

Fort Loudoun Reservoir

Annual Report 2005

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Fort Loudoun Reservoir - 2005

Largemouth Bass

Population Parameter	Annual Rating	Measure	Gear	Value
Recruitment	Excellent	Substock CPUE	Electrofishing	25.0/hr
Structure	Good	PSD	Electrofishing	72
Density	Excellent	CPUE \geq Stock Size (203 mm)	Electrofishing	89.3/hr
	Excellent	CPUE \geq Minimum Size Limit (356 mm)	Electrofishing	32.3/hr
Number Caught	Good	Angler Catch	Creel Survey	90,839
Quality	Excellent	Average Weight	Creel Survey	2.6 lb
Value of Fishery	Excellent	Trip Expenditures (\$)	Creel Survey	\$313,540

Fishery Forecast: Low harvest due to contaminant problems, good recruitment, and adequate forage should maintain the quality fishery in the future.

Management Recommendations: No change in the creel limit is planned for the future.

Smallmouth Bass

Population Parameter	Annual Rating	Measure	Gear	Value
Recruitment	Poor	Substock CPUE	Electrofishing	0.3/hr
Structure	Good	PSD	Electrofishing	75
Density	Fair	CPUE \geq Stock Size (178 mm)	Electrofishing	6.7/hr
	Poor	CPUE \geq Minimum Size Limit (457 mm)	Electrofishing	0.0/hr
Number Caught	Fair	Angler Catch	Creel Survey	15,136
Quality	Good	Average Weight	Creel Survey	3.1 lb
Value of Fishery	Good	Trip Expenditures (\$)	Creel Survey	\$24,430

Fishery Forecast: Low harvest due to contaminant problems and adequate forage should maintain the quality fishery in the future. The new minimum size limit that went into effect in 2003 should help increase the density and improve the size structure of this important game fish.

Management Recommendations: No change in the creel limit is planned for the future.

White Crappie

Population Parameter	Annual Rating	Measure	Gear	Value
Structure	Good	PSD	Electrofishing	98
Density	Good	CPUE > Stock Size (127 mm)	Electrofishing	15.0/hr
	Good	CPUE > Minimum Size Limit (254 mm)	Electrofishing	8.3/hr
Number Caught	Good	Angler Catch	Creel Survey	70,311
Quality	Fair	Average Weight	Creel Survey	0.7 lb
Value of Fishery	Fair	Trip Expenditures (\$)	Creel Survey	\$79,320

Fishery Forecast: The population appears stable. Future creel surveys planned for this reservoir will improve our ability to monitor changes and status of this and other important game fish.

Management Recommendations: No change in the creel limit is planned for the future.

Habitat Enhancement and Monitoring

Water Quality	Temperature	July-September (Satisfactory)
	D.O.	July-September (Satisfactory)

Tables

Table 1. Fort Loudoun Reservoir physical and chemical characteristics.

Surface Area	14,600 acres	5,909 hectares
Drainage Area	9,550 sq. mi.	24,754 sq. km
Full Pool Elevation	813 feet-msl	248 m-msl
Mean Annual Fluctuation	6 feet	1.8 m
Shoreline Distance	378 miles	608 km
Total Developed Shoreline	53%	
Maximum Depth	78 feet	23.8 m
Thermocline Depth	9 feet	2.7 m
Trophic Status (Forebay)	Eutrophic	
Mean Chlorophyll (Forebay)	11.7 mg/L	
Trophic Index Value Carlson (1977)	54.7	
Hydraulic Retention Time	10 days	
Reservoir Age	62 years	

Table 2. Relative stock density, mean relative weight, and catch per unit effort by RSD category for target species collected in Fort Loudoun Reservoir 1998-2005.

Species	Year	Gear	Samples	Substock			RSD-stock				RSD-quality				RSD-preferred				RSD-memorable				RSD-trophy				Total		PSD
				No.	CPE	Pct.	No.	CPE	Pct.	Wr	No.	CPE	Pct.	Wr	No.	CPE	Pct.	Wr	No.	CPE	Pct.	Wr	No.	CPE	Pct.	Wr	No.	CPE	Pct.
Largemouth Bass	1998	Electro	20	23	4.6	13.0	45	9.0	25.4	90.0	49	9.8	27.7	93.0	48	9.6	27.1	94.5	12	2.4	6.8	94.8	0	0.0	0.0	0.0	177	35.4	71
	1999	Electro	20	48	9.6	22.9	55	11.0	26.2	95.9	60	12.0	28.6	92.1	32	6.4	15.2	92.1	15	3.0	7.1	97.4	0	0.0	0.0	0.0	210	42.0	66
	2000	Electro	18	42	8.8	20.9	53	11.2	26.4	90.2	63	13.3	31.3	94.7	33	6.9	16.4	98.7	10	2.1	5.0	95.1	0	0.0	0.0	0.0	201	42.3	67
	2001	Electro	16	67	16.8	22.4	92	23.0	30.8	84.8	92	23.0	30.8	87.4	39	9.8	13.0	97.0	9	2.3	3.0	96.5	0	0.0	0.0	0.0	299	74.8	60
	2003	Electro	16	39	9.8	13.5	63	15.8	21.8	86.7	131	32.8	45.3	87.2	49	12.3	17.0	96.3	7	1.8	2.4	102.2	0	0.0	0.0	0.0	289	72.3	75
	2004	Electro	12	11	3.7	6.5	46	15.3	27.4	87.2	75	25.0	44.6	88.4	31	10.3	18.5	92.3	5	1.7	3.0	101.6	0	0.0	0.0	0.0	168	56.0	65
	2005	Electro	12	75	25.0	21.9	74	24.7	21.6	85.3	133	44.3	38.8	87.8	56	18.7	16.3	91.5	5	1.7	1.5	99.0	0	0.0	0.0	0.0	343	114.3	94
Smallmouth Bass	1998	Electro	20	3	0.6	8.1	15	3.0	40.5	77.4	5	1.0	13.5	86.0	4	0.8	10.8	86.7	6	1.2	16.2	100.3	4	0.8	10.8	99.6	37	7.4	56
	1999	Electro	20	7	1.4	13.5	11	2.2	21.2	88.0	15	3.0	28.9	85.0	3	0.6	5.8	91.6	11	2.2	21.2	88.7	5	1.0	9.6	0.0	52	10.4	76
	2000	Electro	18	6	1.3	22.2	9	1.9	33.3	87.1	2	0.4	7.4	85.5	7	1.5	25.9	87.5	2	0.4	7.4	92.4	0	0.0	0.0	0.0	27	5.7	57
	2001	Electro	16	4	1.0	13.8	13	3.3	44.8	84.6	2	0.5	6.9	77.1	5	1.3	17.2	85.9	4	1.0	13.8	88.7	1	0.3	3.4	0.0	29	7.3	48
	2003	Electro	16	3	0.8	12.5	4	1.0	16.7	80.8	6	1.5	25.0	80.3	7	1.8	29.2	82.5	4	1.0	16.7	87.2	0	0.0	0.0	0.0	24	6.0	81
	2004	Electro	12	3	1.0	15.8	3	1.0	15.8	77.4	9	3.0	47.4	75.3	1	0.3	5.3	62.7	3	1.0	15.8	77.2	0	0.0	0.0	0.0	19	6.3	64
	2005	Electro	12	1	0.3	4.8	5	1.7	23.8	87.4	10	3.3	47.6	82.5	5	1.7	23.8	78.3	0	0.0	0.0	0.0	0	0.0	0.0	0.0	21	7.0	72
White Crappie	1998	Electro	20	0	0.0	0.0	2	0.4	4.8	81.5	9	1.8	21.4	88.8	24	4.8	57.1	89.5	6	1.2	14.3	91.4	1	0.2	2.4	40.1	42	8.4	95
	1999	Electro	20	0	0.0	0.0	0	0.0	0.0	0.0	1	0.2	9.0	88.1	5	1.0	45.5	89.6	5	1.0	45.5	87.6	0	0.0	0.0	0.0	11	2.2	100
	2000	Electro	18	0	0.0	0.0	0	0.0	0.0	0.0	2	0.4	11.1	91.3	12	2.5	66.6	94.5	4	0.8	22.2	92.8	0	0.0	0.0	0.0	18	3.8	100
	2001	Electro	16	0	0.0	0.0	0	0.0	0.0	0.0	7	1.8	43.8	84.7	5	1.3	31.3	91.4	4	1.0	25.0	85.0	0	0.0	0.0	0.0	16	4.0	100
	2003	Electro	16	0	0.0	0.0	0	0.0	0.0	0.0	29	7.3	43.9	95.9	21	5.3	31.9	93.8	16	4.0	24.2	89.7	0	0.0	0.0	0.0	66	16.5	100
	2004	Electro	12	0	0.0	0.0	0	0.0	0.0	0.0	2	0.7	5.9	95.7	25	8.3	73.5	99.3	7	2.3	20.6	97.8	0	0.0	0.0	0.0	34	11.3	100
	2005	Electro	12	0	0.0	0.0	1	0.3	2.2	117.6	17	5.7	37.8	79.7	23	7.7	51.1	85.3	4	1.3	8.9	84.9	0	0.0	0.0	0.0	45	15.0	98
Black Crappie	1998	Electro	20	0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	4	0.8	100.0	82.3	0	0.0	0.0	0.0	0	0.0	0.0	0.0	4	0.8	
	1999	Electro	20	0	0.0	0.0	0	0.0	0.0	0.0	2	0.4	40.0	88.0	3	0.6	60.0	81.5	0	0.0	0.0	0.0	0	0.0	0.0	0.0	5	1.0	
	2000	Electro	18	0	0.0	0.0	0	0.0	0.0	0.0	3	0.6	21.4	95.6	8	1.7	57.1	88.5	3	0.6	21.4	90.2	0	0.0	0.0	0.0	14	2.9	100
	2001	Electro	16	0	0.0	0.0	1	0.3	5.6	86.7	5	1.3	27.8	83.1	4	1.0	22.2	89.3	8	2.0	44.4	83.7	0	0.0	0.0	0.0	18	4.5	94
	2003	Electro	16	0	0.0	0.0	0	0.0	0.0	0.0	10	2.5	58.8	94.9	7	1.8	41.2	91.4	0	0.0	0.0	0.0	0	0.0	0.0	0.0	17	4.2	100
	2004	Electro	12	0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	2	0.7	40.0	93.3	3	1.0	60.0	92.5	0	0.0	0.0	0.0	5	1.7	100
	2005	Electro	12	0	0.0	0.0	2	0.7	5.6	68.9	16	5.3	44.4	82.4	15	5.0	41.7	83.0	3	1.0	8.3	81.2	0	0.0	0.0	0.0	36	12.0	94

Table 3. Mean relative weight and standard error values by size class for Loudoun Reservoir largemouth bass collected during the 2005 electrofishing sample.

Size Class	Mean Wr	Std. Error	N
150	76.019	6.719	3
175	78.858	5.504	7
200	85.901	1.273	25
225	81.391	3.878	9
250	86.888	1.494	13
275	85.166	1.263	22
300	86.612	1.713	26
325	87.656	0.897	56
350	88.925	1.444	46
375	89.481	1.038	26
400	90.964	1.629	16
425	91.903	0.995	9
450	92.006	2.359	4
475	94.296	3.141	5
500	97.082	3.013	3
525	100.552	1.904	3

Total Catch 273

Table 4. Mean relative weight and standard error values by size class for Loudoun Reservoir smallmouth bass collected during the 2005 electrofishing samples.

Size Class	Mean Wr	Std. Error	N
150	101.004		1
175	81.967		1
200	80.650	1.456	6
225	86.849	1.213	8
250	84.735	2.971	3
275	83.563	2.759	9
300	85.696	2.352	5
325	83.298	4.450	4
350	77.637	6.616	5
375	86.778		1
400	77.325	4.815	2
425	87.467	3.540	3
450	89.063	2.693	5
475	82.503		1
500	93.958		1
525	77.962	6.191	2

Total Catch 57

Table 5. Mean relative weight and standard error values by size class for Loudoun Reservoir white crappie collected during the 2005 electrofishing sample.

Size Class	Mean Wr	Std. Error	N
175	117.593		1
200	77.921		1
225	79.917	2.636	15
250	83.647	3.176	10
275	86.527	0.855	13
300	84.864	2.191	4

Total Catch 44

Table 6. Summary of July 2005 Fort Loudoun Reservoir water quality parameters at Tennessee River Mile 604.

Depth (m)	Temp ©	Cond	PH	DO	Site	Secchi (m)	Time	Date
0	24.7	181	7.9	8.3	T 604	1.5	0900	7/12/2004
1	24.7	182	7.9	8.4				
2	24.7	182	7.9	8.8				
3	24.7	182	7.9	8.4				
4	23.8	183	7.8	7.2				
5	23.6	182	7.7	5.3				
6	23.4	182	7.6	5.1				
7	23.1	181	7.6	4.6				
8	22.5	182	7.5	4.1				
9	22.5	183	7.5	3.9				
10	22.5	183	7.5	3.6				
11	22.4	183	7.5	3.8				
12	22.4	182	7.5	3.7				
13	21.9	180	7.4	2.6				
14	21.6	180	7.4	2.3				
15	21.4	176	7.4	2.2				
16	20.7	102	7.5	6.3				
17	19.6	69	7.7	7.4				
18	19.4	65	7.6	7.5				
19	19.1	64	7.6	7.2				
20	18.8	69	7.6	6.5				
21	18.6	106	7.4	2.3				

Table 7. Summary of July 2005 Fort Loudoun Reservoir water quality parameters at Tennessee River Mile 617.

Depth (m)	Temp ©	Cond	PH	DO	Site	Secchi (m)	Time	Date
0	24.3			9.0	T 617	1.0	1425	7/12/2004
1	23.5			8.2				
2	23.1			8.0				
3	22.6			6.6				
4	22.3			6.4				
5	22.2			6.1				
6	22.1			6.2				
7	22.1			6.0				
8	22.1			6.1				
9	22.0			5.9				
10	22.0			5.8				
11	22.0			5.7				
12	21.9			5.7				
13	21.9			5.6				
14	21.9			5.5				

Table 8. Summary of July 2005 Fort Loudoun Reservoir water quality parameters at Tennessee River Mile 634.

Depth (m)	Temp ©	Cond	PH	DO	Site	Secchi (m)	Time	Date
0	23.5	146	8.8	7.8	T 634	1.0	1535	7/7/2004
1	23.3	147	8.5	7.5				
2	23.1	148	8.3	7.5				
3	22.5	150	8.2	6.8				
4	22.4	148	8.1	6.7				
5	22.2	146	8.0	6.4				
6	22.2	146	7.9	6.5				
7	22.2	146	7.9	6.4				
8	22.2	146	7.9	6.3				
9	22.2	147	7.9	6.2				

Table 9. Summary of August 2005 Fort Loudoun Reservoir water quality parameters at Tennessee River Mile 604.

Depth (m)	Temp ©	Cond	PH	DO	Site	Secchi (m)	Time	Date
0	29.1	168		9.6	T 604	1.5	0813	8/5/2004
1	29.1	168		9.8				
2	28.9	171		9.9				
3	28.1	173		9.5				
4	27.2	174		7.7				
5	26.6	177		7.4				
6	26.2	177		7.6				
7	24.6	179		3.8				
8	24.5	179		3.6				
9	24.4	180		3.4				
10	24.3	179		3.3				
11	24.1	177		3.1				
12	23.9	177		2.7				
13	23.9	176		2.7				
14	23.7	173		2.8				
15	23.5	169		2.6				
16	23.3	165		2.7				
17	22.9	150		3.2				
18	22.5	136		3.5				
19	21.5	101		4.7				
20	21.2	94		4.9				
21	20.8	84		5.6				

Table 10. Summary of August 2005 Fort Loudoun Reservoir water quality parameters at Tennessee River Mile 617.

Depth (m)	Temp ©	Cond	PH	DO	Site	Secchi (m)	Time	Date
0	27.7	165		9.4	T 617	1.3	1230	8/5/2004
1	27.3	166		9.1				
2	26.6	173		8.6				
3	26.3	175		7.9				
4	25.9	179		8.1				
5	25.7	179		6.5				
6	25.5	179		6.3				
7	25.4	179		7.5				
8	25.3	182		7.5				
9	25.1	191		7.3				
10	25.0	195		7.7				
11	24.9	200		6.0				
12	24.9	200		5.6				
13	24.8	202		5.4				
14	24.8	204		4.9				

Table 11. Summary of August 2005 Fort Loudoun Reservoir water quality parameters at Tennessee River Mile 634.

Depth (m)	Temp ©	Cond	PH	DO	Site	Secchi (m)	Time	Date
0	26.9	184		9.1	T 634	1.1	1350	8/5/2004
1	24.3	195		7.5				
2	21.7	217		6.6				
3	21.2	226		6.4				
4	20.9	234		6.2				
5	20.7	236		6.2				
6	20.7	236		6.2				
7	20.7	236		6.2				
8	20.7	235		6.1				
9	20.7	236		5.9				

Table 12. Fort Loudoun Reservoir water levels for 2005. (TVA)

ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY
810.12	JANUARY	1	809.00	FEBRUARY	24	811.62	APRIL	19
809.56	JANUARY	2	809.05	FEBRUARY	25	811.20	APRIL	20
809.56	JANUARY	3	808.92	FEBRUARY	26	811.47	APRIL	21
810.23	JANUARY	4	808.62	FEBRUARY	27	811.42	APRIL	22
810.38	JANUARY	5	807.93	FEBRUARY	28	811.62	APRIL	23
810.44	JANUARY	6	808.10	MARCH	1	811.78	APRIL	24
810.66	JANUARY	7	808.67	MARCH	2	811.76	APRIL	25
810.26	JANUARY	8	809.06	MARCH	3	812.05	APRIL	26
809.50	JANUARY	9	808.99	MARCH	4	812.19	APRIL	27
809.02	JANUARY	10	808.86	MARCH	5	812.06	APRIL	28
809.09	JANUARY	11	808.83	MARCH	6	812.16	APRIL	29
808.72	JANUARY	12	808.30	MARCH	7	812.24	APRIL	30
808.67	JANUARY	13	808.83	MARCH	8	812.38	MAY	1
809.16	JANUARY	14	809.12	MARCH	9	812.47	MAY	2
809.18	JANUARY	15	809.39	MARCH	10	812.79	MAY	3
808.53	JANUARY	16	809.51	MARCH	11	812.67	MAY	4
808.46	JANUARY	17	809.18	MARCH	12	812.64	MAY	5
808.42	JANUARY	18	808.90	MARCH	13	812.61	MAY	6
808.31	JANUARY	19	808.28	MARCH	14	812.27	MAY	7
808.17	JANUARY	20	808.12	MARCH	15	812.29	MAY	8
807.97	JANUARY	21	808.05	MARCH	16	811.95	MAY	9
807.29	JANUARY	22	808.45	MARCH	17	812.20	MAY	10
807.32	JANUARY	23	808.43	MARCH	18	812.25	MAY	11
809.04	JANUARY	24	808.79	MARCH	19	812.09	MAY	12
809.82	JANUARY	25	808.92	MARCH	20	812.19	MAY	13
809.86	JANUARY	26	808.94	MARCH	21	812.54	MAY	14
809.66	JANUARY	27	808.90	MARCH	22	812.67	MAY	15
809.22	JANUARY	28	809.12	MARCH	23	812.85	MAY	16
809.41	JANUARY	29	809.15	MARCH	24	812.50	MAY	17
809.40	JANUARY	30	809.21	MARCH	25	812.34	MAY	18
809.40	JANUARY	31	809.34	MARCH	26	812.57	MAY	19
809.64	FEBRUARY	1	809.81	MARCH	27	813.12	MAY	20
809.56	FEBRUARY	2	809.99	MARCH	28	812.93	MAY	21
809.58	FEBRUARY	3	809.76	MARCH	29	812.91	MAY	22
810.03	FEBRUARY	4	809.50	MARCH	30	812.62	MAY	23
809.55	FEBRUARY	5	809.27	MARCH	31	812.48	MAY	24
808.96	FEBRUARY	6	809.68	APRIL	1	812.61	MAY	25
808.71	FEBRUARY	7	811.09	APRIL	2	812.57	MAY	26
808.76	FEBRUARY	8	811.85	APRIL	3	812.52	MAY	27
808.73	FEBRUARY	9	811.87	APRIL	4	812.81	MAY	28
808.85	FEBRUARY	10	811.19	APRIL	5	812.62	MAY	29
809.43	FEBRUARY	11	810.53	APRIL	6	812.42	MAY	30
809.71	FEBRUARY	12	810.08	APRIL	7	812.46	MAY	31
809.36	FEBRUARY	13	809.60	APRIL	8	812.53	JUNE	1
809.51	FEBRUARY	14	809.59	APRIL	9	812.65	JUNE	2
809.52	FEBRUARY	15	810.01	APRIL	10	812.56	JUNE	3
808.66	FEBRUARY	16	810.11	APRIL	11	812.64	JUNE	4
808.70	FEBRUARY	17	810.28	APRIL	12	812.61	JUNE	5
808.67	FEBRUARY	18	810.83	APRIL	13	812.61	JUNE	6
808.33	FEBRUARY	19	810.91	APRIL	14	812.26	JUNE	7
808.33	FEBRUARY	20	810.99	APRIL	15	812.42	JUNE	8
809.09	FEBRUARY	21	811.15	APRIL	16	812.32	JUNE	9
809.85	FEBRUARY	22	811.34	APRIL	17	812.39	JUNE	10
809.63	FEBRUARY	23	811.62	APRIL	18	812.92	JUNE	11

Table 13. Fort Loudoun Reservoir water levels for 2005. (TVA)

ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY
813.00	JUNE	12	812.78	AUGUST	5	812.24	SEPTEMBER	28
812.70	JUNE	13	813.01	AUGUST	6	812.47	SEPTEMBER	29
812.42	JUNE	14	812.87	AUGUST	7	812.68	SEPTEMBER	30
812.60	JUNE	15	812.47	AUGUST	8	812.31	OCTOBER	1
812.73	JUNE	16	812.60	AUGUST	9	812.47	OCTOBER	2
812.68	JUNE	17	812.45	AUGUST	10	812.22	OCTOBER	3
812.78	JUNE	18	812.75	AUGUST	11	812.26	OCTOBER	4
812.87	JUNE	19	812.57	AUGUST	12	812.40	OCTOBER	5
812.66	JUNE	20	812.54	AUGUST	13	812.64	OCTOBER	6
812.63	JUNE	21	812.88	AUGUST	14	812.78	OCTOBER	7
812.83	JUNE	22	812.76	AUGUST	15	812.85	OCTOBER	8
812.78	JUNE	23	812.77	AUGUST	16	812.68	OCTOBER	9
812.56	JUNE	24	812.76	AUGUST	17	812.00	OCTOBER	10
812.87	JUNE	25	812.99	AUGUST	18	812.06	OCTOBER	11
812.43	JUNE	26	812.98	AUGUST	19	811.78	OCTOBER	12
812.82	JUNE	27	812.63	AUGUST	20	812.13	OCTOBER	13
812.63	JUNE	28	813.11	AUGUST	21	812.38	OCTOBER	14
812.59	JUNE	29	812.72	AUGUST	22	812.72	OCTOBER	15
812.56	JUNE	30	812.57	AUGUST	23	812.71	OCTOBER	16
812.96	JULY	1	812.20	AUGUST	24	812.34	OCTOBER	17
813.06	JULY	2	812.09	AUGUST	25	812.29	OCTOBER	18
812.78	JULY	3	812.34	AUGUST	26	812.21	OCTOBER	19
812.58	JULY	4	812.50	AUGUST	27	812.10	OCTOBER	20
812.44	JULY	5	812.67	AUGUST	28	812.10	OCTOBER	21
812.66	JULY	6	812.16	AUGUST	29	812.63	OCTOBER	22
812.80	JULY	7	812.05	AUGUST	30	812.83	OCTOBER	23
812.47	JULY	8	812.30	AUGUST	31	812.30	OCTOBER	24
812.21	JULY	9	812.49	SEPTEMBER	1	812.29	OCTOBER	25
811.95	JULY	10	812.62	SEPTEMBER	2	812.58	OCTOBER	26
811.90	JULY	11	812.94	SEPTEMBER	3	812.24	OCTOBER	27
812.07	JULY	12	812.87	SEPTEMBER	4	812.45	OCTOBER	28
812.29	JULY	13	812.75	SEPTEMBER	5	812.35	OCTOBER	29
812.25	JULY	14	812.50	SEPTEMBER	6	812.81	OCTOBER	30
812.47	JULY	15	812.37	SEPTEMBER	7	812.38	OCTOBER	31
812.43	JULY	16	812.63	SEPTEMBER	8	812.18	NOVEMBER	1
812.37	JULY	17	812.64	SEPTEMBER	9	811.94	NOVEMBER	2
812.25	JULY	18	812.59	SEPTEMBER	10	811.94	NOVEMBER	3
812.34	JULY	19	812.61	SEPTEMBER	11	811.65	NOVEMBER	4
812.44	JULY	20	812.52	SEPTEMBER	12	811.64	NOVEMBER	5
812.25	JULY	21	812.54	SEPTEMBER	13	811.35	NOVEMBER	6
812.51	JULY	22	812.44	SEPTEMBER	14	811.13	NOVEMBER	7
812.60	JULY	23	812.47	SEPTEMBER	15	811.24	NOVEMBER	8
812.98	JULY	24	812.79	SEPTEMBER	16	811.10	NOVEMBER	9
812.84	JULY	25	812.55	SEPTEMBER	17	811.28	NOVEMBER	10
812.56	JULY	26	812.15	SEPTEMBER	18	811.37	NOVEMBER	11
812.91	JULY	27	812.32	SEPTEMBER	19	811.49	NOVEMBER	12
812.71	JULY	28	812.45	SEPTEMBER	20	811.24	NOVEMBER	13
812.76	JULY	29	812.43	SEPTEMBER	21	810.82	NOVEMBER	14
812.81	JULY	30	812.48	SEPTEMBER	22	810.83	NOVEMBER	15
812.79	JULY	31	812.25	SEPTEMBER	23	810.83	NOVEMBER	16
812.00	AUGUST	1	812.20	SEPTEMBER	24	810.82	NOVEMBER	17
812.32	AUGUST	2	812.09	SEPTEMBER	25	810.69	NOVEMBER	18
812.67	AUGUST	3	812.14	SEPTEMBER	26	809.95	NOVEMBER	19
812.67	AUGUST	4	812.15	SEPTEMBER	27	809.81	NOVEMBER	20

Table 14. Fort Loudoun Reservoir water levels for 2005. (TVA)

ELEVATION	MONTH	DAY
809.32	NOVEMBER	21
808.87	NOVEMBER	22
808.45	NOVEMBER	23
808.42	NOVEMBER	24
808.54	NOVEMBER	25
808.71	NOVEMBER	26
808.78	NOVEMBER	27
808.72	NOVEMBER	28
808.38	NOVEMBER	29
808.75	NOVEMBER	30
808.48	DECEMBER	1
808.49	DECEMBER	2
808.86	DECEMBER	3
809.02	DECEMBER	4
808.54	DECEMBER	5
807.87	DECEMBER	6
807.78	DECEMBER	7
807.78	DECEMBER	8
807.99	DECEMBER	9
807.68	DECEMBER	10
808.30	DECEMBER	11
807.72	DECEMBER	12
807.74	DECEMBER	13
807.68	DECEMBER	14
808.84	DECEMBER	15
809.53	DECEMBER	16
809.46	DECEMBER	17
809.00	DECEMBER	18
808.60	DECEMBER	19
808.70	DECEMBER	20
808.78	DECEMBER	21
808.45	DECEMBER	22
808.77	DECEMBER	23
809.03	DECEMBER	24
809.18	DECEMBER	25
808.92	DECEMBER	26
809.12	DECEMBER	27
809.29	DECEMBER	28
809.02	DECEMBER	29
808.83	DECEMBER	30
808.91	DECEMBER	31

Figures

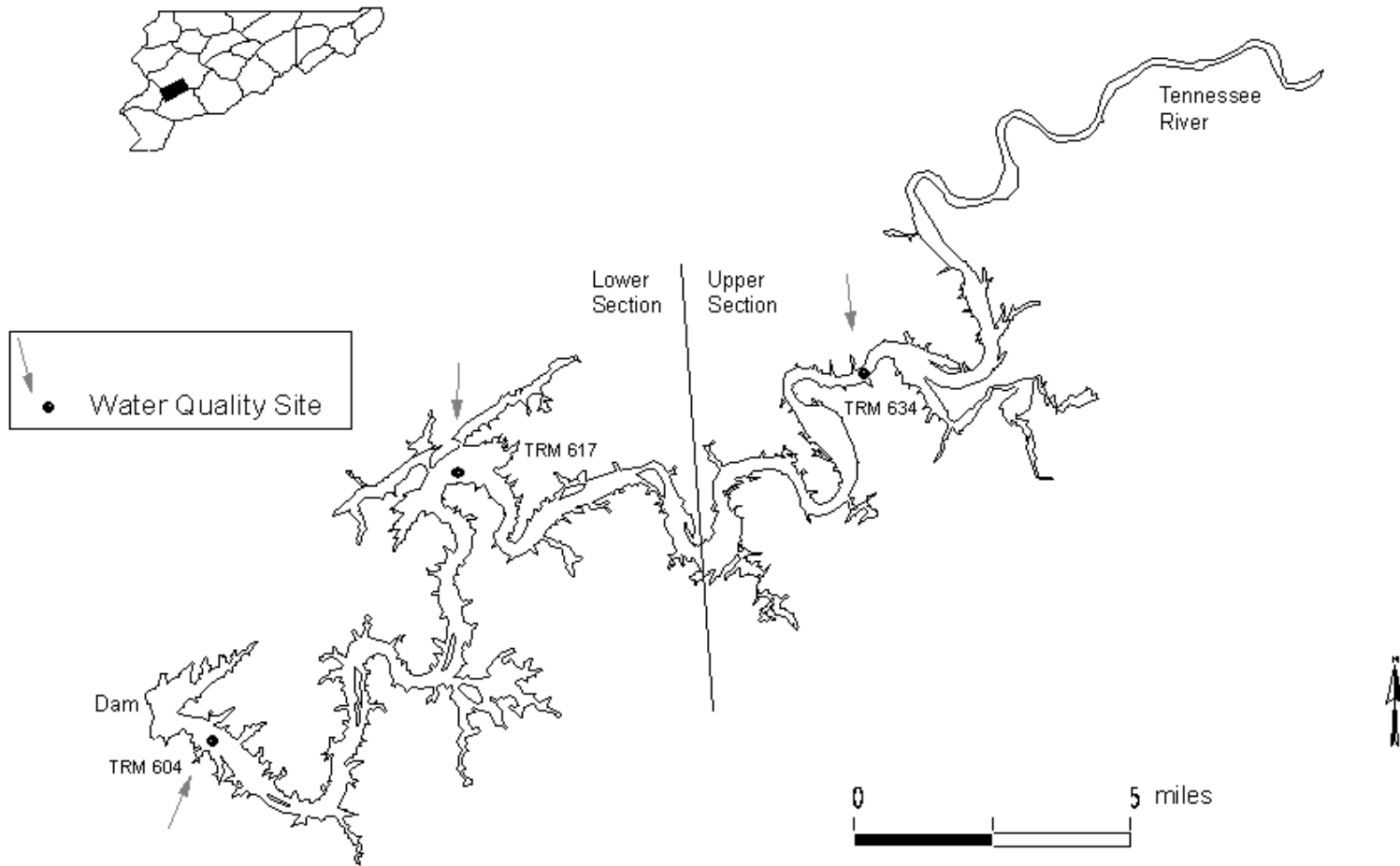


Figure 1. Water quality sites and upper and lower section boundaries of Fort Loudoun Reservoir in 2005.

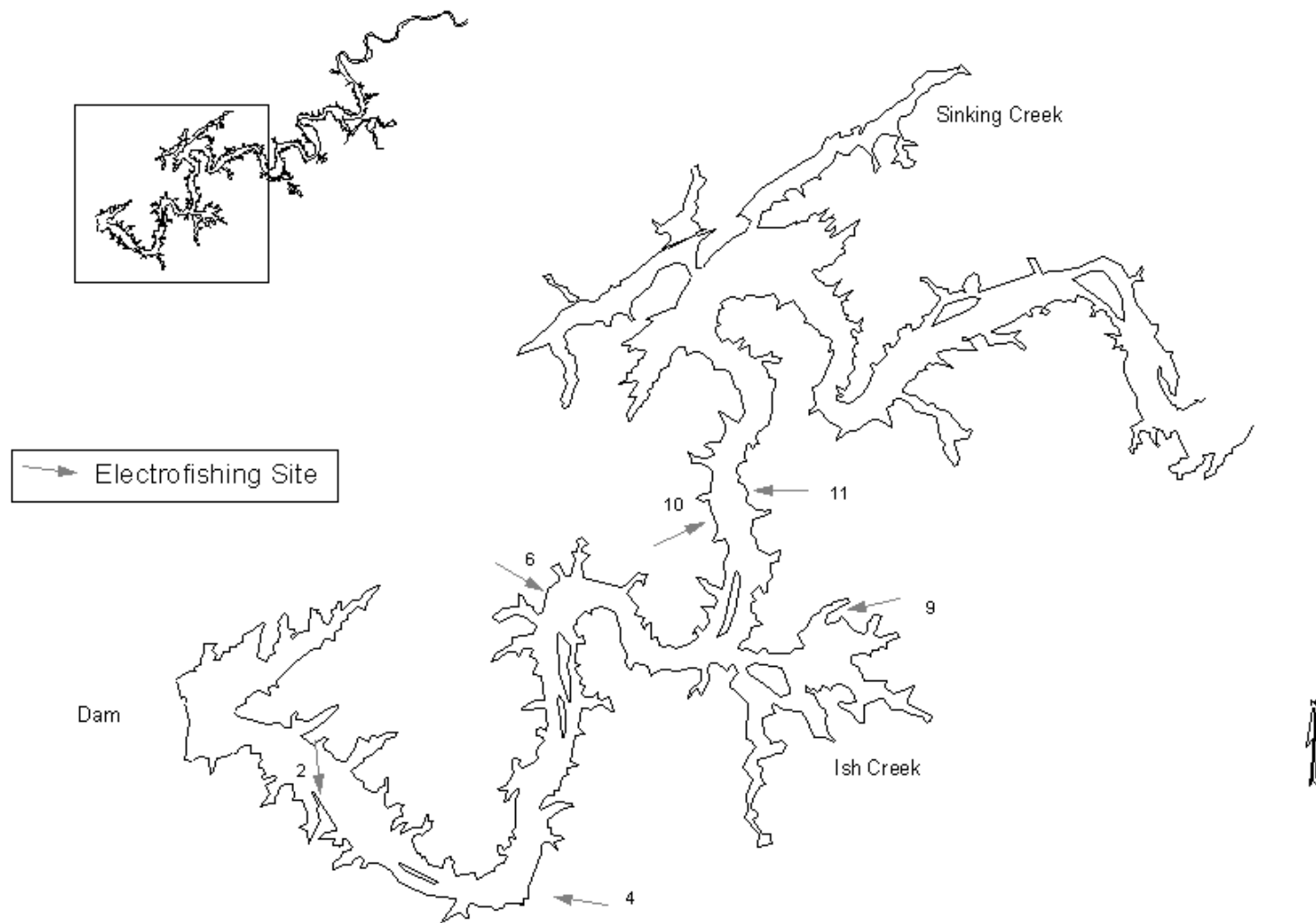


Figure 2. Electrofishing sites in the lower section of Fort Loudoun Reservoir in 2005.

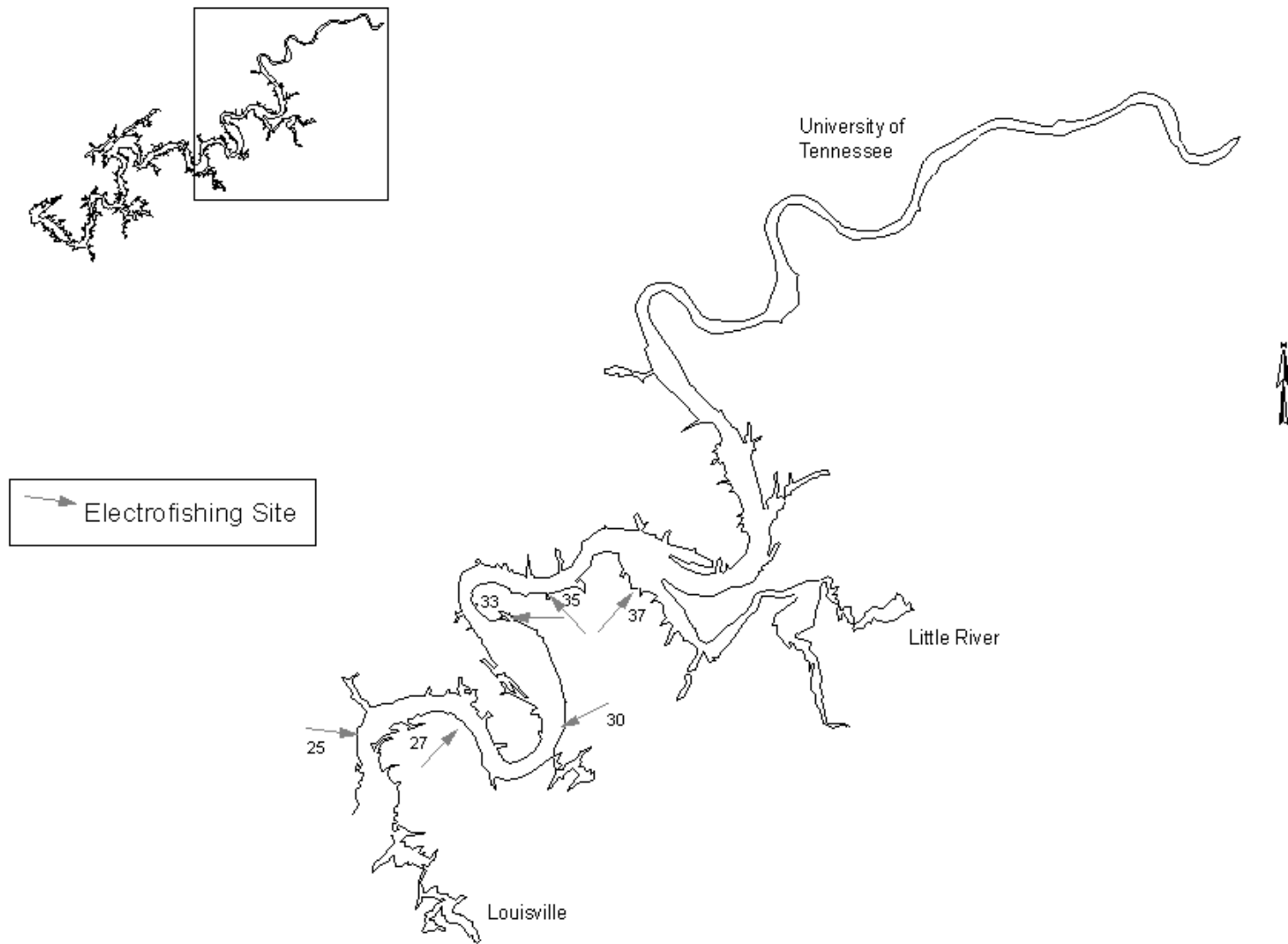


Figure 3. Electrofishing sites in the upper section of Fort Loudoun Reservoir in 2005.

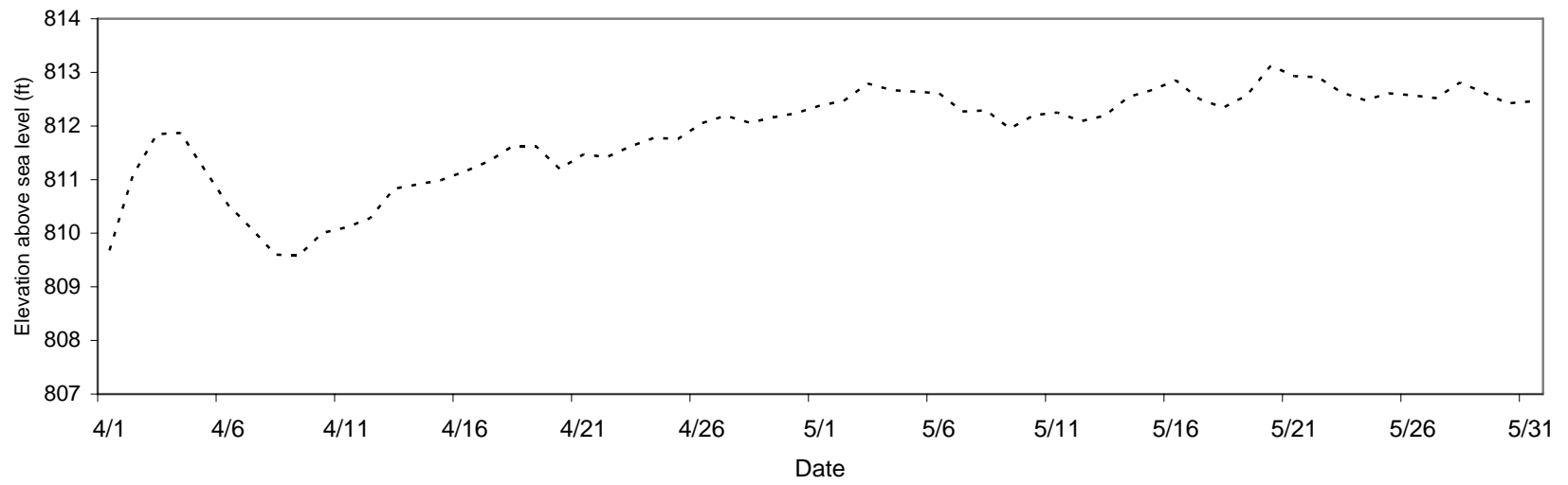


Figure 4. April and May water levels in Loudoun Reservoir in 2005 (TVA data).

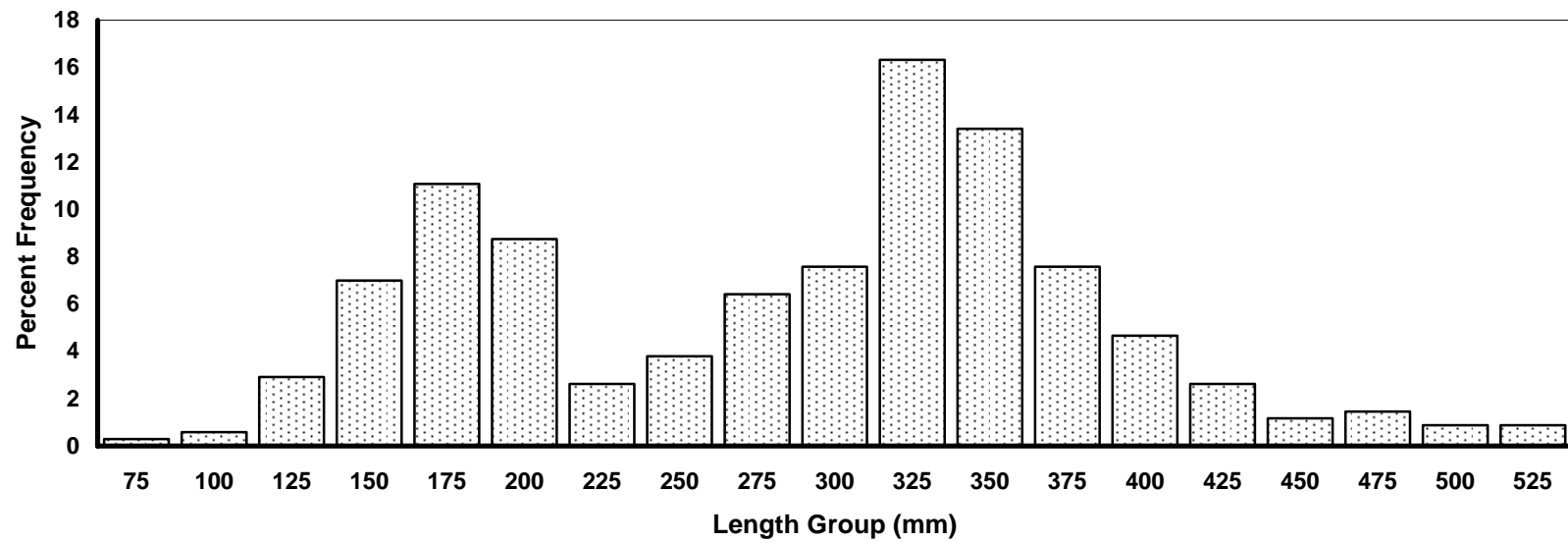


Figure 5. Fort Loudoun Reservoir largemouth bass length frequency by percent for 2005 electrofishing sample (n=343).

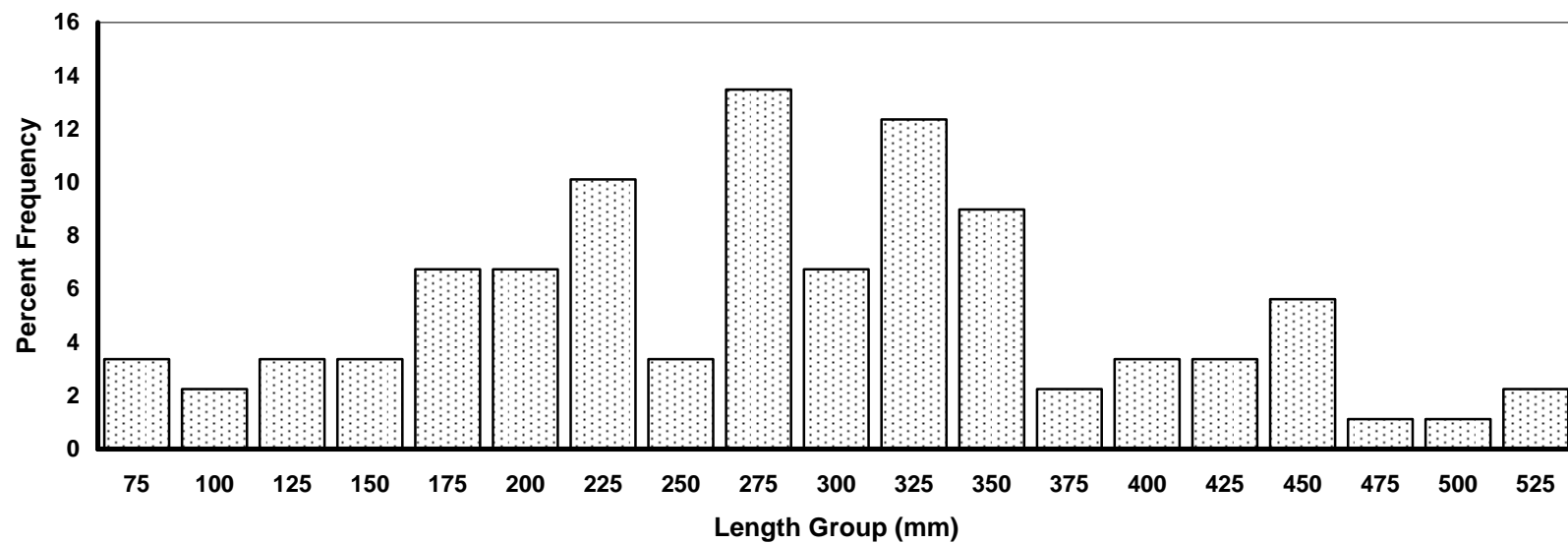


Figure 6. Fort Loudoun smallmouth bass length frequency by percent for 2005 targeted and standard electrofishing samples combined (n=89).

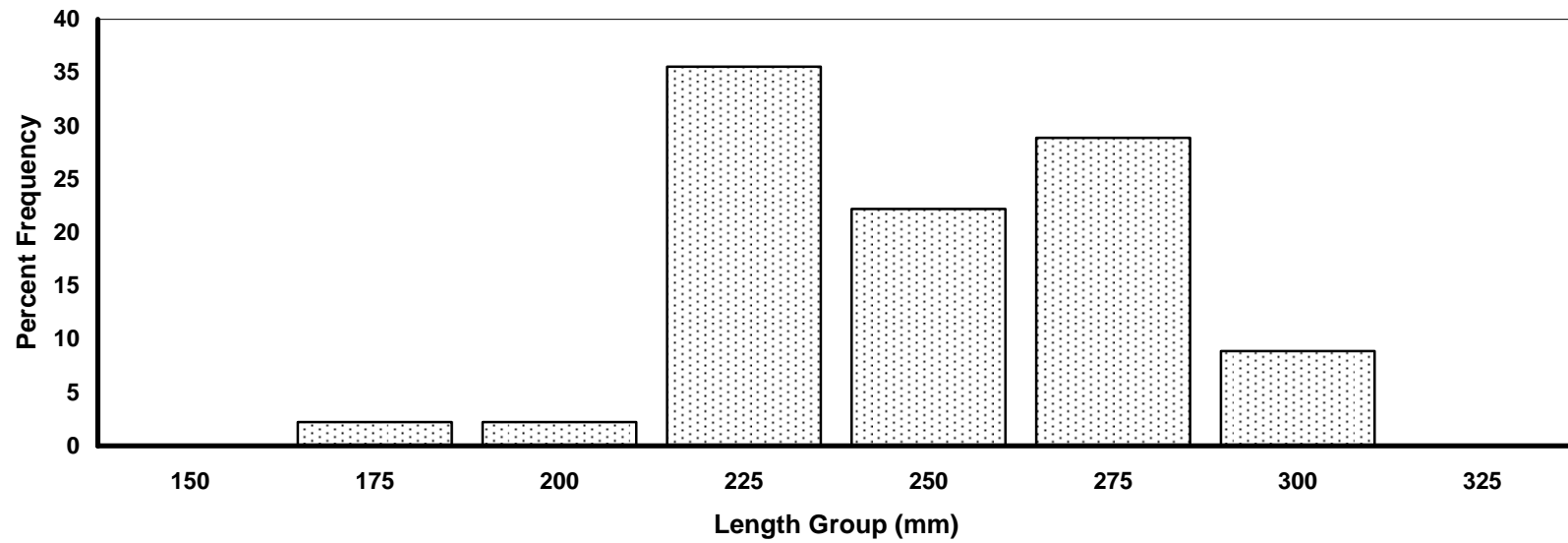


Figure 7. Fort Loudoun Reservoir white crappie length frequency by percent for 2005 electrofishing sample (n=45).

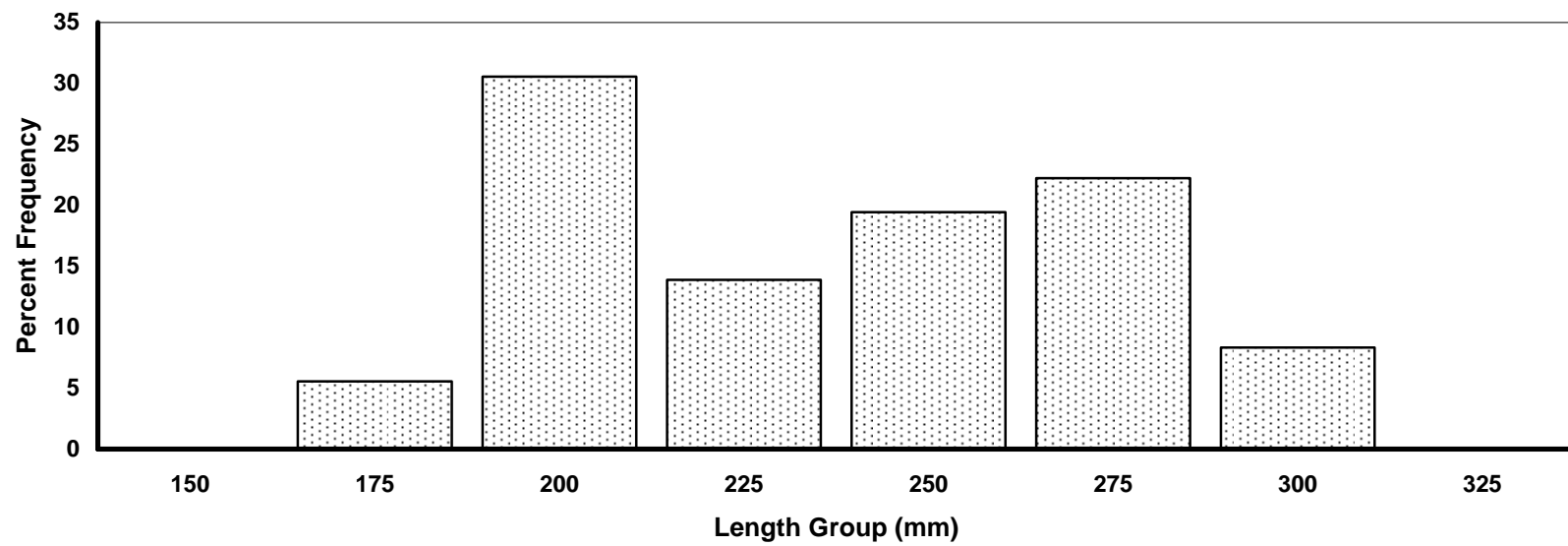


Figure 8. Fort Loudoun Reservoir black crappie length frequency by percent for 2005 electrofishing sample (n=36).

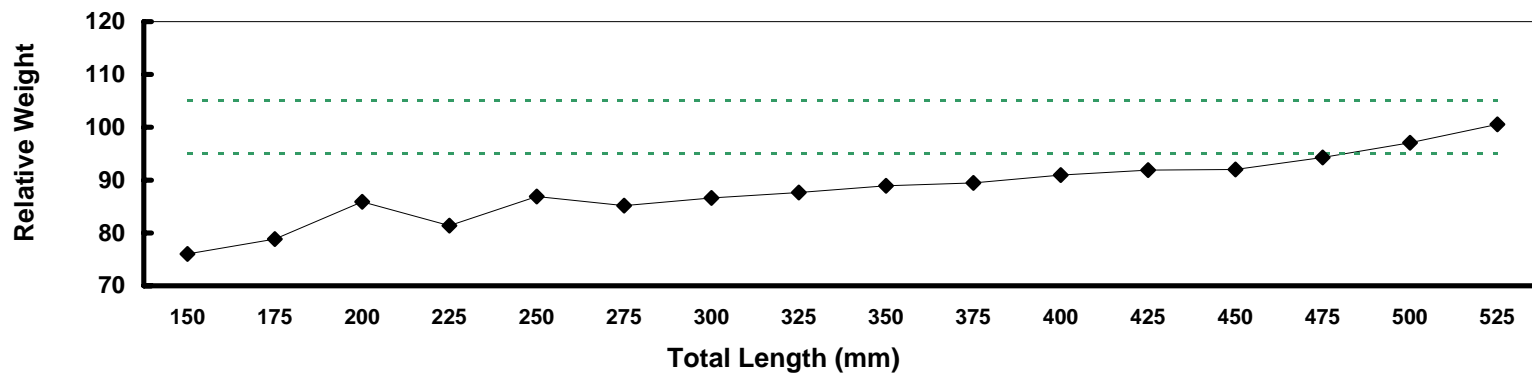


Figure 9. Fort Loudoun Reservoir largemouth bass mean relative weight values from the 2005 electrofishing sample (n=273).

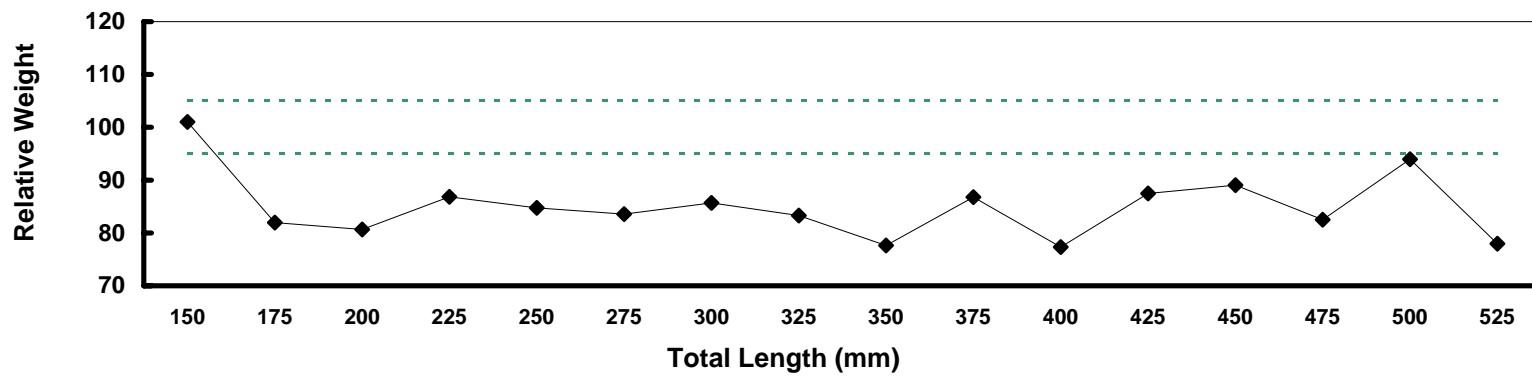


Figure 10. Fort Loudoun Reservoir smallmouth bass mean relative weight values from the 2005 electrofishing samples (n=57).

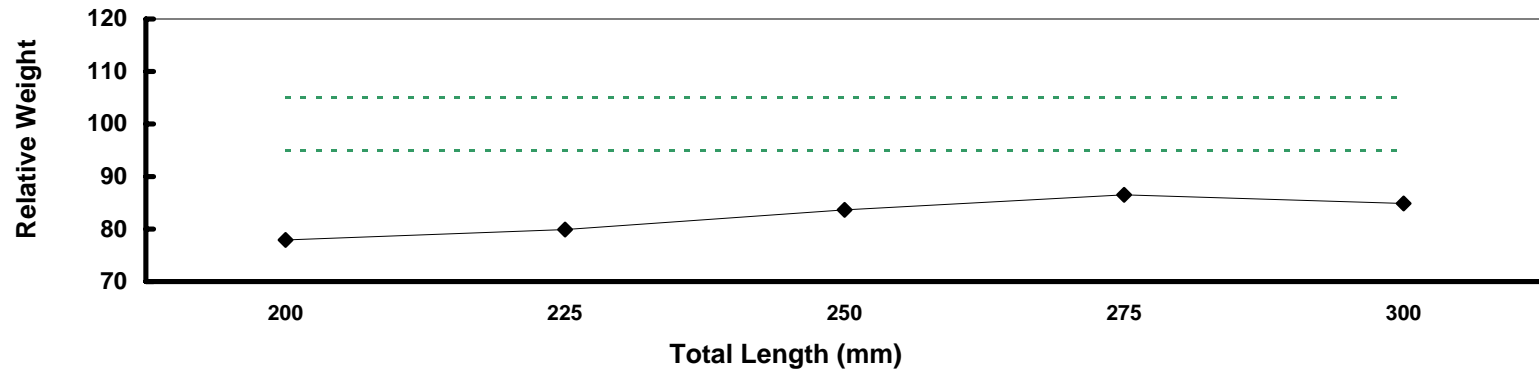


Figure 11. Fort Loudoun Reservoir white crappie mean relative weight values from the 2005 electrofishing samples (n=43).

Figure 12. DO - Loudoun - RM 604 - July 12, 2005

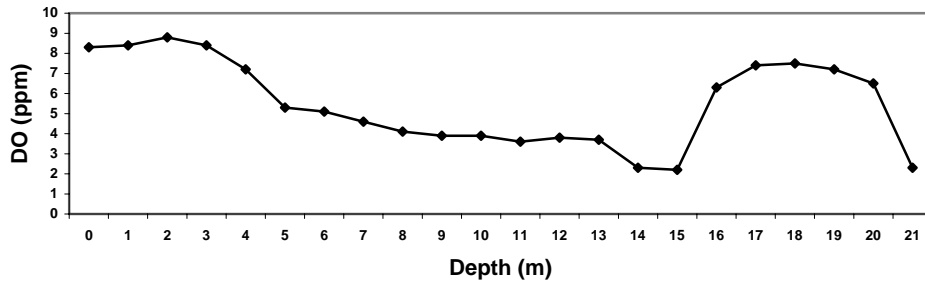


Figure 13. Temp - Loudoun - RM 604 - July 12, 2005

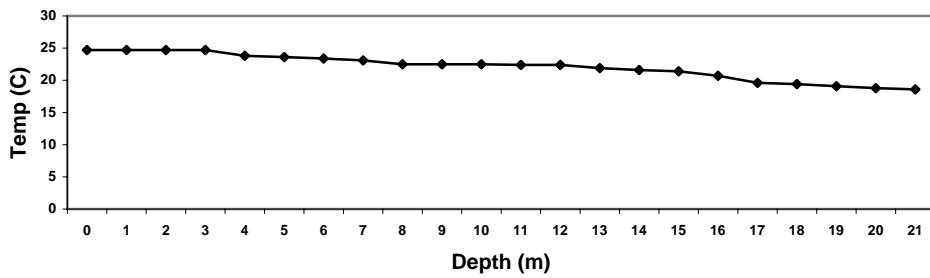


Figure 14. DO - Loudoun - RM 617 - July 12, 2005

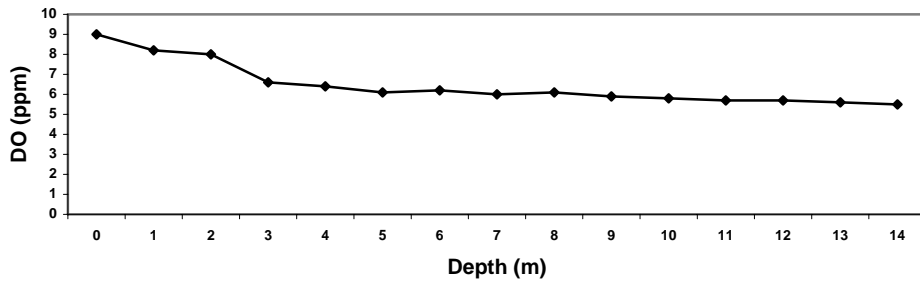


Figure 15. Temp - Loudoun - RM 617 - July 12, 2005

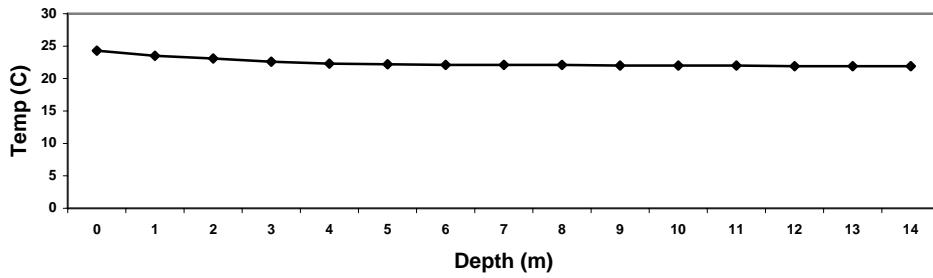


Figure 16. DO - Loudoun - RM 634 - July 12, 2005

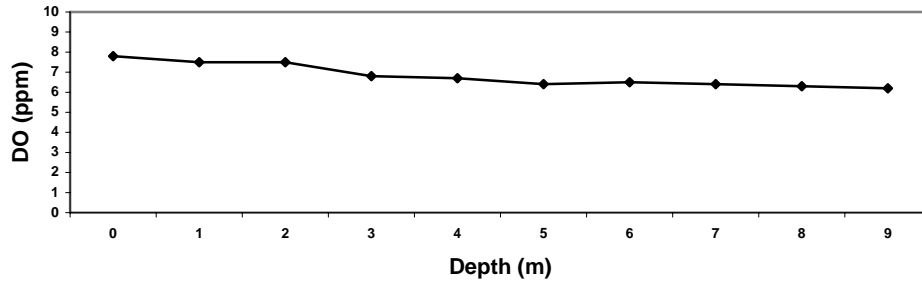


Figure 17. Temp - Loudoun - RM 634 - July 12, 2005

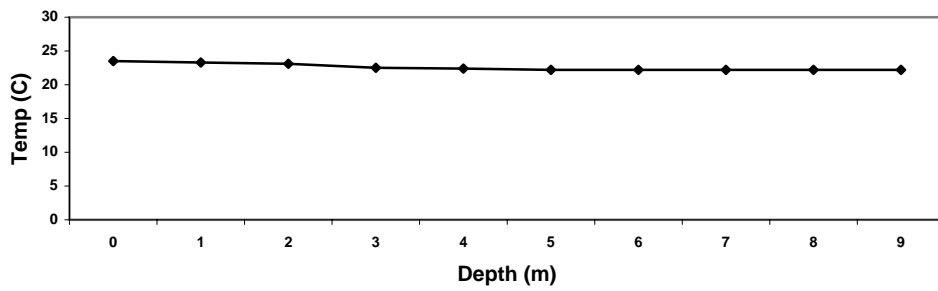


Figure 18. DO - Loudoun - RM 604 - Aug 5, 2005

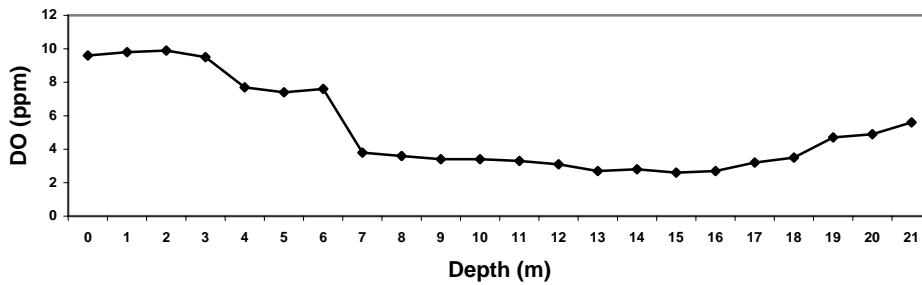


Figure 19. Temp - Loudoun - RM 604 - Aug 5, 2005

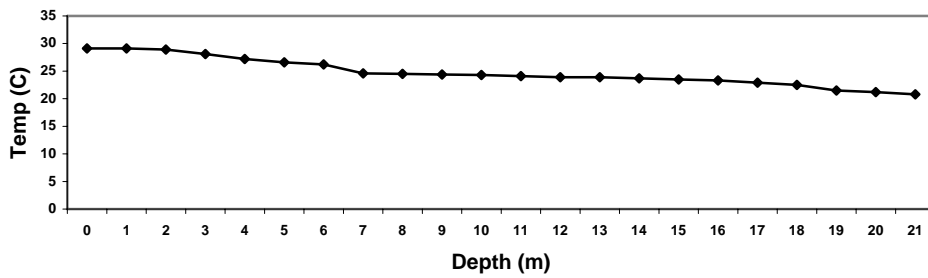


Figure 20. DO - Loudoun - RM 617 - Aug 5, 2005

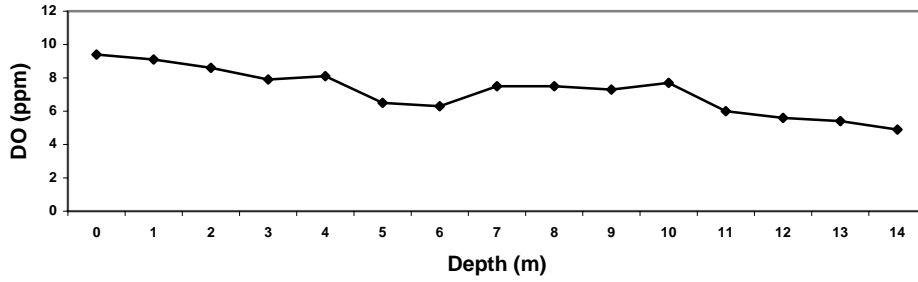


Figure 21. Temp - Loudoun - RM 617 - Aug 5, 2005

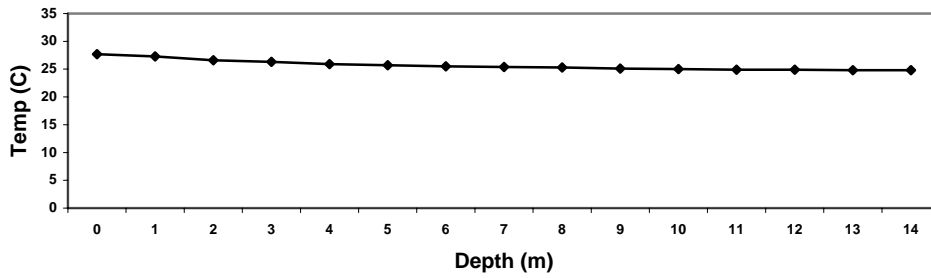


Figure 22. DO - Loudoun - RM 634 - Aug 5, 2005

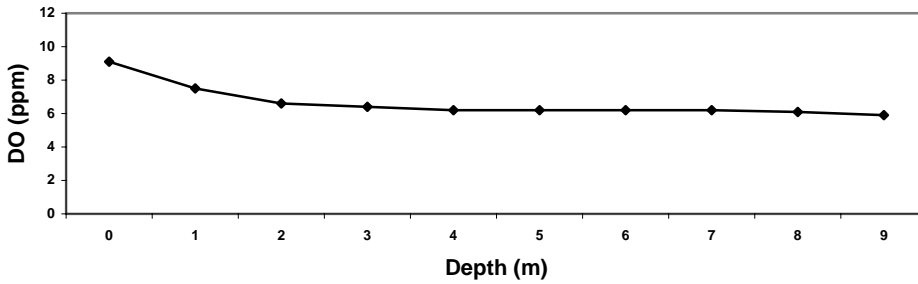
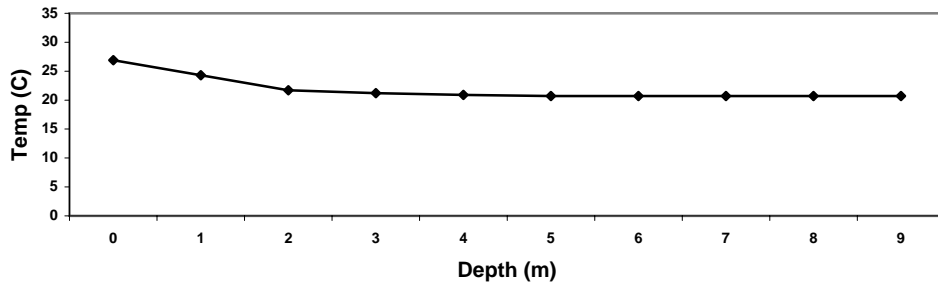


Figure 23. Temp - Loudoun - RM 634 - Aug 5, 2005



Appendix - Creel

MONTHLY ANGLING EFFORT FOR ALL ANGLERS - 2005

LAKE=FT. LOUDOUN

MONTH	ANGLER HOURS	RELATIVE STANDARD ERROR	HOURS PER ACRE	ANGLER TRIPS	TRIPS PER ACRE	PERCENT EFFORT
01 JANUARY	6177	32.4	0.4	1507	0.1	3.3
02 FEBRUARY	20162	53.8	1.4	3809	0.3	10.8
03 MARCH	15997	17.9	1.1	3562	0.2	8.6
04 APRIL	15681	17.3	1.1	3112	0.2	8.4
05 MAY	21864	15.9	1.5	4514	0.3	11.7
06 JUNE	22040	23.4	1.5	4217	0.3	11.8
07 JULY	19494	17.9	1.3	3369	0.2	10.5
08 AUGUST	12375	19.8	0.8	2367	0.2	6.6
09 SEPTEMBER	17793	21.3	1.2	3686	0.3	9.5
10 OCTOBER	22952	21.1	1.6	3653	0.3	12.3
11 NOVEMBER	10711	30.3	0.7	2008	0.1	5.7
12 DECEMBER	1170	100.0	0.1	161	0.0	0.6
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TOTAL	186416			35965		

MONTHLY CATCH STATISTICS FOR ALL ANGLERS - 2005

LAKE=FT. LOUDOUN

MONTH	NUMBER FISH CAUGHT	RSE FOR CATCH	FISH CAUGHT PER HOUR	RSE FOR CATCH RATE	NUMBER FISH HARVESTED	RSE FOR HARVEST	FISH HARVESTED PER HOUR	RSE FOR HARVEST RATE
01 JANUARY	4509	54.0	0.73	41.4	618	73.7	0.10	65.5
02 FEBRUARY	11291	62.7	0.56	28.2	3024	82.5	0.15	55.8
03 MARCH	30234	36.7	1.89	31.5	16317	59.9	1.02	56.3
04 APRIL	32930	31.1	2.10	25.4	6429	23.4	0.41	15.6
05 MAY	30391	27.0	1.39	21.7	4373	45.7	0.20	42.5
06 JUNE	25787	40.7	1.17	32.6	5510	65.6	0.25	60.7
07 JULY	36259	30.0	1.86	23.7	3314	47.6	0.17	44.0
08 AUGUST	16211	48.3	1.31	43.1	2351	93.5	0.19	89.6
09 SEPTEMBER	8007	67.5	0.45	62.6	1779	67.6	0.10	59.9
10 OCTOBER	36264	30.8	1.58	21.9	7115	44.0	0.31	37.9
11 NOVEMBER	47985	75.4	4.48	66.2	13924	92.8	1.30	83.6
12 DECEMBER	3136	.	2.68	.	211	.	0.18	.
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TOTAL	283004				64965			

SUMMARY OF SPECIES CATCH STATISTICS - 2005

LAKE=FT. LOUDOUN

SPECIES	TOTAL NUMBER FISH CAUGHT	RSE FOR CATCH	SPECIES CATCH COMPOSITION (%)	INTENDED NUMBER CAUGHT	TOTAL NUMBER FISH HARVESTED	RSE FOR HARVEST	SPECIES HARVEST COMPOSITION (%)	INTENDED NUMBER HARVESTED	% OF CAUGHT FISH RELEASED	AVERAGE WEIGHT (LBS)	NUMBER FISH RECORDED
ANY BUFFALO	87	1782.6	0.0	87	0	.	0.0	0	100.0	.	0
CHANNEL CATFISH	205	1323.2	0.1	0	0	.	0.0	0	100.0	.	0
FLATHEAD CATFISH	628	561.2	0.2	419	204	403.1	0.3	102	67.5	36.00	2
WHITE BASS	6654	123.5	2.4	4615	3194	170.9	4.9	2938	52.0	1.14	25
YELLOW BASS	772	325.1	0.3	483	583	203.5	0.9	292	24.5	1.33	6
STRIPED BASS	5999	120.9	2.1	1758	272	451.5	0.4	272	95.5	1.90	2
GREEN SUNFISH	102	1883.2	0.0	102	0	.	0.0	0	100.0	.	0
BLUEGILL	41034	34.1	14.5	32516	7773	56.9	12.0	6462	81.1	0.39	83
SMALLMOUTH BASS	15136	54.6	5.3	5107	1590	86.3	2.4	716	89.5	3.11	13
SPOTTED BASS	895	586.5	0.3	269	0	.	0.0	0	100.0	.	0
LARGEMOUTH BASS	90839	15.7	32.1	88617	11521	28.5	17.7	10817	87.3	2.64	100
WHITE CRAPPIE	70311	22.8	24.8	68704	18551	45.9	28.6	18329	73.6	0.69	165
BLACK CRAPPIE	15094	82.2	5.3	13976	6079	111.7	9.4	6079	59.7	0.69	20
BLACKNOSE CRAPPIE	262	662.6	0.1	262	194	512.8	0.3	194	26.0	0.87	2
YELLOW PERCH	814	494.7	0.3	362	97	518.7	0.1	0	88.1	0.68	1
SAUGER	10129	70.4	3.6	9788	6159	68.4	9.5	5902	39.2	1.71	46
WALLEYE	98	711.6	0.0	0	98	711.6	0.2	0	0.0	1.40	1
FRESHWATER DRUM	321	948.9	0.1	214	0	.	0.0	0	100.0	.	0

SUMMARY OF FISHING EFFORT AND CATCH RATES FOR INTENDED SPECIES GROUPS - 2005

LAKE=FT. LOUDOUN

INTENDED SPECIES	ANGLER HOURS	RSE FOR ANGLER HOURS	ANGLER TRIPS	PERCENT EFFORT	NUMBER CAUGHT PER HOUR	RSE FOR CATCH PER HOUR	NUMBER HARVESTED PER HOUR	RSE FOR HARVEST PER HOUR	NUMBER OF INTERVIEWS
ANY CATFISH	5995	25.6	1179	3.2	0.14	122.4	0.01	187.6	17
WHITE BASS	358	95.6	77	0.2	3.18		2.02		2
STRIPED BASS	424	100.5	86	0.2	0.54		0.00		2
ANY SUNFISH	1754	49.9	310	0.9	4.41	33.0	1.48	30.5	7
ANY BLACK BASS	18649	18.8	3269	10.0	0.80	18.8	0.06	46.8	58
SMALLMOUTH BASS	5283	27.5	1099	2.8	0.30	118.2	0.10	121.5	19
LARGEMOUTH BASS	79624	10.2	15535	42.7	0.64	18.4	0.09	41.6	245
ANY CRAPPIE	38005	13.4	7178	20.4	1.88	30.6	0.48	38.9	107
SAUGER	11266	26.5	2366	6.0	0.47	23.7	0.24	30.6	38
ANY SPECIES	23948	13.7	4668	12.8	1.75	39.4	0.31	104.8	74
OTHER	1112	59.5	204	0.6	0.00		0.00		5
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TOTAL	186418		35971						

SUMMARY OF RELATIVE SPECIES CATCH RATES
WITHIN TARGET GROUPS - 2005

LAKE=FT. LOUDOUN

TARGET GROUP	SPECIES WITHIN TARGET GROUPS	RELATIVE CATCH RATE	RELATIVE HARVEST RATE
ANY CATFISH	ANY CATFISH	0.00	0.00
	CHANNEL CATFISH	0.00	0.00
	FLATHEAD CATFISH	0.14	0.01
ANY SUNFISH	ANY SUNFISH	0.00	0.00
	GREEN SUNFISH	0.01	0.00
	BLUEGILL	4.40	1.48
ANY BLACK BASS	SMALLMOUTH BASS	0.05	0.01
	SPOTTED BASS	0.00	0.00
	LARGEMOUTH BASS	0.86	0.10
ANY CRAPPIE	ANY CRAPPIE	0.00	0.00
	WHITE CRAPPIE	1.56	0.36
	BLACK CRAPPIE	0.32	0.12
	BLACKNOSE CRAPPIE	0.01	0.00

COMPARISON OF BLACK BASS CATCH RATES (# FISH/HOUR) BETWEEN TOURNAMENT AND NON-TOURNAMENT ANGLERS
(MONTHS ARE LISTED ONLY IF > 90% OF BLACK BASS ANGLERS RESPONDED TO THE QUESTION ON TOURNAMENT PARTICIPATION)

LAKE=FT. LOUDOUN

MONTH	% BLACK BASS EFFORT BY TOURNAMENT ANGLERS	CATCH RATE FOR TOURNAMENT ANGLERS	# OF INTERVIEWS (TOURNAMENT)	CATCH RATE FOR NON-TOURNAMENT ANGLERS	# OF INTERVIEWS (NON-TOURNAMENT)
01 JANUARY	24	0.98	3	0.57	10
02 FEBRUARY	66	0.73	11	0.70	10
03 MARCH	41	0.48	9	0.92	12
04 APRIL	66	0.63	16	0.75	13
05 MAY	13	1.00	3	0.68	36
06 JUNE	30	0.86	5	0.46	26
07 JULY	30	0.42	8	0.64	40
08 AUGUST	29	1.48	8	0.81	28
09 SEPTEMBER	0		0	0.16	32
10 OCTOBER	40	0.63	6	1.17	19
11 NOVEMBER	22	0.50	3	0.75	22

**SUMMARY OF TRIP EXPENDITURES AND CONSUMER SURPLUS
FOR INTENDED SPECIES - 2005**

LAKE=FT. LOUDOUN

INTENDED SPECIES	TOTAL TRIP EXPENDITURES	TOTAL CONSUMER SURPLUS	TOTAL VALUE BY ANGLERS	NUMBER OF INTERVIEWS
ANY CATFISH	14740	7690	16730	17
WHITE BASS	310			2
STRIPED BASS	2710			2
ANY SUNFISH	4610	2420	4670	7
ANY BLACK BASS	63990	35900	94750	58
SMALLMOUTH BASS	24430	0	2190	19
LARGEMOUTH BASS	313540	37330	267470	243
ANY CRAPPIE	79320	46170	106320	107
SAUGER	32150	0	21950	38
ANY SPECIES	33040	25010	58050	73
OTHER	5250	900	5080	5
TOTAL	574090	155420	577210	571

SUMMARY OF SOCIOLOGICAL QUESTIONS - 2005

LAKE=FT. LOUDOUN

DISTRIBUTION OF STATES OF RESIDENCE OF INTERVIEWED ANGLERS

STATE	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
TN	914	98.1
OTHERS	18	1.9

DISTRIBUTION OF COUNTIES OF RESIDENCE OF INTERVIEWED ANGLERS

COUNTY	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
ANDERSON	59	6.4
BLOUNT	183	20.0
KNOX	481	52.6
OTHERS IN TN	182	19.9
OUT-OF-STATE	10	1.1

DISTRIBUTION OF ONE-WAY MILEAGE OF ANGLERS INTERVIEWED

ONE-WAY MILES TRAVELED	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) 0-25	616	65.7
B) 26-100	305	32.6
C) 101-250	13	1.4
D) > 250	3	0.3

DISTRIBUTION OF REASONS WHY INTERVIEWED ANGLERS MADE THE TRIP

REASON FOR TRIP	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) FISHING	548	95.8
B) VACATION	2	0.3
C) BUSINESS	3	0.5
D) OTHER	19	3.3

DISTRIBUTION OF NUMBER OF DAYS IN TRIPS OF INTERVIEWED ANGLERS

NUMBER DAYS IN TRIP	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) 1	561	98.4
B) 2-5	7	1.2
F) >20	2	0.4