

Watauga Reservoir
Annual Report 2006

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Table of contents

	Page
Species Summaries	3-6
Stocking	7
Habitat	7
Tables	
1. Morphometric, physical, and chemical characteristics	9
2. Fish stocked in Watauga Reservoir.....	10
3. Number of species collected by gear type	11
4. CPUE and RSD by category and species	12
5. Largemouth bass mean relative weights (Wr).....	13
6. Smallmouth bass mean relative weights (Wr)	13
7. Habitat enhancement summary	14
Figures	
1. Sites sampled on Watauga Reservoir in 2006	16
2. Largemouth bass incremental CPUE values.....	17
3. Largemouth bass length frequency by percent	17
4. Largemouth bass mean relative weights (Wr).....	18
5. Largemouth bass traditional PSD and RSD-15 values	18
6. Smallmouth bass incremental CPUE values.....	19
7. Smallmouth bass length frequency by percent	19
8. Smallmouth bass mean relative weights (Wr)	20
9. Smallmouth bass traditional PSD and RSD-14 values.....	20
Appendix A – Water Quality	
Tables A1 – A8. Summer water quality sampling data.....	22 – 29
Figures A1 – A8. Summer water quality sampling data	30 – 37
Appendix B – Reservoir Elevations	
Table B1. Daily reservoir elevation data	38
Figure B1. Daily reservoir elevation data with guide curve	42

Largemouth Bass

Population Parameter	Annual Rating	Measure	Gear	Value
Recruitment	Poor	Sub-stock CPUE	Electrofishing	0.4 fish/hr.
Growth		Mean TL at Age-3	Electrofishing	N/A
	Fair	RSD-P (380 mm)	Electrofishing	49 %
Density	Good	CPUE \geq Stock Size (200 mm)	Electrofishing	14.7 fish/hr.
	Good	CPUE \geq Minimum Size Limit	Electrofishing	11.2 fish/hr.
Mortality		Total Mortality (Z)	Electrofishing	N/A
Angling Pressure		Fishing Effort (# of hours)	Creel Survey	N/A
Fishing Success		Angler Catch Rate (# fish/hr)	Creel Survey	N/A
Value of Fishery		Trip Expenditures	Creel Survey	N/A

Fishery Forecast:

Due to the low primary production of Watauga Reservoir, the largemouth bass densities have never been high. However, the percentage of largemouth bass over 381 mm (15-inches) has been above 40 percent 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 2007 season.

Management Recommendations:

No change to the current 305 mm (12-inch) minimum length limit.

Smallmouth Bass

Population Parameter	Annual Rating	Measure	Gear	Value
Recruitment	Fair	Sub-stock CPUE	Electrofishing	1.2 fish/hr.
<i>Growth*</i>	<i>Good</i>	<i>Mean TL at Age-3</i>	<i>Electrofishing</i>	<i>246 mm</i>
	Good	RSD-P (350 mm)	Electrofishing	54 %
Density	Fair	CPUE \geq Stock Size (180 mm)	Electrofishing	18.7 fish/hr.
	Fair	CPUE \geq Minimum Size Limit	Electrofishing	12.7 fish/hr.
<i>Mortality*</i>	<i>Moderate</i>	<i>Total Mortality (Z)</i>	<i>Electrofishing</i>	<i>48%</i>
Angling Pressure		Fishing Effort (# of hours)	Creel Survey	N/A
Fishing Success		Angler Catch Rate (# fish/hr)	Creel Survey	N/A
Value of Fishery		Trip Expenditures	Creel Survey	N/A

* *Based on a 1999 data set.*

Fishery Forecast:

Just like in largemouth bass, the low primary productivity of Watauga does not allow for high densities of smallmouth bass. However 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 (>356 mm) smallmouth bass in the population. The smallmouth bass fishery should remain in good quality for the 2007 season.

Management Recommendations:

No change to the current 305 mm (12-inch) minimum length limit is recommended at this time. Continue to monitor the same concern about the "trout minnows" that seems to be an issue on Watauga as well as South Holston.

Walleye*

Population Parameter	Annual Rating	Measure	Gear	Value
Density*	Good	RSD-P (510 mm)	Electrofishing	63 %
	Good	CPUE >Stock Size (250 mm)	Electrofishing	81.2 fish/hr.
	Good	CPUE > Minimum Size Limit (457 mm)	Electrofishing	72.6 fish/hr.
Angling Pressure		Fishing Effort (# of hours)	Creel Survey	N/A
Fishing Success		Angler Catch Rate (# fish/hr)	Creel Survey	N/A
Value of Fishery		Trip Expenditures	Creel Survey	N/A

* Special walleye electrofishing sample in headwaters during March 2006.

Fishery Forecast:

The quality of the walleye fishery is excellent. The samples taken in the headwater areas consistently have excellent percentages and numbers of quality size walleye. The fishery should remain stable for the 2007 season, due to stocking efforts.

Management Recommendations:

Maintain current regulations and current stocking rates.

Rainbow Trout

Angling Pressure		Fishing Effort (# of hours)	Creel Survey	N/A
Fishing Success		Angler Catch Rate (# fish/hr)	Creel Survey	N/A
Value of Fishery		Trip Expenditures	Creel Survey	N/A

Fishery Forecast:

The quality of the fishery should remain stable. Tennessee Technological University will be 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

Maintain current regulations and current stocking rates. Attempt to sample the fishery with vertical gill nets in the near future.

Lake Trout

Angling Pressure		Fishing Effort (# of hours)	Creel Survey	N/A
Fishing Success		Angler Catch Rate (# fish/hr)	Creel Survey	N/A
Value of Fishery		Trip Expenditures	Creel Survey	N/A

Fishery Forecast:

The quality of the fishery should remain stable. Tennessee Technological University will be 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

Maintain current regulations and current stocking rates. Attempt to sample the fishery with vertical gill nets in the near future.

Stocking and Stocking Evaluations

Species	Number Stocked	Mark	Evaluation	Age-0 CPUE
Walleye	76,728	None	Gill Net	0.1 fish / net night
Rainbow Trout	24,164	fin clip	Angler Survey	N/A
Lake Trout	46,635	fin clip	Angler Survey	N/A

Habitat Enhancement and Monitoring

Type of Work	Details	Date
Shoreline Stabilization		See table 7.
Shoreline Seeding		“
Aquatic Plants		“
Fish Attractors (Shallow Water)		“
Fish Attractors (Deep Water)		“
Smallmouth Spawning Benches		“
Stake Beds		“
Water Quality Monitoring	Temperature, pH, Conductivity, and D.O.	July, August, September

Tables

Table 1. The morphometric, physical, and chemical characteristics of Watauga Reservoir.

Parameter	Measurement	
	<i>English</i>	<i>Metric</i>
Surface Area	6,430 ac	2,602 ha
Drainage Area	468 sq. mi	1,213 sq. km
Full Pool Elevation	1,959 ft msl	597 m msl
Mean Annual Fluctuation	44 feet	13.4 m
Shoreline Distance	105 mi	169 km
Maximum Depth	312 ft	95 m
Thermocline Depth	30 ft	9.1m
Mean Chlorophyll (Forebay)	4.0 ppm	4.0 mg/l
Shoreline Development		21%
Trophic Status (Forebay)		Mesotrophic
Trophic Index, Carlson (1977)		44.3
Hydraulic Retention Time		400 days
Reservoir Age		58 years

Table 2. Watauga Reservoir fish stockings 1996 - 2006.

Species	Date	Rate (per acre)	Mean Length	Number
Walleye	May 1996	33.8	1.50	217,441
	May 1997	5.9	1.50	38,155
	May 1999	15.2	1.25 – 2.75	97,828
	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 – 1.5	99,079
	May 2006	11.9	1.0 – 2.0	76,728
Blacknose	Nov. 1996	15.1	2.50	97,077
Black Crappie	Nov. 1997	15.4	2.50	98,731
	Dec. 1998	5.9	2.50	38,000
Rainbow Trout	1996	5.3	Adult	34,274
	1997	6.2	Adult	39,972
	1998	9.6	Adult	61,603
	1999	6.2	Adult	40,026
	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
Lake Trout	1997	0.5	Adult	3,356
	1997	7.1	Advanced Fing.	45,514
	1998	13.8	Advanced Fing.	88,852
	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	

Table 3. Number of species collected by gear type in Watauga Reservoir, 2006.

Species	Winter Gill Netting			Spring Electrofishing		
	No.	CPUE (# fish / net night)	Total Effort	No.	CPUE (# fish / hour)	Total Effort
Largemouth Bass	X	X	X	76	15.1	5.0
Smallmouth Bass	X	X	X	100	19.9	5.0
Spotted Bass	X	X	X	29	5.8	5.0
Black Crappie	X	X	X	4	0.8	5.0
Black-Nose Crappie	X	X	X	1	0.2	5.0
White Crappie	X	X	X	0	0	5.0
Walleye	151	6.3	24	17	3.4	5.0
White Bass	0	0	24	0	0	5.0

X = non targeted species

Table 4. Catch; mean CPUE and relative stock density by incremental RSD category for target species by gear in Watauga Reservoir, 1999 – 2006

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	21	13	3.3	39				19	4.8	56	2	0.5	6		
	2000	EL	22	4	0.7	6.9	16	9.5	30	16	2.8	30	19	3.4	35	3	0.5	6				71	58	10.2
	2001	EL	14	0	0	0	17	4.8	28	13	3.6	22	27	7.6	45	3	0.8	5				72	60	16.8
	2002	EL	14	6	1.7	10	12	3.3	21	12	3.3	21	32	8.9	56	1	0.2	2				79	63	12.4
	2003	EL	24	3	0.5	5	11	1.7	20	9	1.5	16	32	5.3	58	3	0.5	5				79	58	9.4
	2004	EL	20	1	0.2	1	7	1.4	9	20	3.8	27	45	8.6	60	3	0.6	4	0	0	0	91	76	14.58
	2005	EL	20	3	0.6	4	13	2.6	18	13	2.6	18	41	8.2	56	6	1.2	8	0	0	0	82	76	15.1
	2006	EL	20	2	0.4	3	16	3.2	22	22	4.4	30	32	6.4	43	4	0.8	5	0	0	0	78	76	15.14
Smallmouth Bass	1999	EL	16	30	7.5	19	56	14	43	36	9	28	28	7	21	11	2.8	8				57	161	40.3
	2000	EL	22	10	1.8	7	33	5.8	26	47	8.3	37	35	6.2	28	11	1.9	9	1	0.2	1	74	137	24.2
	2001	EL	14	21	5.8	16	23	6.4	21	31	8.6	28	43	12	38	15	4.2	13				79	133	36.8
	2002	EL	14	18	5	18	20	5.5	24	15	4.1	18	32	8.7	39	15	4.1	18				75	100	27.5
	2003	EL	24	8	1.3	8	20	3.2	23	23	3.8	26	26	4.3	30	16	2.6	18				74	95	15.5
	2004	EL	20	2	0.4	2	11	2.1	10	21	4.1	19	43	8.2	39	33	6.3	30	0	0	0	88	112	21.5
	2005	EL	20	2	0.4	3	8	1.6	12	12	2.4	17	26	5.2	38	16	3.2	23	7	1.4	10	88	71	14.1
	2006	EL	20	6	1.2	6	22	4.4	23	21	4.2	22	31	6.2	33	13	2.6	14	7	1.4	7	77	100	19.87
Walleye	1999	GN	5				17	3.4	11	92	18	58	47	9.4	29	4	0.8	3				90	160	32
	2000	GN	8	1	0.1	2	1	6.3	2	30	6.1	60	18	2.4	36	1	0.1	2				98	51	6.4
	2002	EL*	24	1	0		6	0.3	3	93	3.8	43	104	4.3	48	14	0.5	6				97	218	9.1
	2003	EL*	24	1	0.2	2	13	2.1	27	7	1.1	14	19	3.2	39	10	1.7	20	0	0	0	73	50	8.2
	2004	EL*	20	9	1.8	12	7	1.4	10	24	4.6	36	26	5	39	10	1.9	15	0	0	0	90	76	14.6
	2005	EL*	20	0	0	0	3	0.6	9	10	2	29	17	3.4	49	5	1	14	0	0	0	91	35	6.9
	2006	EL*	20	0	0	0	0	0	0	6	1.2	35	10	2	59	1	0.2	6	0	0	0	100	17	3.38

Table 5. Largemouth bass mean relative weights (Wr) in Watauga Reservoir, spring 2006.

Length Group	Mean Wr	Std. Error	N
150			
175	81.242		1
200	88.094	3.856	4
225	80.664	1.862	7
250	82.258	1.097	2
275	88.612	4.423	3
300	95.375	3.011	6
325	89.836	2.683	7
350	92.015	4.283	7
375	83.395	5.013	4
400	94.346	2.050	10
425	94.267	1.350	6
450	100.060	4.064	10
475	93.329	2.095	4
500	92.812	5.523	2
525	96.088	7.763	2
Total =			75

Table 6. Smallmouth bass mean relative weights (Wr) in Watauga Reservoir, spring 2006.

Length Group	Mean Wr	Std. Error	N
150	77.856	1.639	2
175	86.090	2.538	6
200	95.035	1.319	5
225	90.217	3.687	5
250	98.354	1.826	7
275	90.033	2.756	6
300	90.624	2.774	10
325	89.179	3.153	6
350	89.630	3.227	7
375	85.002	1.440	15
400	85.573	2.940	9
425	86.248	4.453	6
450	82.042	2.584	2
475	83.834	3.122	3
500	81.072	2.726	7
525			0
550	52.416		1
575			0
600	58.102		1
Total =			98

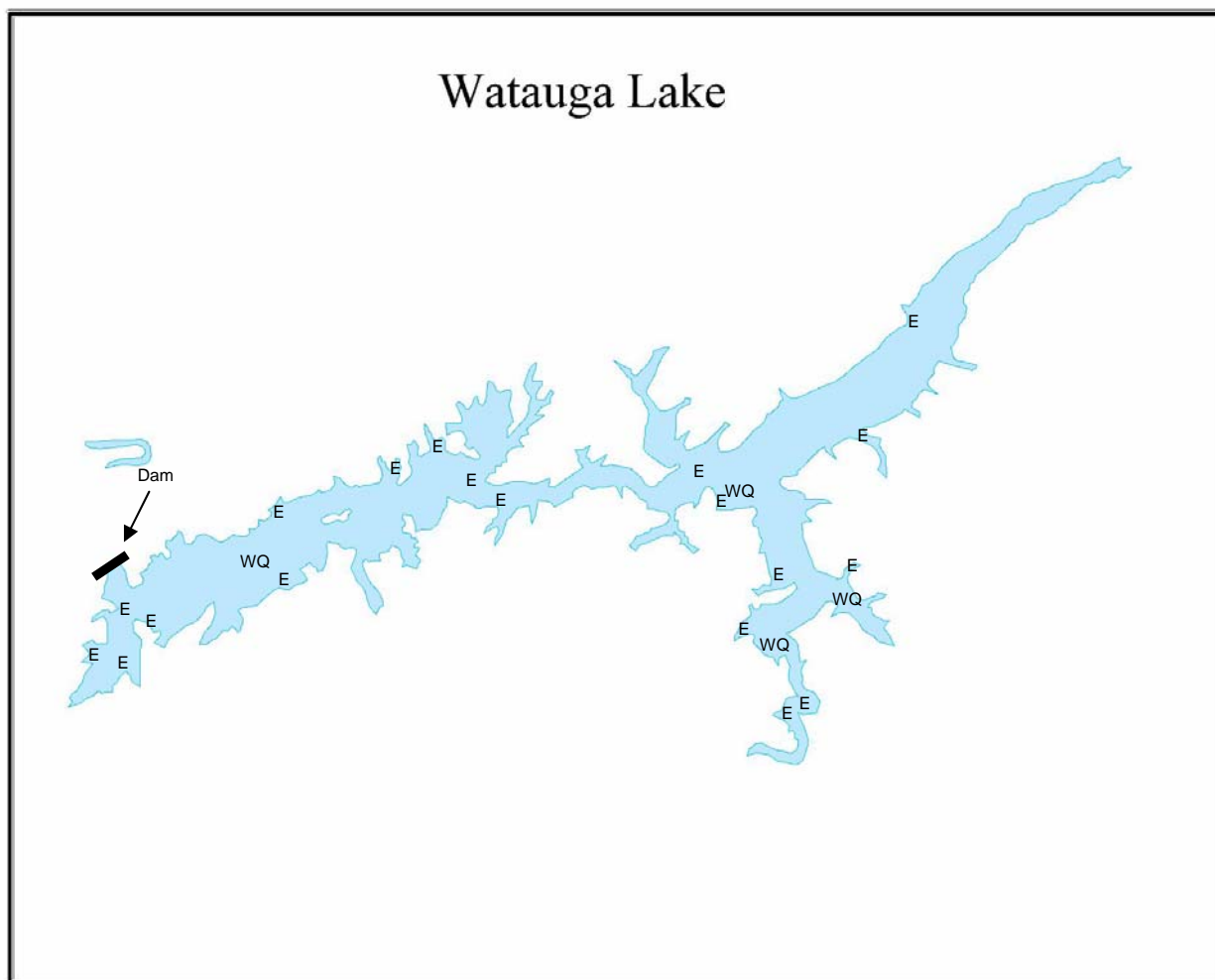
Table 7. Watauga Reservoir fish habitat enhancement summary for 2006.

Location	New Sites			Renovated Sites			Expanded Sites		
	Number	Units	Acres	Number	Units	Acres	Number	Units	Acres
WRM 37.0 R*				1	280	5.60			
<i>Total</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>280</i>	<i>6</i>	<i>0</i>	<i>0</i>	<i>0</i>

*Christmas Trees

Figures

Figure 1. Sites sampled on Watauga Reservoir in 2006.



E = Electrofishing
WQ = Water Quality

Largemouth Bass

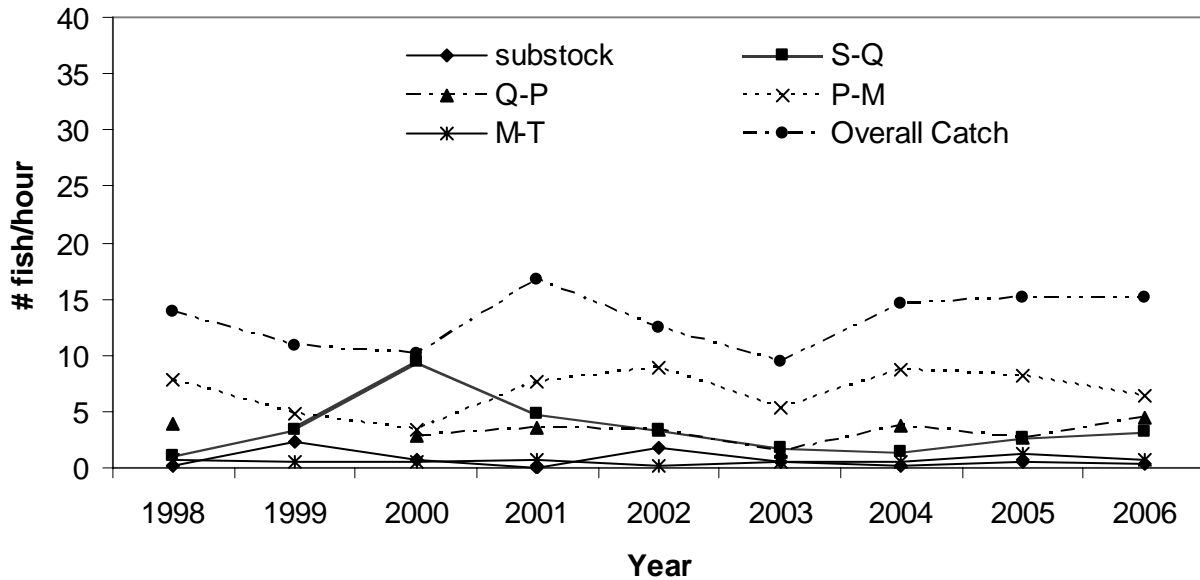


Figure 2. Largemouth bass RSD values by incremental length category in Watauga Reservoir, 1998 - 2006.

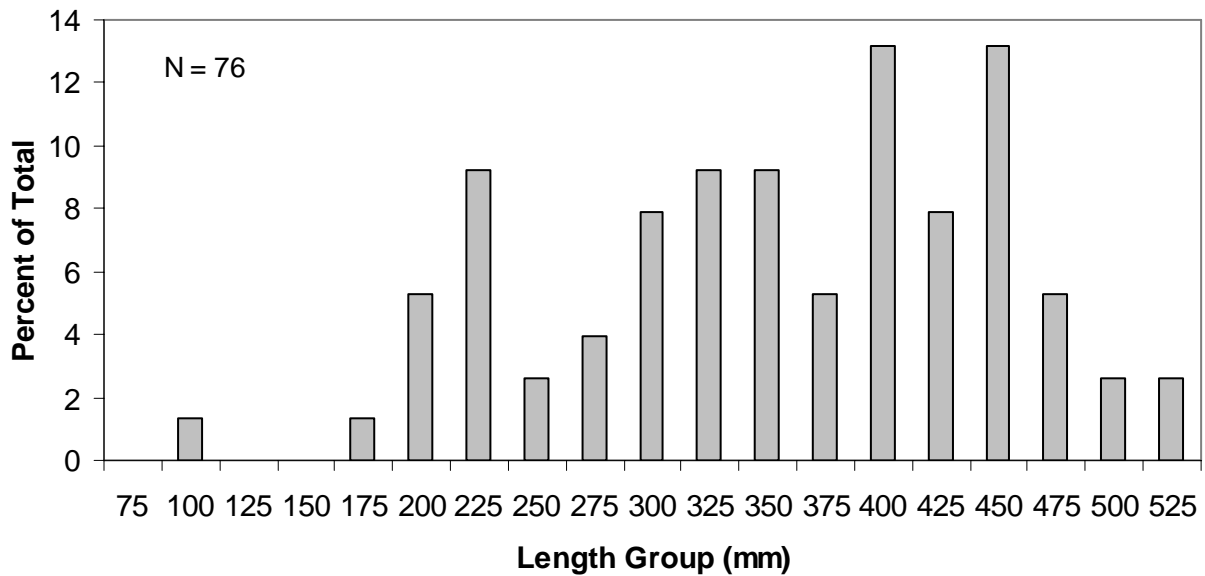


Figure 3. Largemouth bass length frequency by percent in Watauga Reservoir, spring 2006.

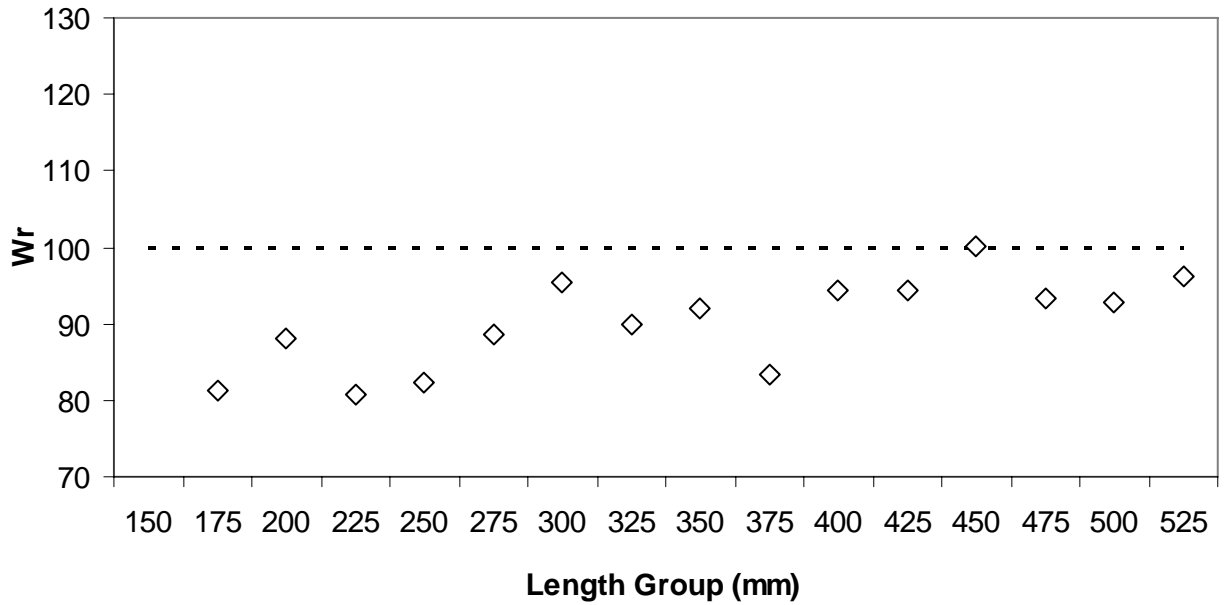


Figure 4. Largemouth bass mean relative weights (Wr) in Watauga Reservoir, spring 2006.

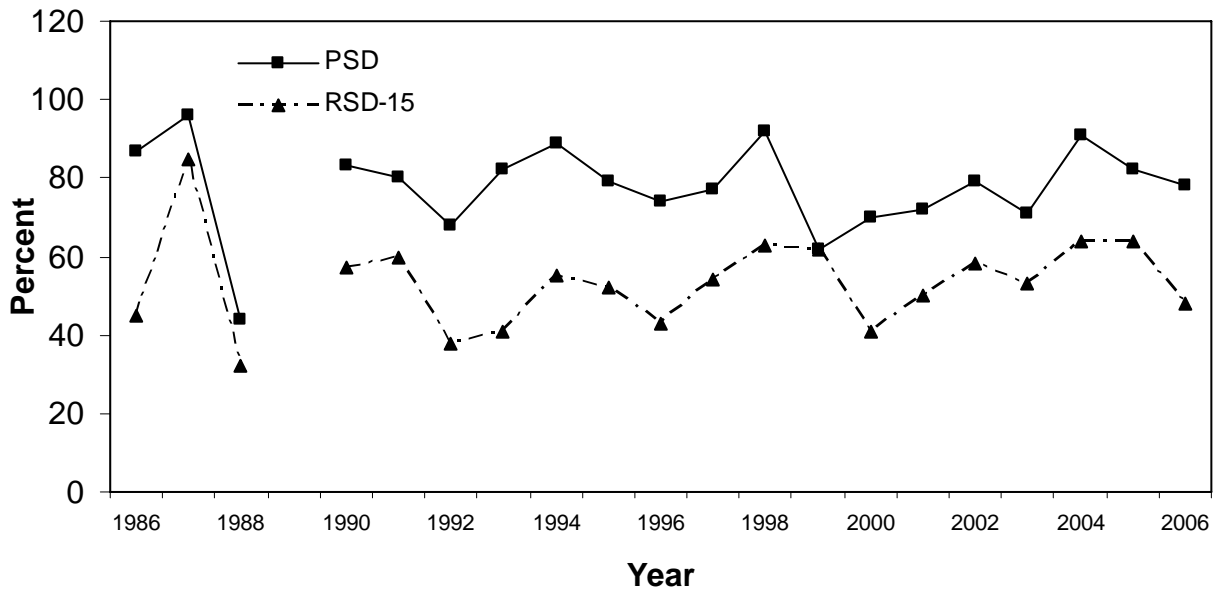


Figure 5. Largemouth bass traditional PSD and RSD-15 values in Watauga Reservoir 1986 – 2006.

Smallmouth Bass

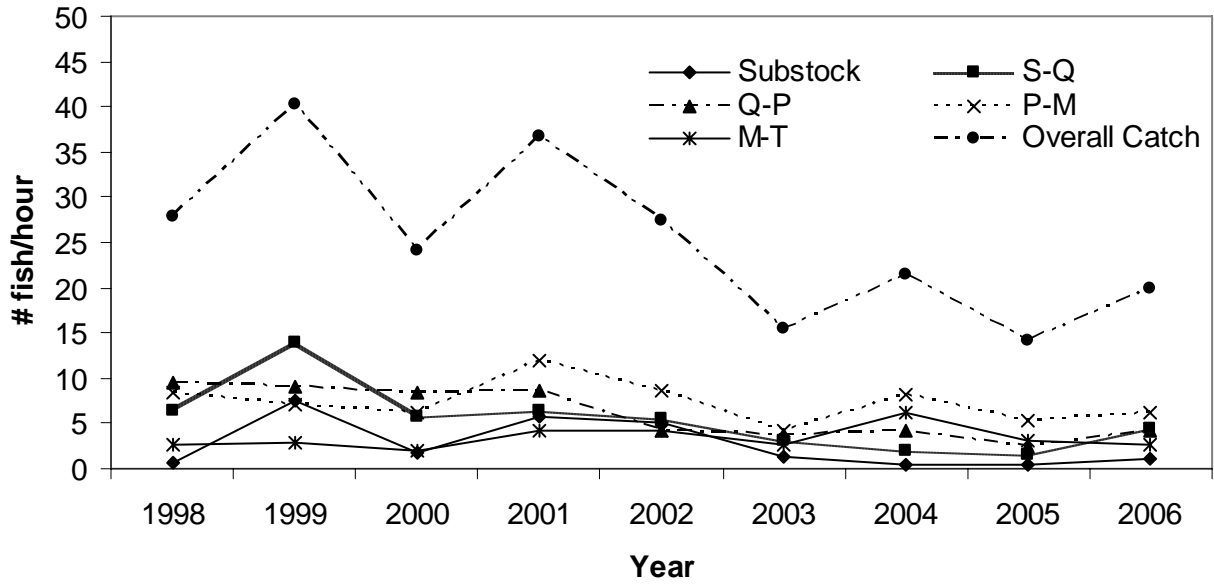


Figure 6. Smallmouth bass RSD values by incremental length category in Watauga Reservoir, 1998 - 2006.

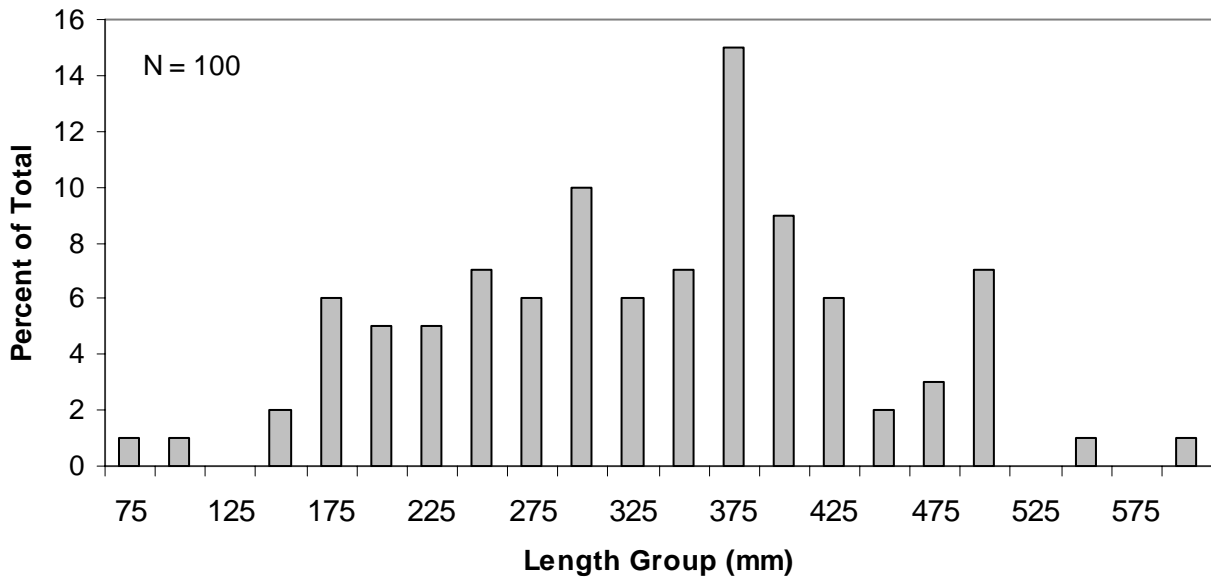


Figure 7. Smallmouth bass length frequency by percent in Watauga Reservoir, spring 2006.

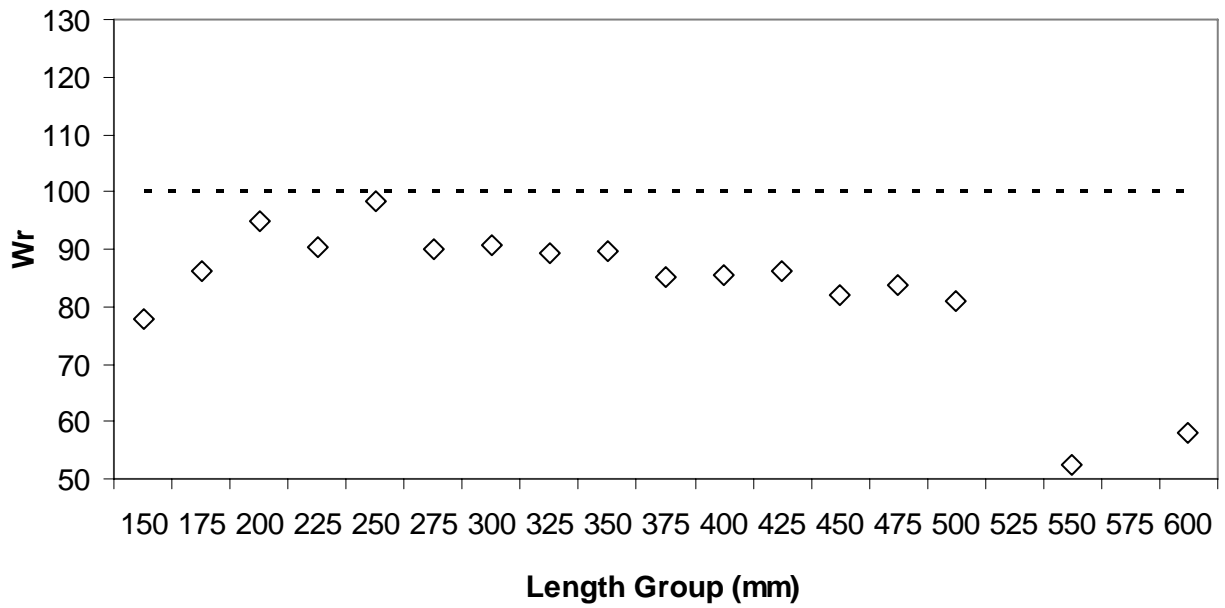


Figure 8. Smallmouth bass mean relative weights (Wr) in Watauga Reservoir, spring 2006.

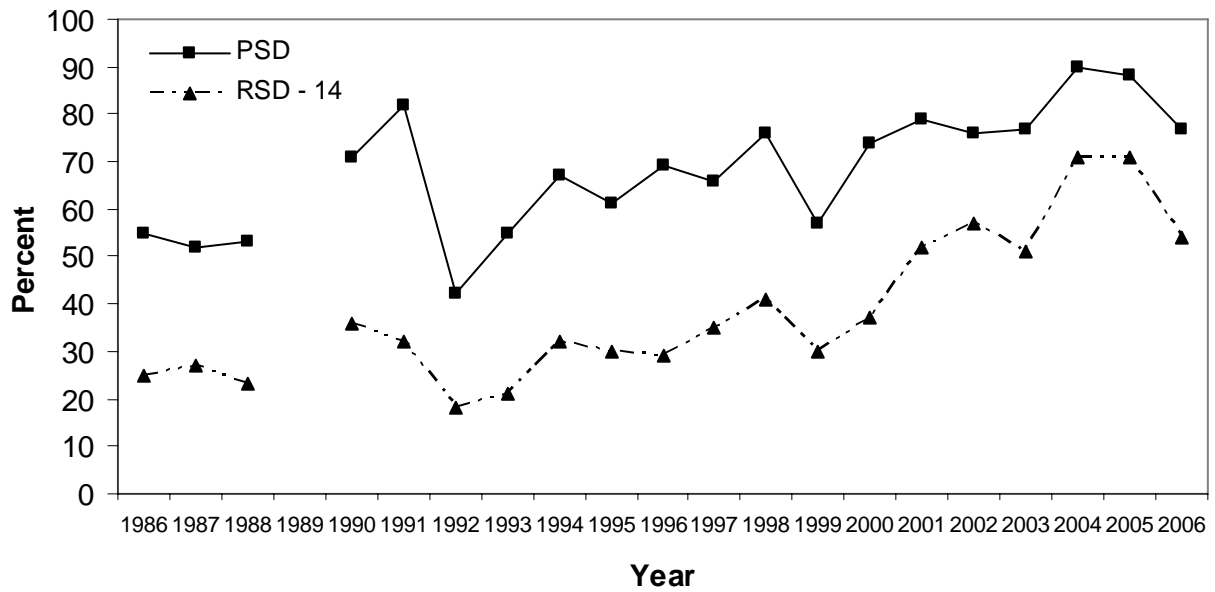


Figure 9. Smallmouth bass traditional PSD and RSD - 14 values in Watauga Reservoir 1987 – 2006.

Appendix A
Water Quality

Table A1. Watauga Reservoir, water quality data at **WRM 39**, July 7, 2006.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	24.9	267	8.7	W39	2.5	1040
1	25.0	268	8.8			
2	24.9	269	8.8			
3	24.9	269	8.8			
4	24.8	269	8.9			
5	24.8	269	8.9			
6	24.6	269	8.9			
7	20.5	270	9.4			
8	19.0	265	8.3			
9	17.7	263	8.3			
10	17.0	259	8.0			
11	16.2	257	7.9			
12	15.7	254	7.7			
13	15.2	252	7.6			
14	14.8	251	7.4			
15	14.3	249	7.3			
16	13.9	248	7.3			
17	13.2	248	7.4			
18	12.6	245	7.7			
19	11.5	247	8.0			
20	11.1	244	8.4			
21	10.6	243	8.6			
22	10.1	243	8.8			
23	9.5	243	9.0			
24	9.2	242	9.0			
25	8.8	241	9.1			
26	8.6	240	9.2			
27	8.5	239	9.3			
28	8.4	238	9.3			
29	8.4	237	9.4			
30	8.3	237	9.3			

Table A2. Watauga Reservoir, water quality data at **WRM 45**, July 7, 2006.

Depth (m)	Temp C	Cond	DO	Site	Secchi (m)	Time
0	26.1	271	8.5	W45	2.8	1140
1	25.9	272	8.6			
2	25.8	272	8.8			
3	25.6	272	8.8			
4	25.5	272	8.8			
5	23.3	273	8.4			
6	21.7	270	6.7			
7	20.2	269	6.0			
8	19.0	266	5.4			
9	17.8	266	5.5			
10	16.9	262	5.8			
11	16.1	261	6.0			
12	15.7	260	6.2			
13	15.3	258	6.3			
14	14.9	255	6.3			
15	14.6	254	6.3			
16	13.7	254	6.6			
17	12.8	253	6.9			
18	12.2	250	7.2			
19	11.9	249	7.3			
20	10.5	252	7.8			
21	10.1	248	8.0			
22	9.6	247	8.1			
23	9.3	246	8.1			
24	9.2	245	8.1			
25	8.9	245	8.1			
26	8.6	245	8.1			
27	8.5	244	8.0			
28	8.4	243	8.0			
29	8.3	241	7.7			
30	8.2	241	7.7			

Table A3. Watauga Reservoir, water quality data at **WRM 49**, July 7, 2006.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.7	269	8.9	W49	2.6	1300
1	26.4	271	9.1			
2	26.0	272	9.2			
3	25.9	272	9.2			
4	25.8	272	9.1			
5	23.1	272	6.5			
6	21.3	271	6.5			
7	19.8	267	6.3			
8	18.4	263	4.7			
9	17.3	260	4.4			
10	16.7	259	4.5			
11	16.1	258	4.9			
12	15.6	255	5.0			
13	15.2	253	4.9			
14	14.8	251	6.5			
15	14.1	250	4.8			
16	13.8	248	4.9			
17	13.1	248	5.2			
18	12.7	247	5.0			
19	11.9	248	3.5			
20	11.3	248	3.1			
21	10.9	248	2.8			
22	10.2	249	2.3			
23	9.5	251	2.4			
24	9.4	247	2.9			
25	9.1	247	3.1			
26	9.0	246	3.3			
27	Bottom					
28						
29						
30						

Table A4. Watauga Reservoir, water quality data at **ERM 2**, July 7, 2006.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	26.3	273	9.0	E2	2.6	1340
1	26.2	274	9.0			
2	25.8	275	9.0			
3	25.6	275	9.0			
4	25.5	274	8.8			
5	23.3	276	7.3			
6	21.1	274	6.7			
7	19.9	270	6.4			
8	18.5	267	5.3			
9	17.4	265	5.1			
10	16.5	263	5.1			
11	15.9	259	5.3			
12	15.5	258	5.4			
13	15.3	256	5.5			
14	14.8	255	5.7			
15	14.5	253	5.7			
16	14.2	251	5.6			
17	13.7	251	5.5			
18	13.1	250	5.2			
19	12.3	251	4.9			
20	11.4	251	4.9			
21	10.4	251	5.0			
22	10.0	249	5.2			
23	9.5	246	5.4			
24	9.0	246	5.5			
25	Bottom					
26						
27						
28						
29						
30						

Table A5. Watauga Reservoir, water quality data at **WRM 39**, August 4, 2006.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	27.1	316	8.7	W39	2.5	0920
1	27.1	317	8.7			
2	27.1	317	8.6			
3	27.0	317	8.5			
4	26.9	317	8.5			
5	25.9	318	8.6			
6	24.7	317	8.3			
7	23.5	317	7.2			
8	21.7	316	6.9			
9	19.5	316	5.3			
10	18.2	310	5.3			
11	17.1	308	5.6			
12	16.4	306	5.8			
13	16.0	304	6.1			
14	15.5	303	6.3			
15	15.0	300	6.6			
16	14.6	299	6.5			
17	14.2	298	6.7			
18	13.7	297	6.9			
19	13.3	296	7.0			
20	12.5	296	7.3			
21	11.9	294	7.7			
22	10.8	295	8.3			
23	10.2	293	8.7			
24	9.9	291	9.1			
25	9.4	290	9.3			
26	9.2	289	9.1			
27	9.0	288	9.1			
28	8.9	287	9.1			
29	8.7	286	9.1			
30	8.7	286	9.1			

Table A6. Watauga Reservoir, water quality data at **WRM 45**, August 4, 2006.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	27.8	311	9.5	W45	2.0	1025
1	27.7	318	9.6			
2	27.5	319	9.6			
3	27.5	320	9.5			
4	27.5	320	9.5			
5	25.9	322	8.8			
6	25.1	320	7.8			
7	22.0	326	5.2			
8	20.4	320	3.2			
9	19.0	317	2.8			
10	17.9	312	3.0			
11	17.0	310	3.7			
12	16.2	308	4.4			
13	15.6	304	5.1			
14	15.2	301	5.3			
15	14.9	299	5.4			
16	14.5	297	5.6			
17	14.0	295	5.8			
18	13.5	294	6.1			
19	12.9	294	6.3			
20	12.3	293	6.6			
21	11.5	293	7.0			
22	11.0	292	7.2			
23	10.7	292	7.3			
24	10.3	290	7.4			
25	9.8	290	7.4			
26	9.6	289	7.3			
27	9.4	289	7.3			
28	9.1	289	7.3			
29	9.0	289	7.2			
30	8.8	289	7.2			

Table A7. Watauga Reservoir, water quality data at **WRM 49**, August 4, 2006.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	28.7	302	9.3	W49	1.9	1125
1	28.4	312	9.5			
2	28.2	315	9.5			
3	28.1	318	9.3			
4	26.9	320	8.5			
5	25.6	320	5.9			
6	24.3	321	2.9			
7	22.7	319	0.8			
8	20.2	319	1.0			
9	19.1	315	0.9			
10	18.0	310	1.1			
11	17.2	309	1.4			
12	16.6	305	1.4			
13	16.0	303	2.3			
14	15.2	330	3.2			
15	14.8	315	2.5			
16	14.4	308	2.7			
17	13.6	308	2.8			
18	13.2	299	1.8			
19	12.6	300	0.2			
20	12.4	301	0.1			
21	12.0	303	0.1			
22	11.6	305	0.1			
23	10.8	308	0.1			
24	10.2	308	0.1			
25	9.5	305	0.1			
26	9.5	302	0.1			
27	Bottom					
28						
29						
30						

Table A8. Watauga Reservoir, water quality data at **ERM 2**, August 4, 2006.

Depth (m)	Temp ©	Cond	DO	Site	Secchi (m)	Time
0	28.9	314	9.4	E2	2.4	1240
1	27.9	320	9.7			
2	27.9	321	9.7			
3	27.6	322	10.4			
4	26.8	323	10.4			
5	26.3	323	9.1			
6	25.2	324	6.9			
7	23.9	325	4.8			
8	22.2	326	2.6			
9	20.3	322	1.3			
10	18.4	319	1.2			
11	17.2	317	1.7			
12	16.6	313	2.4			
13	15.9	310	3.1			
14	15.2	307	3.5			
15	14.9	305	3.1			
16	14.3	304	2.8			
17	13.7	304	2.4			
18	12.8	302	2.1			
19	12.3	301	1.9			
20	11.3	301	2.1			
21	10.5	300	2.9			
22	10.3	298	3.3			
23						
24						
25						
26						
27						
28						
29						
30						

No water quality taken in September 2006.

Figure A1. Watauga Reservoir water quality data at WRM 39, July 2006.

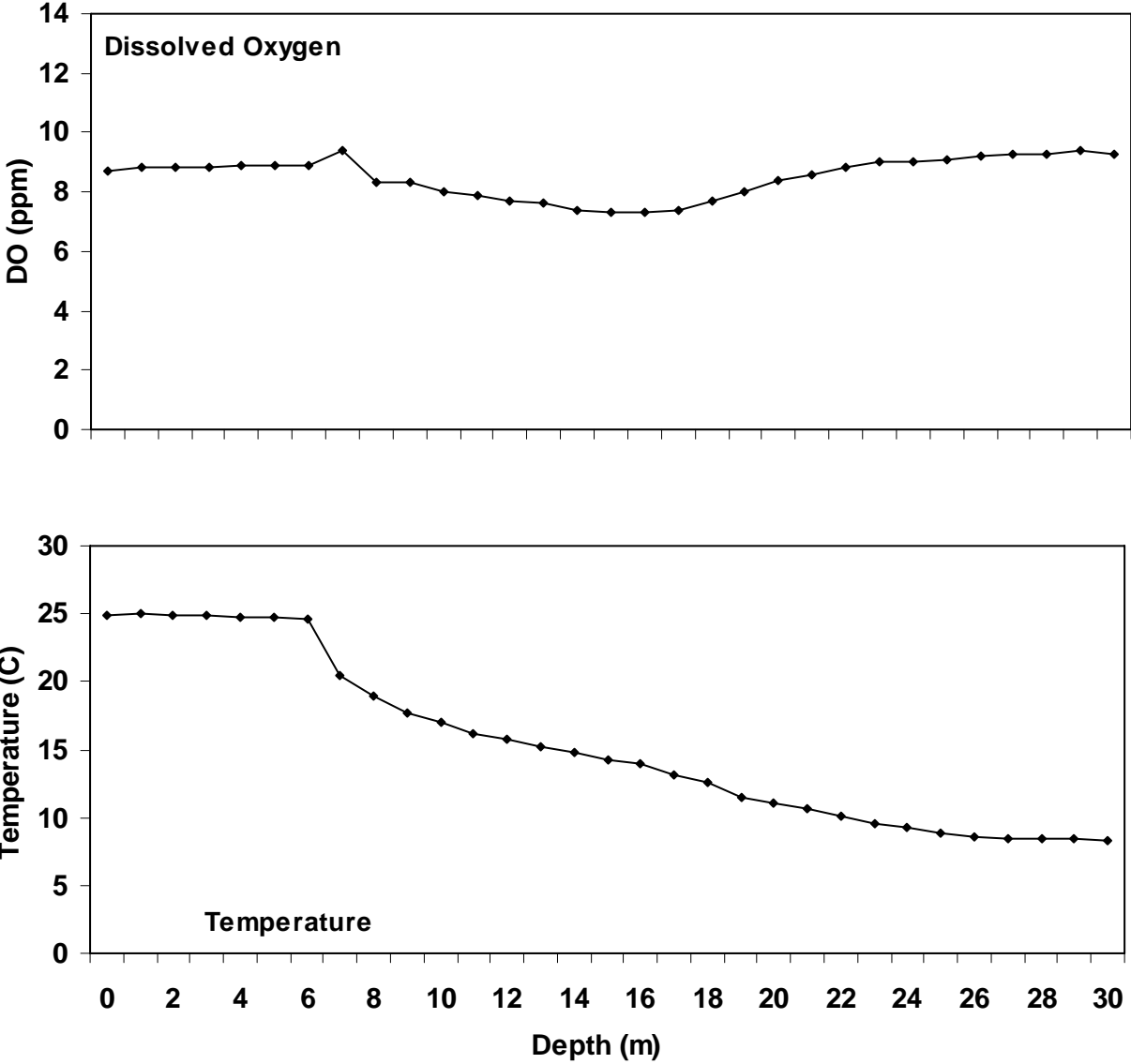


Figure A2. Watauga Reservoir water quality data at WRM 45, July 2006.

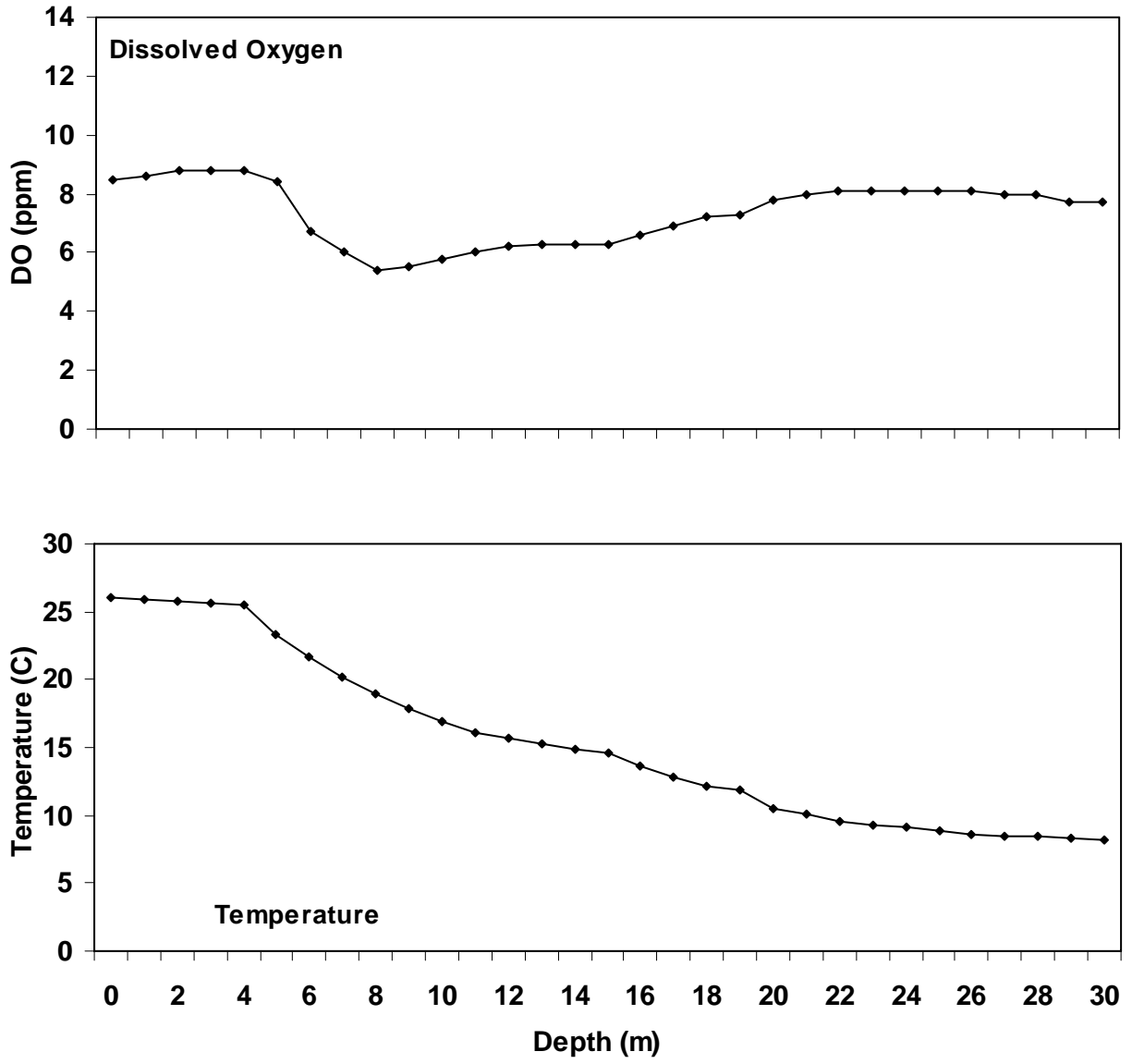


Figure A3. Watuaga Reservoir water quality data at WRM 49, July 2006.

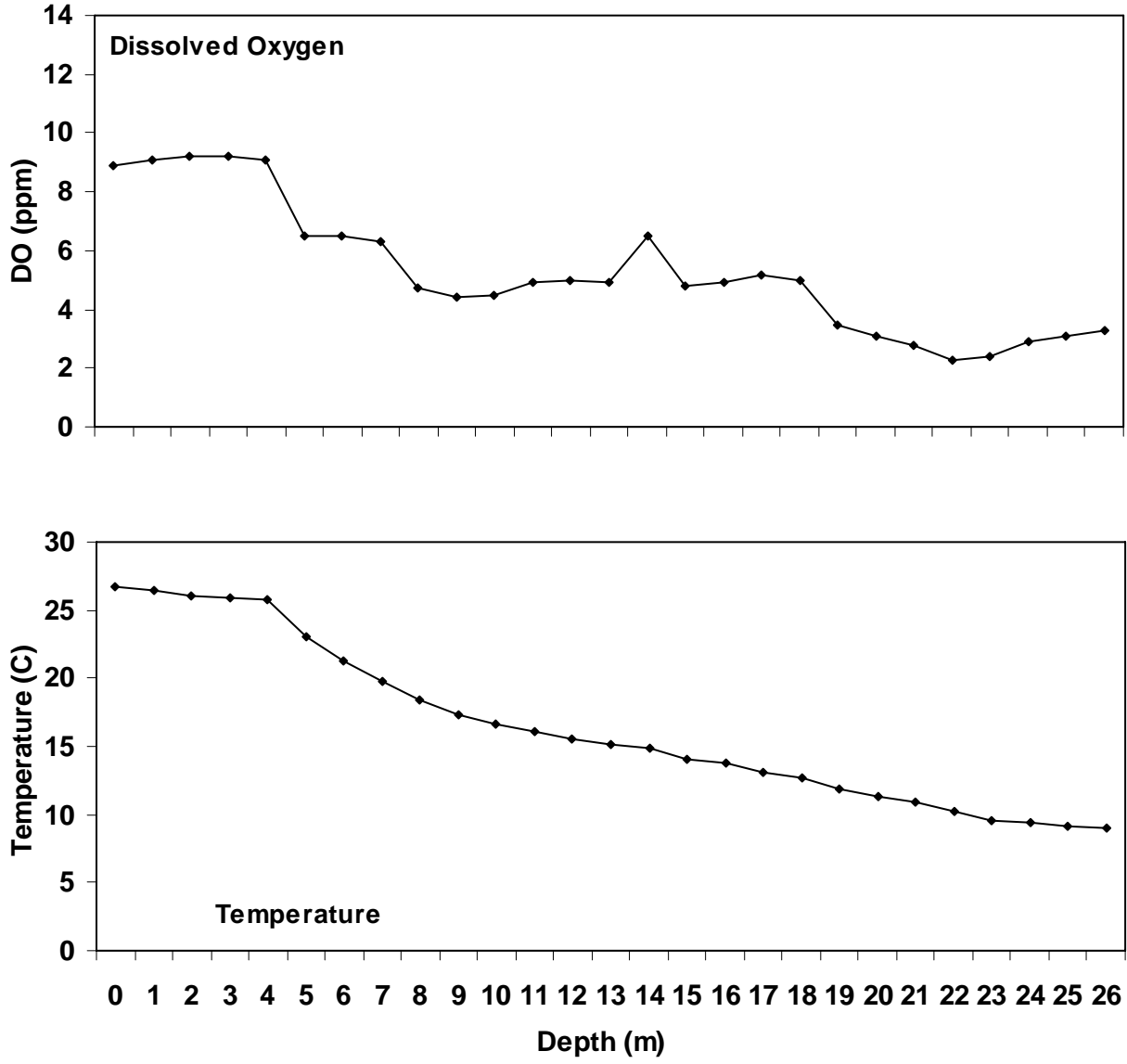


Figure A4. Watauga Reservoir water quality data at ERM 2, July 2006.

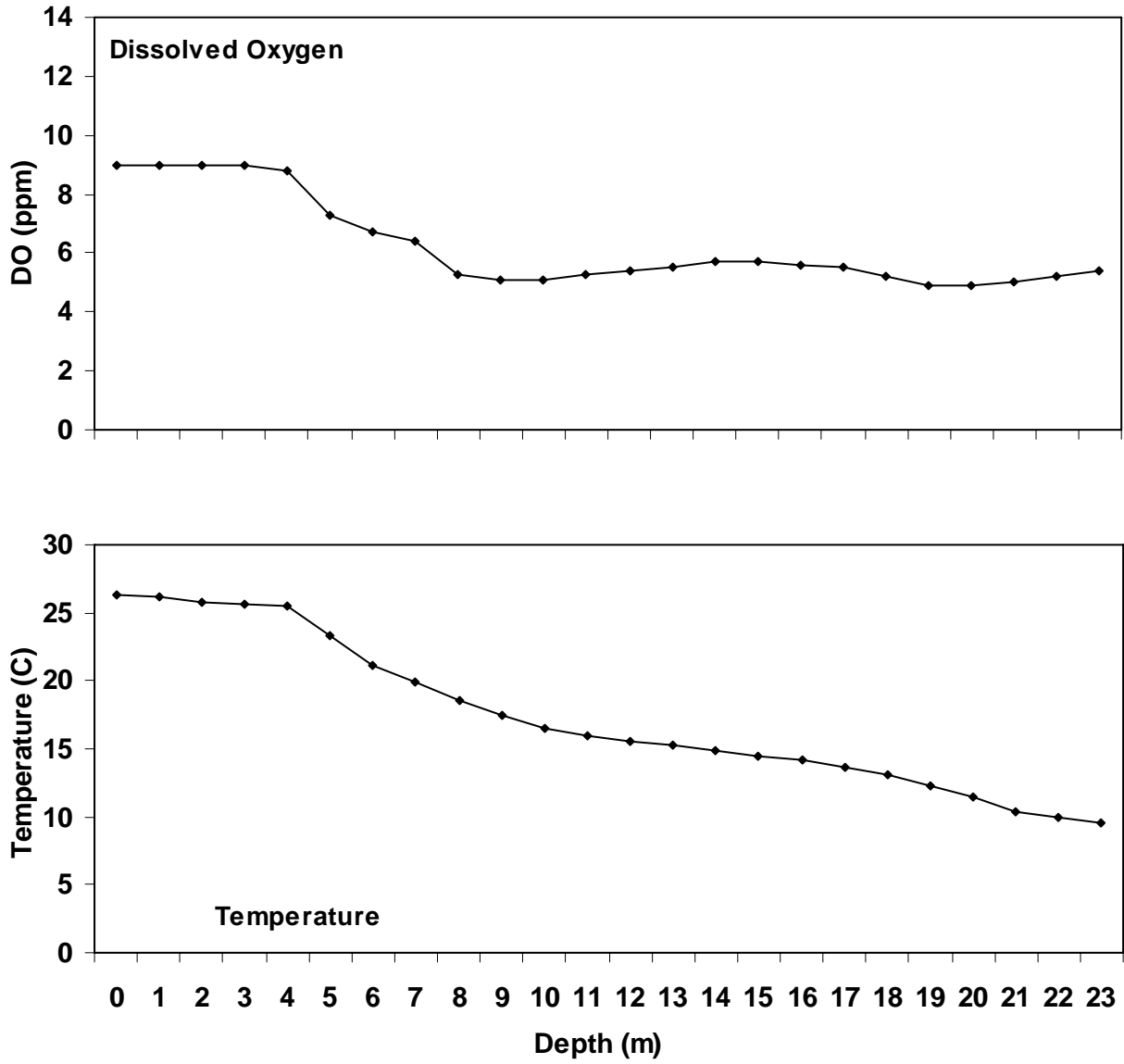


Figure A5. Watauga Reservoir water quality data at WRM 39, August 2006.

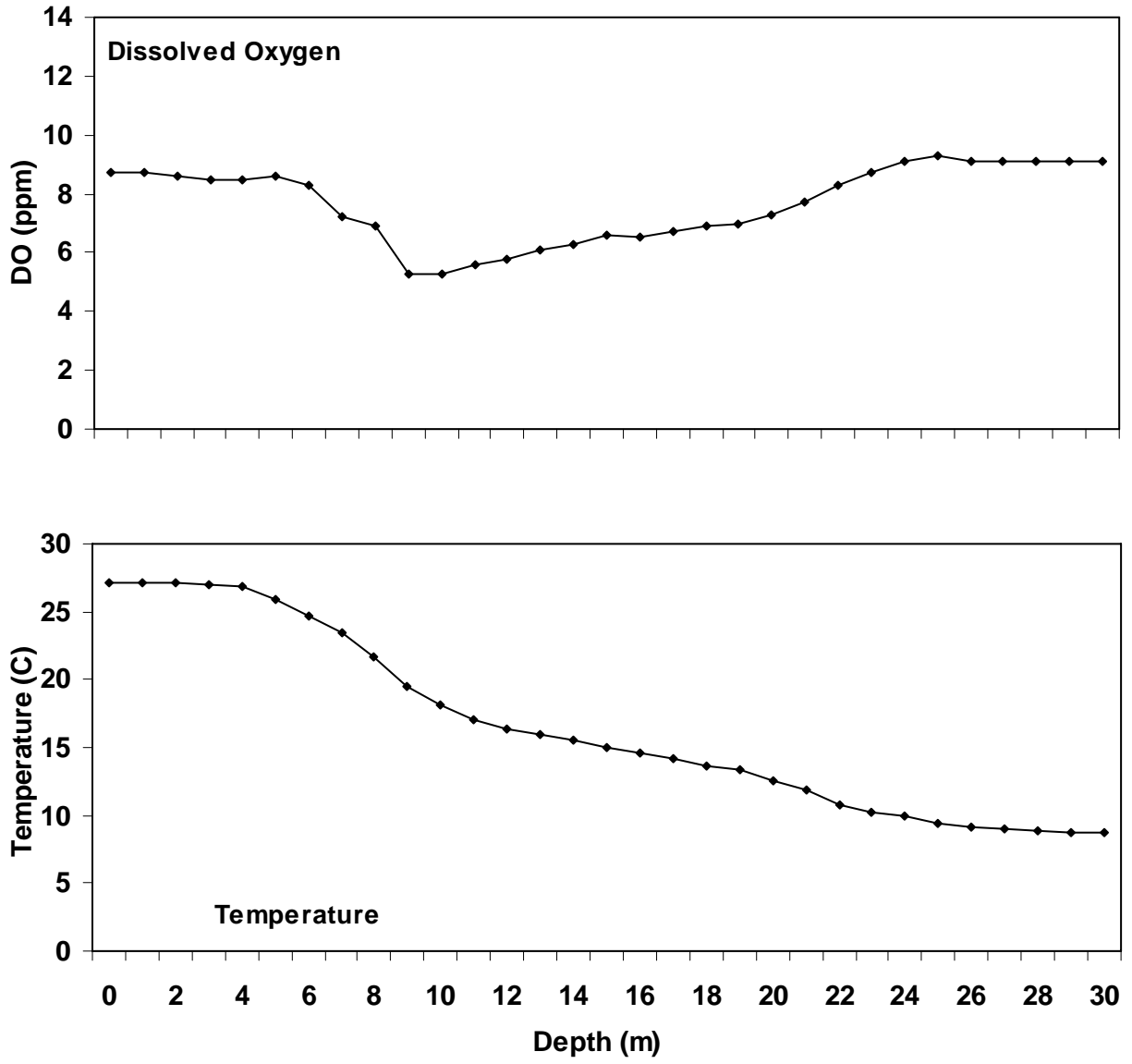


Figure A6. Watauga Reservoir water quality data at WRM 45, August 2006

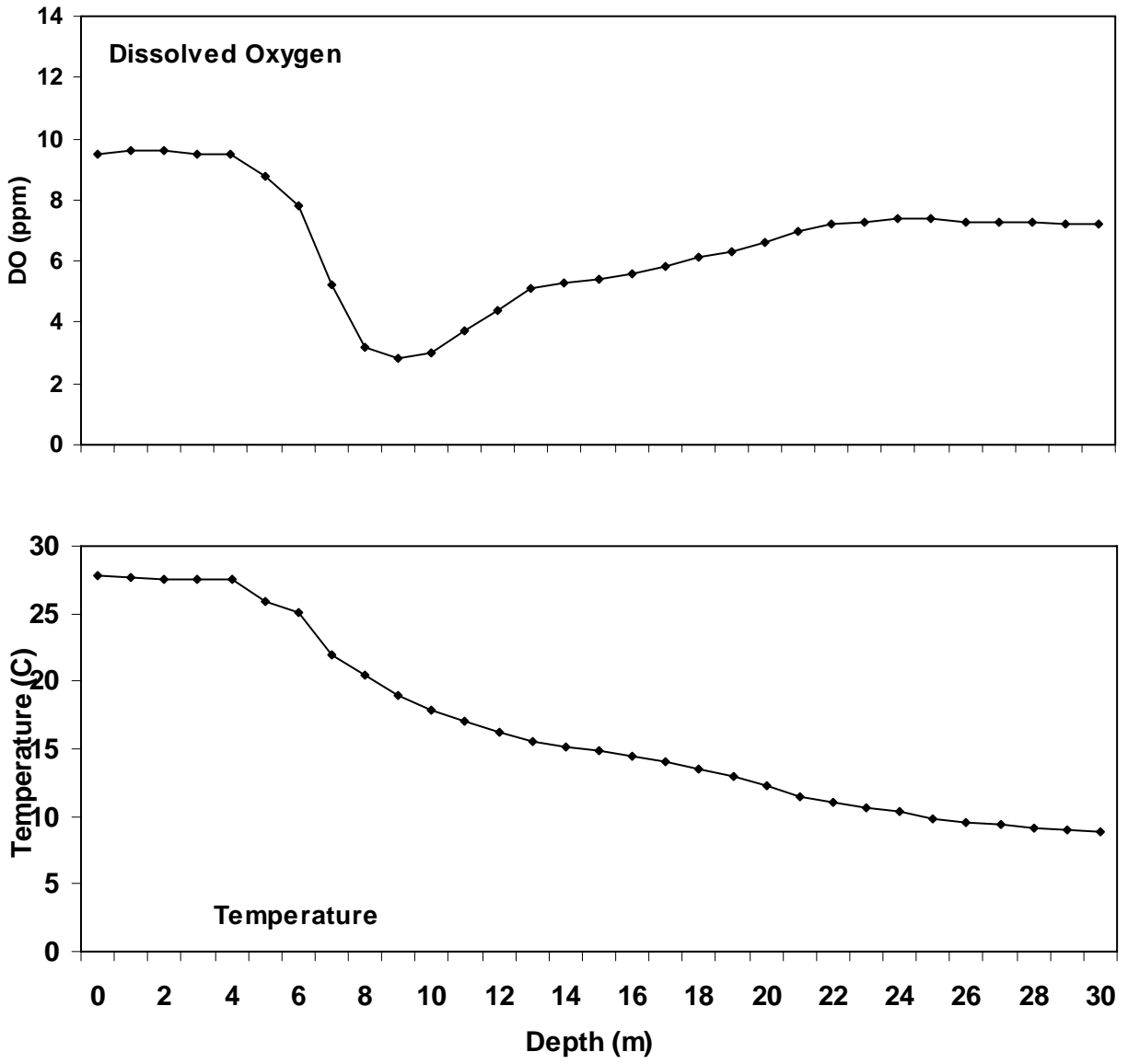


Figure A7. Watauga Reservoir water quality data at WRM 49, August 2006.

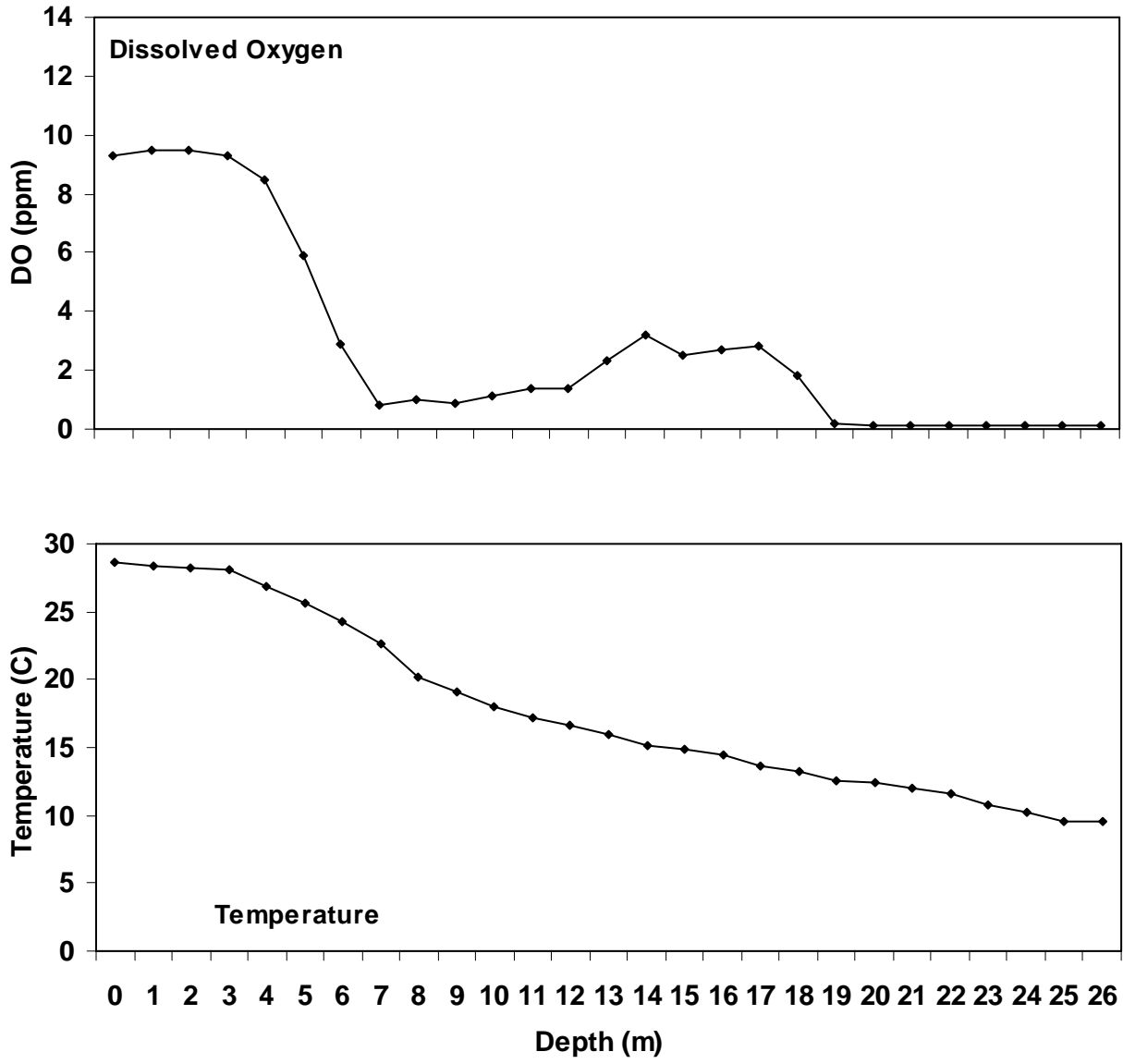
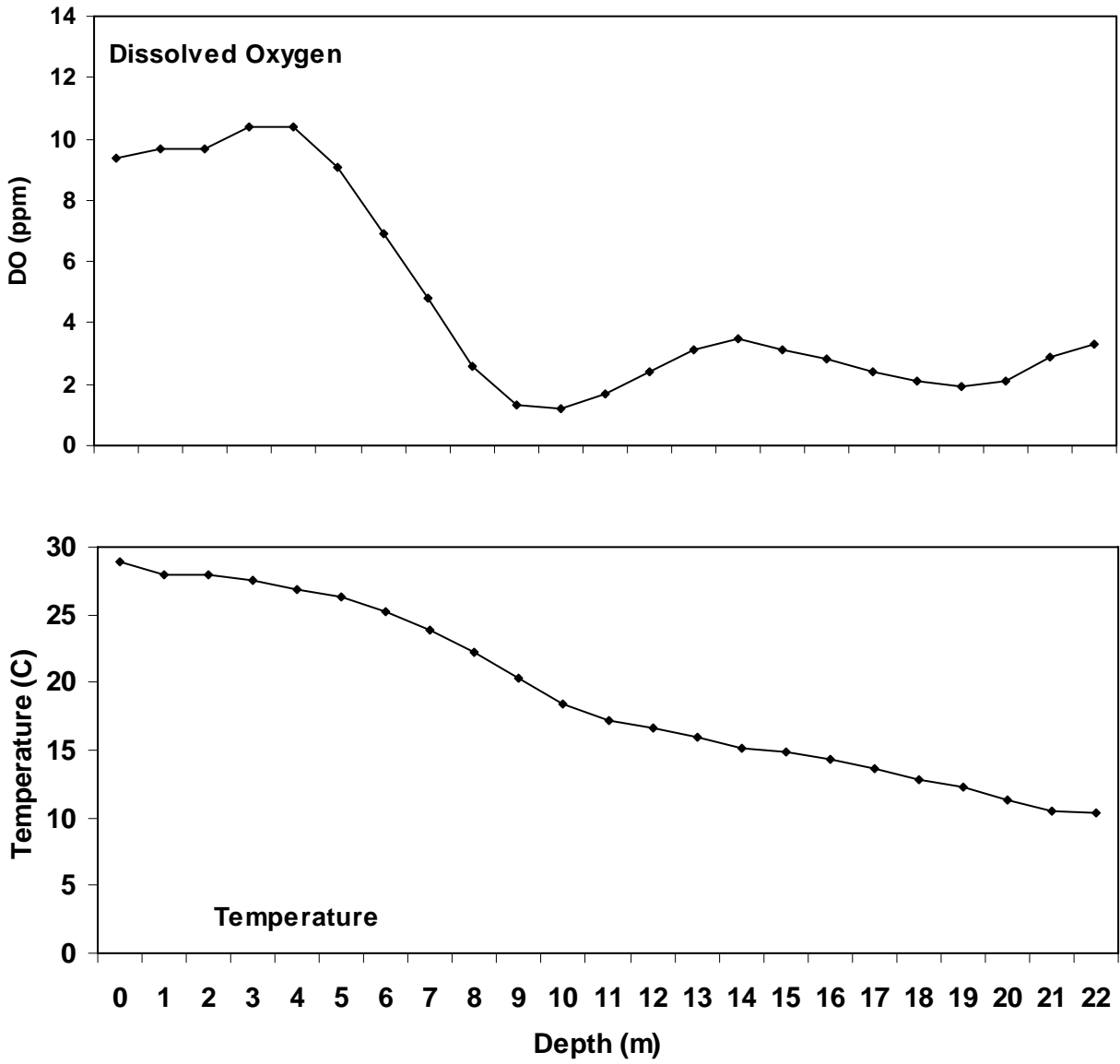


Figure A8. Watauga Reservoir water quality data at ERM 2, August 2006.



Appendix B
Reservoir Elevations

Table B1. Watauga Reservoir elevation data for 2006. Data is courtesy of TVA.

Elevation	Month	Day	Elevation	Month	Day	Elevation	Month	Day
1947.79	January	1	1951.83	February	24	1956.62	April	19
1947.96	January	2	1952.00	February	25	1956.82	April	20
1948.24	January	3	1952.16	February	26	1957.09	April	21
1948.47	January	4	1951.91	February	27	1957.80	April	22
1948.66	January	5	1952.06	February	28	1958.44	April	23
1948.81	January	6	1952.20	March	1	1958.66	April	24
1948.95	January	7	1952.09	March	2	1958.66	April	25
1949.08	January	8	1952.17	March	3	1958.83	April	26
1949.17	January	9	1952.25	March	4	1959.67	April	27
1949.28	January	10	1952.35	March	5	1960.07	April	28
1949.36	January	11	1951.98	March	6	1960.16	April	29
1949.36	January	12	1951.89	March	7	1960.03	April	30
1949.46	January	13	1951.87	March	8	1959.82	May	1
1949.57	January	14	1951.85	March	9	1959.52	May	2
1949.71	January	15	1951.77	March	10	1959.24	May	3
1949.67	January	16	1951.85	March	11	1958.94	May	4
1949.98	January	17	1951.78	March	12	1959.03	May	5
1950.97	January	18	1951.63	March	13	1959.24	May	6
1951.04	January	19	1951.56	March	14	1959.48	May	7
1950.91	January	20	1951.67	March	15	1959.51	May	8
1951.17	January	21	1951.51	March	16	1959.40	May	9
1951.42	January	22	1951.51	March	17	1959.32	May	10
1951.06	January	23	1951.51	March	18	1959.19	May	11
1951.18	January	24	1951.53	March	19	1959.06	May	12
1951.19	January	25	1951.61	March	20	1959.22	May	13
1951.10	January	26	1951.78	March	21	1959.32	May	14
1950.95	January	27	1952.00	March	22	1959.32	May	15
1951.04	January	28	1952.23	March	23	1959.35	May	16
1951.09	January	29	1952.45	March	24	1959.35	May	17
1951.12	January	30	1952.67	March	25	1959.37	May	18
1951.12	January	31	1952.84	March	26	1959.41	May	19
1951.07	February	1	1952.91	March	27	1959.58	May	20
1951.15	February	2	1953.07	March	28	1959.75	May	21
1951.30	February	3	1953.27	March	29	1959.69	May	22
1951.75	February	4	1953.34	March	30	1959.59	May	23
1952.12	February	5	1953.42	March	31	1959.49	May	24
1952.02	February	6	1953.58	April	1	1959.39	May	25
1951.83	February	7	1953.68	April	2	1959.34	May	26
1951.61	February	8	1953.88	April	3	1959.35	May	27
1951.54	February	9	1954.12	April	4	1959.46	May	28
1951.43	February	10	1954.33	April	5	1959.49	May	29
1951.48	February	11	1954.54	April	6	1959.41	May	30
1951.51	February	12	1954.69	April	7	1959.32	May	31
1951.31	February	13	1954.94	April	8	1959.24	June	1
1951.17	February	14	1955.18	April	9	1959.22	June	2
1951.23	February	15	1955.32	April	10	1959.24	June	3
1951.36	February	16	1955.50	April	11	1959.39	June	4
1951.57	February	17	1955.64	April	12	1959.41	June	5
1951.58	February	18	1955.79	April	13	1959.41	June	6
1951.53	February	19	1955.93	April	14	1959.39	June	7
1951.27	February	20	1956.07	April	15	1959.37	June	8
1951.26	February	21	1956.19	April	16	1959.34	June	9
1951.45	February	22	1956.32	April	17	1959.28	June	10
1951.53	February	23	1956.40	April	18	1959.31	June	11

Table B1. Continued.

Elevation	Month	Day	Elevation	Month	Day	Elevation	Month	Day
1959.73	June	12	1955.52	August	5	1950.75	September	28
1959.70	June	13	1955.52	August	6	1950.79	September	29
1959.53	June	14	1955.24	August	7	1950.72	September	30
1959.39	June	15	1954.94	August	8	1950.79	October	1
1959.31	June	16	1954.68	August	9	1950.82	October	2
1959.22	June	17	1954.42	August	10	1950.86	October	3
1959.28	June	18	1954.20	August	11	1950.89	October	4
1959.19	June	19	1954.15	August	12	1950.97	October	5
1959.18	June	20	1954.20	August	13	1951.00	October	6
1959.13	June	21	1953.99	August	14	1950.91	October	7
1959.06	June	22	1953.76	August	15	1950.94	October	8
1959.13	June	23	1953.56	August	16	1951.00	October	9
1959.04	June	24	1953.34	August	17	1951.01	October	10
1958.94	June	25	1953.14	August	18	1951.06	October	11
1959.64	June	26	1953.05	August	19	1951.04	October	12
1959.79	June	27	1953.01	August	20	1950.95	October	13
1959.85	June	28	1952.67	August	21	1950.85	October	14
1959.90	June	29	1952.35	August	22	1950.86	October	15
1959.73	June	30	1952.05	August	23	1950.94	October	16
1959.56	July	1	1951.81	August	24	1951.12	October	17
1959.46	July	2	1951.58	August	25	1951.24	October	18
1959.34	July	3	1951.42	August	26	1951.37	October	19
1959.24	July	4	1951.37	August	27	1951.61	October	20
1959.40	July	5	1951.09	August	28	1951.69	October	21
1959.52	July	6	1950.78	August	29	1951.77	October	22
1959.59	July	7	1950.56	August	30	1951.74	October	23
1959.49	July	8	1950.75	August	31	1951.72	October	24
1959.35	July	9	1950.79	September	1	1951.75	October	25
1959.20	July	10	1950.73	September	2	1951.58	October	26
1959.18	July	11	1950.76	September	3	1951.51	October	27
1959.16	July	12	1950.97	September	4	1951.48	October	28
1958.89	July	13	1951.54	September	5	1951.48	October	29
1958.80	July	14	1951.57	September	6	1951.56	October	30
1958.53	July	15	1951.67	September	7	1951.60	October	31
1958.56	July	16	1951.77	September	8	1951.75	November	1
1958.49	July	17	1951.65	September	9	1951.83	November	2
1958.22	July	18	1951.51	September	10	1951.83	November	3
1958.03	July	19	1951.54	September	11	1951.86	November	4
1957.85	July	20	1951.58	September	12	1951.91	November	5
1957.81	July	21	1951.53	September	13	1951.97	November	6
1957.71	July	22	1951.09	September	14	1952.06	November	7
1957.69	July	23	1950.94	September	15	1952.75	November	8
1957.51	July	24	1950.80	September	16	1953.10	November	9
1957.31	July	25	1950.64	September	17	1953.44	November	10
1957.09	July	26	1950.46	September	18	1953.75	November	11
1956.85	July	27	1950.48	September	19	1954.09	November	12
1956.62	July	28	1950.46	September	20	1954.26	November	13
1956.51	July	29	1950.49	September	21	1954.35	November	14
1956.54	July	30	1950.52	September	22	1954.29	November	15
1956.37	July	31	1950.46	September	23	1954.93	November	16
1956.19	August	1	1950.58	September	24	1955.06	November	17
1956.05	August	2	1950.63	September	25	1955.20	November	18
1955.86	August	3	1950.66	September	26	1955.30	November	19
1955.66	August	4	1950.68	September	27	1954.99	November	20

Table B1. Continued.

Elevation	Month	Day
1954.73	November	21
1954.43	November	22
1954.43	November	23
1954.44	November	24
1954.43	November	25
1954.37	November	26
1953.98	November	27
1953.60	November	28
1953.29	November	29
1953.27	November	30
1953.34	December	1
1953.29	December	2
1953.09	December	3
1952.73	December	4
1952.58	December	5
1952.36	December	6
1951.97	December	7
1951.63	December	8
1951.30	December	9
1951.30	December	10
1951.28	December	11
1951.26	December	12
1951.29	December	13
1951.26	December	14
1951.19	December	15
1951.25	December	16
1951.30	December	17
1951.19	December	18
1951.19	December	19
1950.99	December	20
1951.03	December	21
1951.21	December	22
1951.44	December	23
1951.53	December	24
1951.55	December	25
1951.36	December	26
1951.36	December	27
1951.38	December	28
1951.35	December	29
1951.43	December	30
1951.59	December	31

Figure B1. Watauga Reservoir daily reservoir elevations for 2006 (TVA data).

