.09	March	17	1961.91	May	10
1944.10	January	23	1951.34	March	18	1961.57	May	11
1944.16	January	24	1951.55	March	19	1961.09	May	12
1944.25	January	25	1951.72	March	20	1960.55	May	13
1944.32	January	26	1951.87	March	21	1960.11	May	14
1944.43	January	27	1951.99	March	22	1959.83	May	15
1944.56	January	28	1952.11	March	23	1960.07	May	16
1944.69	January	29	1952.26	March	24	1960.88	May	17
1944.82	January	30	1952.37	March	25	1960.84	May	18
1944.92	January	31	1952.49	March	26	1960.60	May	19
1945.03	February	1	1952.62	March	27	1960.21	May	20
1945.12	February	2	1952.85	March	28	1959.79	May	21
1945.23	February	3	1953.01	March	29	1959.49	May	22
1945.25	February	4	1953.19	March	30	1959.48	May	23
1945.30	February	5	1953.37	March	31	1959.64	May	24
1945.36	February	6	1953.49	April	1	1959.64	May	25
1945.46	February	7	1953.65	April	2	1959.49	May	26
1945.52	February	8	1953.89	April	3	1959.37	May	27
1945.65	February	9	1954.09	April	4	1959.27	May	28
1945.67	February	10	1954.27	April	5	1959.05	May	29
1945.79	February	11	1954.34	April	6	1958.97	May	30
1945.84	February	12	1954.48	April	7	1959.13	May	31
1945.93	February	13	1954.62	April	8	1959.16	June	1
1946.02	February	14	1954.77	April	9	1959.12	June	2
1946.07	February	15	1955.02	April	10	1959.12	June	3
1946.14	February	16	1955.40	April	11	1959.17	June	4
1946.23	February	17	1955.74	April	12	1959.22	June	5
1946.46	February	18	1956.02	April	13	1959.13	June	6
1946.74	February	19	1956.27	April	14	1959.25	June	7
1946.95	February	20	1956.51	April	15	1959.25	June	8
1947.15	February	21	1956.73	April	16	1959.27	June	9
1947.28	February	22	1956.91	April	17	1959.25	June	10
1947.36	February	23	1957.06	April	18	1959.25	June	11

Table B1. Continued.

Elevation	Month	Day	Elevation	Month	Day	Elevation	Month	Day
1959.22	June	12	1957.35	August	5	1954.06	September	28
1959.12	June	13	1957.44	August	6	1953.86	September	29
1959.17	June	14	1957.45	August	7	1953.68	September	30
1959.22	June	15	1957.35	August	8	1953.55	October	1
1959.31	June	16	1957.43	August	9	1953.54	October	2
1959.90	June	17	1957.33	August	10	1953.48	October	3
1960.37	June	18	1957.19	August	11	1953.52	October	4
1960.45	June	19	1957.05	August	12	1953.45	October	5
1960.42	June	20	1956.90	August	13	1953.36	October	6
1960.39	June	21	1956.75	August	14	1953.33	October	7
1960.23	June	22	1956.58	August	15	1953.37	October	8
1959.99	June	23	1956.50	August	16	1953.52	October	9
1959.70	June	24	1956.14	August	17	1953.42	October	10
1959.36	June	25	1955.82	August	18	1953.45	October	11
1959.03	June	26	1955.55	August	19	1953.51	October	12
1958.93	June	27	1955.40	August	20	1953.57	October	13
1958.96	June	28	1955.49	August	21	1953.69	October	14
1958.87	June	29	1955.41	August	22	1953.87	October	15
1958.76	June	30	1955.60	August	23	1954.03	October	16
1958.67	July	1	1955.43	August	24	1954.14	October	17
1958.60	July	2	1955.22	August	25	1954.26	October	18
1958.49	July	3	1954.95	August	26	1954.38	October	19
1958.34	July	4	1954.68	August	27	1954.50	October	20
1958.40	July	5	1954.41	August	28	1954.62	October	21
1958.44	July	6	1954.20	August	29	1954.74	October	22
1958.40	July	7	1954.18	August	30	1954.71	October	23
1958.34	July	8	1953.87	August	31	1954.56	October	24
1958.25	July	9	1953.55	September	1	1954.26	October	25
1958.21	July	10	1953.27	September	2	1954.20	October	26
1958.09	July	11	1952.97	September	3	1954.39	October	27
1958.12	July	12	1952.68	September	4	1954.65	October	28
1958.16	July	13	1952.45	September	5	1954.77	October	29
1958.09	July	14	1952.19	September	6	1954.49	October	30
1958.04	July	15	1952.04	September	7	1954.20	October	31
1958.04	July	16	1952.04	September	8	1954.15	November	1
1958.16	July	17	1952.10	September	9	1954.29	November	2
1958.02	July	18	1952.18	September	10	1954.51	November	3
1958.02	July	19	1952.21	September	11	1954.70	November	4
1958.00	July	20	1952.18	September	12	1954.77	November	5
1957.98	July	21	1952.18	September	13	1954.47	November	6
1957.94	July	22	1952.19	September	14	1954.14	November	7
1957.88	July	23	1952.19	September	15	1953.83	November	8
1957.80	July	24	1952.21	September	16	1953.78	November	9
1957.67	July	25	1952.31	September	17	1954.03	November	10
1957.56	July	26	1952.41	September	18	1955.99	November	11
1957.45	July	27	1952.50	September	19	1956.81	November	12
1957.35	July	28	1952.73	September	20	1956.56	November	13
1957.27	July	29	1952.99	September	21	1956.11	November	14
1957.23	July	30	1953.16	September	22	1955.55	November	15
1957.22	July	31	1953.28	September	23	1955.22	November	16
1957.16	August	1	1953.39	September	24	1954.95	November	17
1957.35	August	2	1953.55	September	25	1954.70	November	18
1957.37	August	3	1953.69	September	26	1954.50	November	19
1957.33	August	4	1954.14	September	27	1954.25	November	20

Table B1. Continued.

<b>Elevation</b>	<b>Month</b>	<b>Day</b>
1953.98	November	21
1953.69	November	22
1953.68	November	23
1953.84	November	24
1953.84	November	25
1953.47	November	26
1953.12	November	27
1952.82	November	28
1952.46	November	29
1952.50	November	30
1952.68	December	1
1952.94	December	2
1953.40	December	3
1953.63	December	4
1953.45	December	5
1953.21	December	6
1953.21	December	7
1953.55	December	8
1954.85	December	9
1955.58	December	10
1955.77	December	11
1955.24	December	12
1954.81	December	13
1955.01	December	14
1955.34	December	15
1955.36	December	16
1955.25	December	17
1954.92	December	18
1955.08	December	19
1955.07	December	20
1954.59	December	21
1953.93	December	22
1953.42	December	23
1953.24	December	24

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

