

Melton Hill Reservoir

Annual Report 2006

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Melton Hill Reservoir – 2006

Largemouth Bass

Population Parameter	Annual Rating	Measure	Gear	Value
Recruitment	Excellent	Substock CPUE (per hr)	Electrofishing	40.7/hr
Structure	Poor	PSD	Electrofishing	32
Density	Excellent	CPUE \geq Stock Size (203 mm) (per/hr)	Electrofishing	82.7/hr
	Fair	CPUE \geq Minimum Size Limit (356 mm) (per hr)	Electrofishing	11.6/hr
Angling Pressure*	Fair	Fishing Effort (hr)	Creel Survey	43,691 hr
Fishing Success	Good	Angler Catch Rate (per hr)	Creel Survey	1.3/hr
Value of Fishery*	Fair	Trip Expenditures (\$)	Creel Survey	\$188,940

*all black bass

Fishery Forecast: Excellent recruitment of the 2001-2005 year classes will continue to improve the density of the fishery for the next several years. The electrofishing catch rate of greater than 356 mm largemouth is less than ideal.

Management Recommendations: A 356 mm creel limit was imposed in 2002 in response to the very low catch rates of preferred size largemouth bass. It appears that this regulation has had little effect on improving the size structure of the population and we are in the process of evaluating other possible solutions to this issue.

White Crappie

Population Parameter	Annual Rating	Measure	Gear	Value
Structure	Good	PSD	Electrofishing	96
Density	Good	CPUE \geq Stock Size (127 mm)	Electrofishing	24.7/hr
	Good	CPUE \geq Minimum size limit (254 mm)	Electrofishing	14.7/hr
Angling Pressure	Fair	Fishing Effort (hr)	Creel Survey	16,141 hr
Fishing Success	Good	Angler Catch Rate (per hr)	Creel Survey	0.9/hr
Value of Fishery	Good	Trip Expenditures (\$)	Creel Survey	\$47,330

Fishery Forecast: The white crappie population appears to be doing very well. A creel clerk has been working on the reservoir since the beginning of 2002 which will continue to provide valuable information concerning the fishery that can not be obtained through electrofishing alone.

Management Recommendations: No changes in creel limits are planned for the future.

Stocking and Stocking Evaluations

Species	Number Stocked	Mark	Evaluation	Value
Musky	6,169	NA	NA	NA

Habitat Enhancement and Monitoring

Fish Attractors	New	1 site, 4 units, .08 acres
	Renovated	1 site, 35 units, .7 acres

Tables

Table 1. Melton Hill Reservoir physical and chemical characteristics.

Surface Area	2,303 hectares
Drainage Area	8,665 sq. km
Full Pool Elevation	242 m-msl
Mean Annual Fluctuation	1.5 m
Shoreline Distance	310.6 km
Total Developed Shoreline	18%
Maximum Depth	18.3 m
Outlet Depth	2.7 m
Thermocline Depth	3 m (Aug 1998)
Trophic Status (Forebay)	Mesotrophic
Mean Chlorophyll (Forebay)	5.6 mg/L
Trophic Index Value	47.5
Hydraulic Retention Time	12 days
Reservoir Age	43 years

Table 2. Melton Hill Reservoir fish stockings 1993 - 2006.

Species	Date	Rate (per hectare)	Total Stocked
Muskellunge	September 1998	0.8	1,873
	August 1999	3.0	7,010
	August 2001	3.1	7,200
	October 2002	0.7	1,621
	Sept-Oct. 2003	0.5	1,145
	July-Nov. 2005	1.1	2,537
	Aug-Nov 2006	2.7	6,169

Table 3. Relative stock density, mean relative weight, and catch per unit effort by RSD category for target species collected in Melton Hill Reservoir 1998-2006.

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	78	15.6	28.3	97	19.4	35.1	85.7	75	15.0	27.2	84.0	23	4.6	8.3	80.4	3	0.6	1.1	86.4	0	0.0	0.0	0.0	276	55.2	51	
	1999	Electro	20	67	13.4	45.9	46	9.2	31.5	87.7	28	5.6	19.2	83.8	3	0.6	2.1	84.5	2	0.4	1.4	91.5	0	0.0	0.0	0.0	146	29.2	42	
	2000	Electro	20	34	6.8	31.8	46	9.2	43.0	83.7	23	4.6	21.5	86.5	3	0.6	2.8	86.4	1	0.2	0.9	84.5	0	0.0	0.0	0.0	107	21.4	37	
	2002	Electro	16	107	26.8	21.9	242	60.5	49.6	81.3	120	30.0	24.6	85.1	19	4.8	3.9	89.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	488	122.0	36	
	2003	Electro	14	118	33.7	28.1	153	43.7	36.4	79.3	126	36.0	30.0	80.0	22	6.3	5.2	83.2	1	0.3	0.2	na	0	0.0	0.0	0.0	420	120.0	49	
	2004	Electro	12	41	13.7	17.1	98	32.7	40.8	73.9	85	28.3	35.4	79.4	15	5.0	6.3	83.0	1	0.3	0.4	78.7	0	0.0	0.0	0.0	240	80.0	51	
	2005	Electro	12	57	19.0	27.4	43	14.3	20.7	91.1	83	27.7	39.9	89.0	23	7.7	11.1	92.1	2	0.7	1.0	95.5	0	0.0	0.0	0.0	208	69.3	72	
2006	Electro	12	122	40.7	33.0	169	56.3	45.7	87.4	56	18.7	15.1	87.0	22	7.3	5.9	87.9	1	0.3	0.3	77.7	0	0.0	0.0	0.0	370	123.3	32		
Smallmouth Bass	1998	Electro	20	3	0.6	9.4	10	2.0	31.3	71.8	12	2.4	37.5	78.2	6	1.2	18.8	74.8	1	0.2	3.1	82.7	0	0.0	0.0	0.0	32	6.4	66	
	1999	Electro	20	9	1.8	33.3	10	2.0	37.0	86.5	6	1.2	22.2	83.9	2	0.4	7.4	87.4	0	0.0	0.0	0.0	0	0.0	0.0	0.0	27	5.4	44	
	2000	Electro	20	3	0.6	75.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	1	0.2	25.0	79.3	0	0.0	0.0	0.0	0	0.0	0.0	0.0	4	0.8		
	2002	Electro	16	3	0.8	27.3	2	0.5	18.2	76.3	4	1.0	36.4	81.0	2	0.5	18.2	76.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	11	2.8	75	
	2003	Electro	14	6	1.7	33.3	4	1.1	22.2	73.6	4	1.1	22.2	74.7	3	0.9	16.7	77.1	1	0.3	5.6	67.2	0	0.0	0.0	0.0	18	5.1	67	
	2004	Electro	12	4	1.3	28.6	3	1.0	21.4	67.9	2	0.7	14.3	69.8	3	1.0	21.4	75.1	2	0.7	14.3	74.8	0	0.0	0.0	0.0	14	4.7	70	
	2005	Electro	12	0	0.0	0.0	1	0.3	100.0	87.7	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	1	0.3	100	
2006	Electro	12	6	2.0	24.0	7	2.3	28.0	82.4	10	3.3	40.0	81.7	2	0.7	8.0	80.5	0	0.0	0.0	0.0	0	0.0	0.0	0.0	25	8.3	63		
Spotted Bass	1998	Electro	20	1	0.2	16.7	5	1.0	83.3	87.6	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	6	1.2		
	1999	Electro	20	5	1.6	62.5	3	0.6	37.5	84.2	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	8	1.6		
	2000	Electro	20	0	0.0	0.0	5	1.0	71.4	87.8	2	0.4	28.6	93.2	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	7	1.4		
	2002	Electro	16	4	1.0	25.0	10	2.5	62.5	85.1	2	0.5	12.5	90.4	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	16	4.0	17	
	2003	Electro	14	0	0.0	0.0	8	2.3	100.0	82.5	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	8	2.3		
	2004	Electro	12	2	0.7	28.6	3	1.0	42.9	84.1	1	0.3	14.3	71.8	1	0.3	14.3	82.9	0	0.0	0.0	0.0	0	0.0	0.0	0.0	7	2.3		
	2005	Electro	12	1	0.3	12.5	5	1.7	62.5	91.9	2	0.7	25.0	80.6	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	8	2.7	29	
2006	Electro	12	0	0.0	0.0	0	0.0	0.0	0.0	1	0.3	100.0	101.2	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	1	0.3	100		
White Crappie	1998	Electro	20	0	0.0	0.0	0	0.0	0.0	0.0	12	2.4	31.6	82.3	20	0.0	52.6	84.6	6	1.2	15.8	80.6	0	0.0	0.0	0.0	38	7.6	100	
	1999	Electro	20	0	0.0	0.0	6	1.2	37.5	93.7	1	0.2	6.3	95.3	7	1.4	43.8	81.5	2	0.4	12.5	78.9	0	0.0	0.0	0.0	16	3.2	63	
	2000	Electro	20	0	0.0	0.0	2	0.4	20.0	84.6	1	0.2	10.0	86.4	4	0.8	40.0	78.9	3	0.6	30.0	81.1	0	0.0	0.0	0.0	10	2.0	80	
	2002	Electro	16	0	0.0	0.0	0	0.0	0.0	0.0	20	5.0	39.2	84.5	26	6.5	51.0	84.0	5	1.3	9.8	78.4	0	0.0	0.0	0.0	51	12.8	100	
	2003	Electro	14	0	0.0	0.0	2	0.6	6.9	80.7	12	3.4	41.4	87.1	11	3.1	37.9	83.1	4	1.1	13.8	81.9	0	0.0	0.0	0.0	29	4.1	93	
	2004	Electro	12	0	0.0	0.0	5	1.7	22.7	79.9	3	1.0	13.6	86.5	13	4.3	59.1	91.6	1	0.3	4.5	91.5	0	0.0	0.0	0.0	22	7.3	77	
	2005	Electro	12	0	0.0	0.0	0	0.0	0.0	0.0	4	1.3	13.3	87.1	22	7.3	73.3	91.4	4	1.3	13.3	85.0	0	0.0	0.0	0.0	30	10.0	100	
2006	Electro	12	0	0.0	0.0	3	1.0	4.1	91.9	25	8.3	33.8	92.8	30	10.0	40.5	85.9	16	5.3	21.6	85.9	0	0.0	0.0	0.0	74	24.7	96		
Black Crappie	2006	Electro	12	0	0.0	0.0	4	1.3	19.9	87.6	15	5.0	75.0	90.0	0	0.0	0.0	0.0	1	0.3	5.0	74.2	0	0.0	0.0	0.0	20	6.7	80	
Blacknose Crappie	2006	Electro	12	0	0.0	0.0	1	0.3	8.3	94.0	10	3.3	83.3	94.4	1	0.3	8.3	83.2	0	0.0	0.0	0.0	0	0.0	0.0	0.0	12	4.0	92	
Musky	2003	Electro	14	1	0.9	20.0	0	0.0	0.0	0.0	4	0.6	80.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	5	1.4	100	
	2004	Electro	14	1	0.3	12.5	7	2.3	87.5	94.3	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	8	2.7		
	2005	Electro	12	0	0.0	0.0	0	0.0	0.0	0.0	6	2.0	100.0	84.9	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	6	2.0	100	
	2006	Electro	12	1	0.3	16.7	0	0.0	0.0	0.0	3	1.0	50.0	nr	1	0.3	16.7	nr	1	0.3	16.7	nr	0	0.0	0.0	0.0	6	2.0	100	
Channel cat	2001	Gill	8	7	0.9	8.9	19	2.4	24.0	0.0	44	5.5	55.7	0.0	9	1.1	11.4	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	79	9.9		
White bass	2001	Gill	8	0	0.0	0.0	16	2.0	50.0	0.0	3	0.4	9.4	0.0	13	1.6	40.6	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	32	4.0		
Yellow bass	2001	Gill	8	0	0.0	0.0	2	0.3	2.8	0.0	66	8.3	93.0	0.0	3	0.4	4.2	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	71	8.9		

Table 4. Mean relative weight and standard error values by size class for Melton Hill Reservoir largemouth bass collected during the 2006 electrofishing sample.

Size Class	Mean Wr	Std. Error	N
150	83.073	1.916	16
175	83.998	1.762	29
200	86.256	0.913	35
225	84.766	0.772	41
250	87.085	0.721	52
275	91.269	3.634	41
300	87.726	1.284	20
325	87.576	1.326	19
350	85.889	1.457	15
375	85.338	2.464	11
400	90.956	2.950	6
425	89.366	2.777	3
450	86.148	5.255	2
475	86.080	0.875	2
500	77.716		1

Total Catch 293

Table 5. Mean relative weight and standard error values by size class for Melton Hill Reservoir white crappie collected during the 2006 electrofishing sample.

Size Class	Mean Wr	Std. Error	N
150	86.075		1
175	97.614		1
200	95.199	2.328	10
225	91.167	1.550	15
250	87.176	1.601	15
275	84.556	1.672	15
300	85.690	1.624	13
325	86.971	1.836	3

Total Catch 73

Table 6. Mean relative weight and standard error values by size class for Melton Hill Reservoir smallmouth bass collected during the 2006 electrofishing sample.

Size Class	Mean Wr	Std. Error	N
150	74.865		1
175	77.674		1
200	82.819	3.365	4
225			
250	84.034	1.319	2
275	79.961	2.502	4
300	80.207	1.281	5
325	95.787		1
350			
375	77.835		1
400	83.056		1
Total Catch			20

Table 7. Melton Hill Reservoir water levels for 2006. (TVA)

ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY
793.94	JANUARY	1	793.96	FEBRUARY	24	793.88	APRIL	19
794.13	JANUARY	2	793.95	FEBRUARY	25	793.93	APRIL	20
794.22	JANUARY	3	794.05	FEBRUARY	26	793.86	APRIL	21
794.38	JANUARY	4	793.73	FEBRUARY	27	794.58	APRIL	22
793.75	JANUARY	5	793.98	FEBRUARY	28	794.22	APRIL	23
793.67	JANUARY	6	794.20	MARCH	1	794.18	APRIL	24
794.06	JANUARY	7	794.08	MARCH	2	793.66	APRIL	25
793.71	JANUARY	8	793.19	MARCH	3	794.04	APRIL	26
793.70	JANUARY	9	793.75	MARCH	4	793.70	APRIL	27
793.75	JANUARY	10	793.89	MARCH	5	793.96	APRIL	28
793.89	JANUARY	11	794.10	MARCH	6	794.21	APRIL	29
794.01	JANUARY	12	792.78	MARCH	7	794.06	APRIL	30
794.37	JANUARY	13	793.39	MARCH	8	793.86	MAY	1
793.43	JANUARY	14	793.09	MARCH	9	793.88	MAY	2
794.17	JANUARY	15	794.00	MARCH	10	793.78	MAY	3
793.59	JANUARY	16	794.03	MARCH	11	793.98	MAY	4
794.22	JANUARY	17	794.06	MARCH	12	794.09	MAY	5
793.21	JANUARY	18	794.37	MARCH	13	794.58	MAY	6
793.61	JANUARY	19	793.75	MARCH	14	794.46	MAY	7
793.68	JANUARY	20	793.17	MARCH	15	794.14	MAY	8
793.67	JANUARY	21	793.59	MARCH	16	793.96	MAY	9
793.78	JANUARY	22	793.61	MARCH	17	793.20	MAY	10
793.89	JANUARY	23	793.56	MARCH	18	793.46	MAY	11
794.04	JANUARY	24	793.60	MARCH	19	794.46	MAY	12
793.45	JANUARY	25	792.25	MARCH	20	794.21	MAY	13
793.67	JANUARY	26	791.99	MARCH	21	794.18	MAY	14
793.48	JANUARY	27	791.37	MARCH	22	794.26	MAY	15
793.42	JANUARY	28	791.12	MARCH	23	794.13	MAY	16
793.45	JANUARY	29	791.21	MARCH	24	794.22	MAY	17
793.95	JANUARY	30	791.18	MARCH	25	794.32	MAY	18
793.61	JANUARY	31	791.16	MARCH	26	793.71	MAY	19
793.11	FEBRUARY	1	791.20	MARCH	27	794.37	MAY	20
793.93	FEBRUARY	2	791.23	MARCH	28	794.14	MAY	21
793.51	FEBRUARY	3	792.10	MARCH	29	793.80	MAY	22
793.96	FEBRUARY	4	792.96	MARCH	30	794.28	MAY	23
793.87	FEBRUARY	5	793.42	MARCH	31	794.40	MAY	24
793.81	FEBRUARY	6	793.46	APRIL	1	794.38	MAY	25
793.78	FEBRUARY	7	793.57	APRIL	2	794.50	MAY	26
793.43	FEBRUARY	8	794.39	APRIL	3	794.07	MAY	27
793.27	FEBRUARY	9	793.78	APRIL	4	794.25	MAY	28
794.32	FEBRUARY	10	793.59	APRIL	5	794.14	MAY	29
793.60	FEBRUARY	11	793.78	APRIL	6	794.41	MAY	30
793.49	FEBRUARY	12	793.89	APRIL	7	794.29	MAY	31
793.27	FEBRUARY	13	794.46	APRIL	8	794.00	JUNE	1
793.23	FEBRUARY	14	793.68	APRIL	9	794.20	JUNE	2
793.69	FEBRUARY	15	793.72	APRIL	10	794.11	JUNE	3
793.50	FEBRUARY	16	794.07	APRIL	11	794.40	JUNE	4
793.65	FEBRUARY	17	794.02	APRIL	12	794.18	JUNE	5
793.83	FEBRUARY	18	794.11	APRIL	13	793.95	JUNE	6
793.30	FEBRUARY	19	794.18	APRIL	14	794.24	JUNE	7
793.22	FEBRUARY	20	794.42	APRIL	15	794.29	JUNE	8
793.58	FEBRUARY	21	794.53	APRIL	16	794.30	JUNE	9
793.70	FEBRUARY	22	794.16	APRIL	17	794.22	JUNE	10
794.30	FEBRUARY	23	793.81	APRIL	18	794.23	JUNE	11

Table 8. Melton Hill Reservoir water levels for 2006. (TVA)

ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY
794.26	JUNE	12	794.36	AUGUST	5	793.42	SEPTEMBER	28
794.33	JUNE	13	793.47	AUGUST	6	793.88	SEPTEMBER	29
794.19	JUNE	14	793.41	AUGUST	7	793.95	SEPTEMBER	30
794.21	JUNE	15	793.39	AUGUST	8	793.75	OCTOBER	1
794.43	JUNE	16	793.76	AUGUST	9	793.88	OCTOBER	2
794.25	JUNE	17	793.50	AUGUST	10	793.68	OCTOBER	3
794.03	JUNE	18	793.64	AUGUST	11	793.26	OCTOBER	4
794.16	JUNE	19	793.55	AUGUST	12	793.47	OCTOBER	5
794.26	JUNE	20	793.73	AUGUST	13	793.75	OCTOBER	6
793.65	JUNE	21	793.65	AUGUST	14	793.41	OCTOBER	7
793.26	JUNE	22	793.31	AUGUST	15	793.61	OCTOBER	8
793.60	JUNE	23	793.86	AUGUST	16	793.42	OCTOBER	9
793.89	JUNE	24	793.53	AUGUST	17	793.72	OCTOBER	10
794.08	JUNE	25	793.53	AUGUST	18	793.61	OCTOBER	11
794.30	JUNE	26	793.17	AUGUST	19	793.26	OCTOBER	12
794.19	JUNE	27	793.29	AUGUST	20	793.13	OCTOBER	13
793.63	JUNE	28	794.00	AUGUST	21	793.56	OCTOBER	14
793.86	JUNE	29	792.94	AUGUST	22	793.75	OCTOBER	15
793.82	JUNE	30	794.28	AUGUST	23	793.63	OCTOBER	16
793.86	JULY	1	793.49	AUGUST	24	793.34	OCTOBER	17
793.84	JULY	2	794.02	AUGUST	25	793.43	OCTOBER	18
793.86	JULY	3	793.60	AUGUST	26	793.17	OCTOBER	19
794.26	JULY	4	793.40	AUGUST	27	793.27	OCTOBER	20
793.79	JULY	5	793.68	AUGUST	28	793.58	OCTOBER	21
794.11	JULY	6	793.58	AUGUST	29	793.57	OCTOBER	22
793.50	JULY	7	794.48	AUGUST	30	793.42	OCTOBER	23
794.10	JULY	8	793.65	AUGUST	31	793.72	OCTOBER	24
794.42	JULY	9	793.50	SEPTEMBER	1	793.59	OCTOBER	25
793.98	JULY	10	793.57	SEPTEMBER	2	792.80	OCTOBER	26
794.27	JULY	11	793.63	SEPTEMBER	3	793.77	OCTOBER	27
793.82	JULY	12	793.90	SEPTEMBER	4	793.95	OCTOBER	28
794.19	JULY	13	793.99	SEPTEMBER	5	793.69	OCTOBER	29
793.93	JULY	14	793.91	SEPTEMBER	6	793.06	OCTOBER	30
793.85	JULY	15	793.23	SEPTEMBER	7	794.07	OCTOBER	31
793.95	JULY	16	794.02	SEPTEMBER	8	794.02	NOVEMBER	1
793.55	JULY	17	793.61	SEPTEMBER	9	793.28	NOVEMBER	2
794.38	JULY	18	793.85	SEPTEMBER	10	793.32	NOVEMBER	3
793.55	JULY	19	794.09	SEPTEMBER	11	793.88	NOVEMBER	4
793.31	JULY	20	793.73	SEPTEMBER	12	793.20	NOVEMBER	5
793.57	JULY	21	793.57	SEPTEMBER	13	792.72	NOVEMBER	6
794.05	JULY	22	793.66	SEPTEMBER	14	793.27	NOVEMBER	7
793.92	JULY	23	793.56	SEPTEMBER	15	794.00	NOVEMBER	8
793.86	JULY	24	794.04	SEPTEMBER	16	793.81	NOVEMBER	9
793.97	JULY	25	793.74	SEPTEMBER	17	793.08	NOVEMBER	10
793.35	JULY	26	793.33	SEPTEMBER	18	792.91	NOVEMBER	11
793.47	JULY	27	793.55	SEPTEMBER	19	793.08	NOVEMBER	12
793.88	JULY	28	793.97	SEPTEMBER	20	793.24	NOVEMBER	13
793.96	JULY	29	793.38	SEPTEMBER	21	792.89	NOVEMBER	14
794.14	JULY	30	793.19	SEPTEMBER	22	793.74	NOVEMBER	15
793.37	JULY	31	794.33	SEPTEMBER	23	792.72	NOVEMBER	16
793.79	AUGUST	1	794.30	SEPTEMBER	24	793.66	NOVEMBER	17
793.89	AUGUST	2	793.44	SEPTEMBER	25	794.38	NOVEMBER	18
793.76	AUGUST	3	793.64	SEPTEMBER	26	793.62	NOVEMBER	19
793.94	AUGUST	4	793.62	SEPTEMBER	27	792.82	NOVEMBER	20

Table 9. Melton Hill Reservoir water levels for 2006. (TVA)

ELEVATION	MONTH	DAY
793.22	NOVEMBER	21
793.47	NOVEMBER	22
793.85	NOVEMBER	23
794.04	NOVEMBER	24
793.56	NOVEMBER	25
793.32	NOVEMBER	26
793.48	NOVEMBER	27
793.68	NOVEMBER	28
794.17	NOVEMBER	29
793.78	NOVEMBER	30
793.02	DECEMBER	1
793.57	DECEMBER	2
793.48	DECEMBER	3
793.26	DECEMBER	4
793.18	DECEMBER	5
792.97	DECEMBER	6
792.97	DECEMBER	7
792.51	DECEMBER	8
793.32	DECEMBER	9
793.64	DECEMBER	10
793.29	DECEMBER	11
793.22	DECEMBER	12
793.84	DECEMBER	13
793.83	DECEMBER	14
793.66	DECEMBER	15
793.69	DECEMBER	16
793.81	DECEMBER	17
793.76	DECEMBER	18
793.48	DECEMBER	19
793.75	DECEMBER	20
793.93	DECEMBER	21
793.95	DECEMBER	22
794.39	DECEMBER	23
794.02	DECEMBER	24
793.53	DECEMBER	25
793.87	DECEMBER	26
793.65	DECEMBER	27
793.80	DECEMBER	28
794.00	DECEMBER	29
794.13	DECEMBER	30
793.80	DECEMBER	31

Table 10. Melton Hill Reservoir fish habitat enhancement summary for 2006.

LOCATION	NEW SITES			RENOVATED SITES			EXPANDED SITES		
	NUMBER	UNITS	ACRES	NUMBER	UNITS	ACRES	NUMBER	UNITS	ACRES
CRM 44.75 L* CRM 45.10 R*	1	4	0.08	1	35	0.70			
TOTAL	1	4	0.08	1	35	0.70			

*Christmas trees, pallets and block

Figures

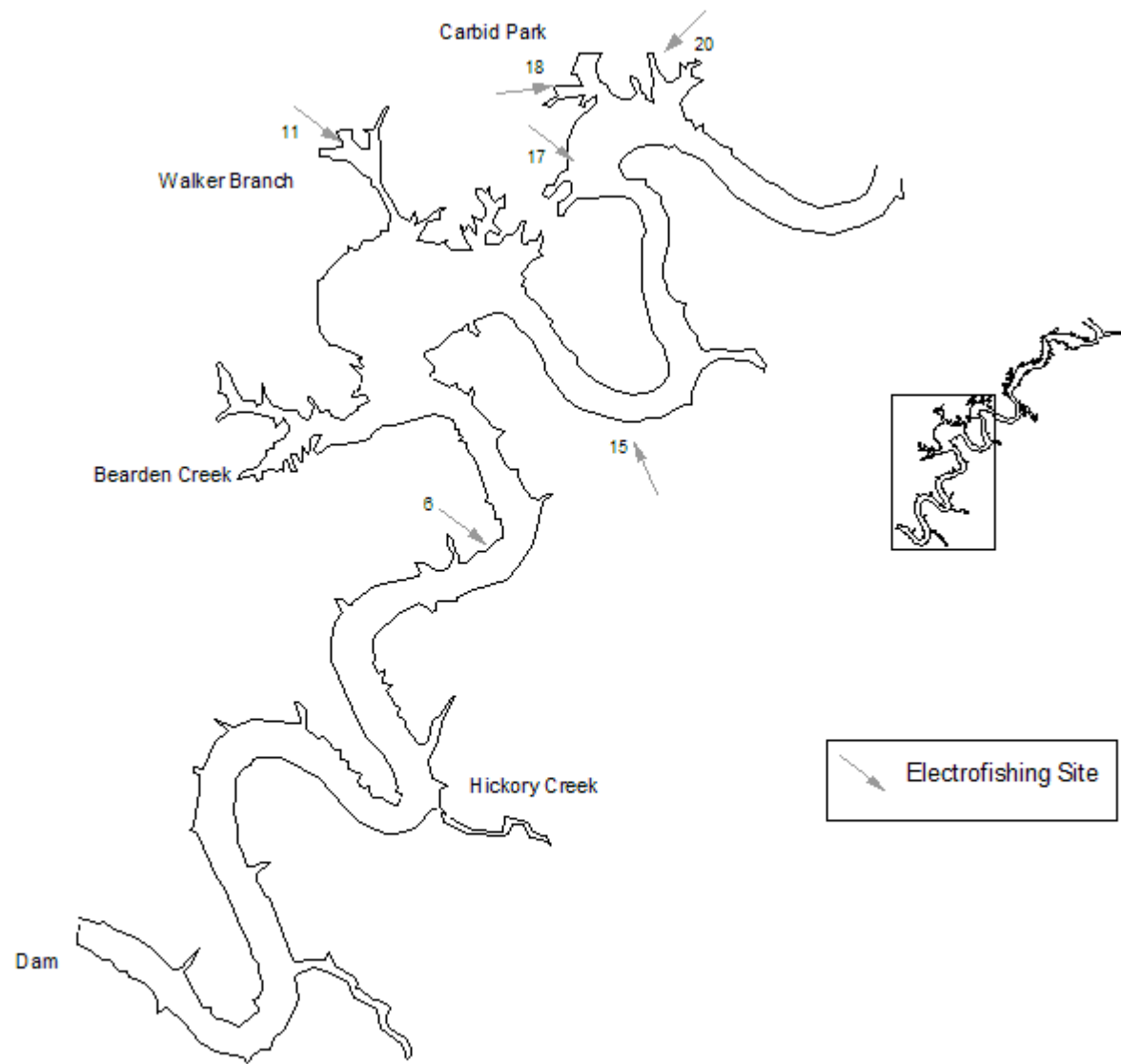


Figure 1. Electrofishing sites in the lower section of Melton Hill Reservoir in 2006.

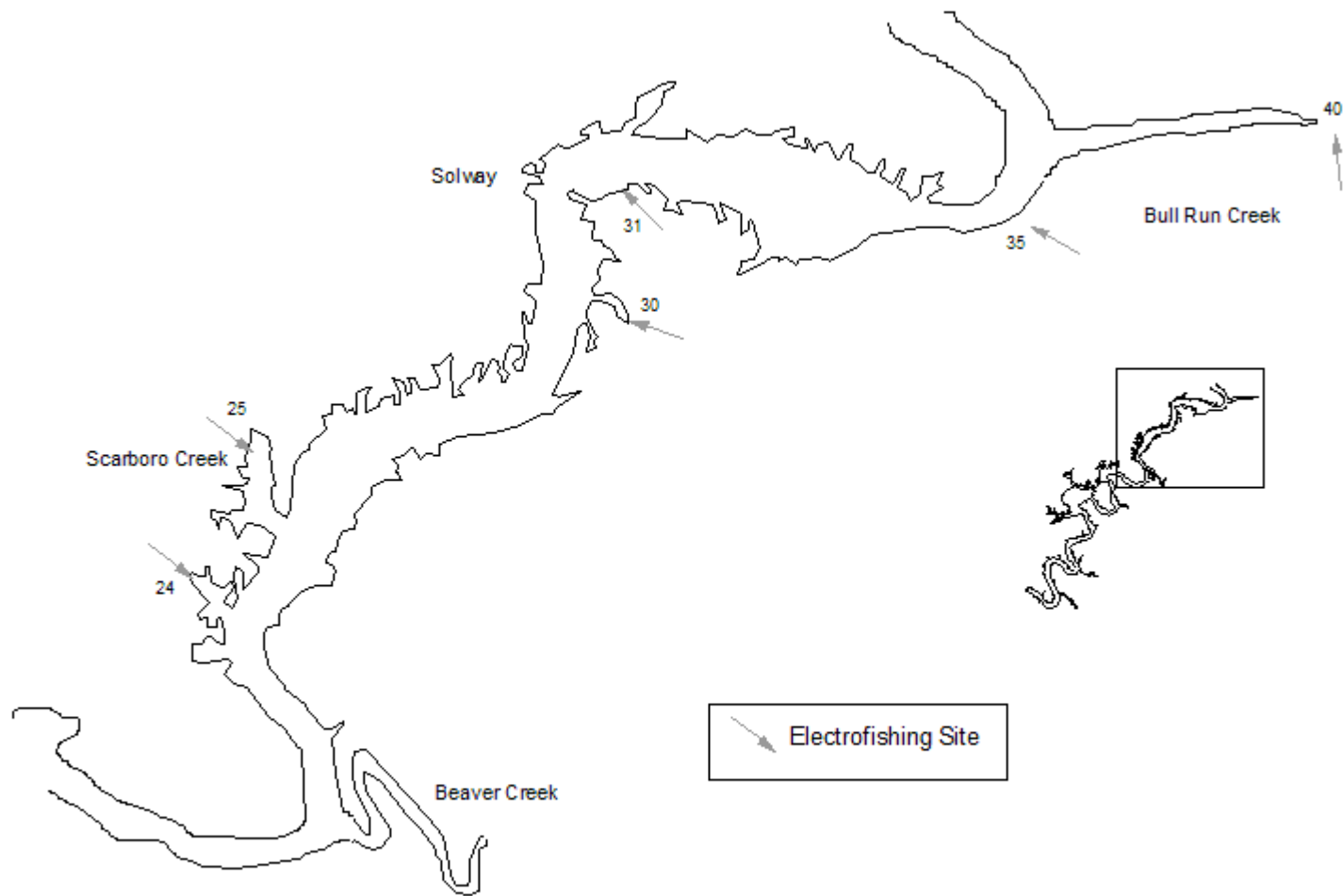


Figure 2. Electrofishing sites in the upper section of Melton Hill Reservoir in 2006.

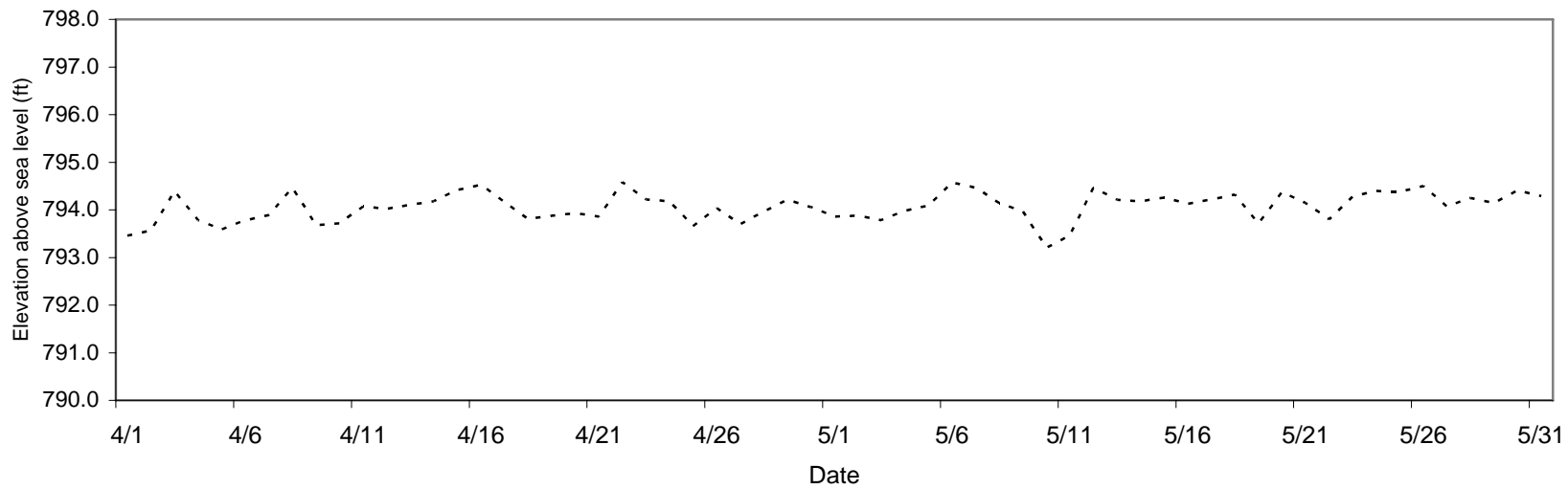


Figure 3. April and May water levels in Melton Hill Reservoir in 2006 (TVA data).

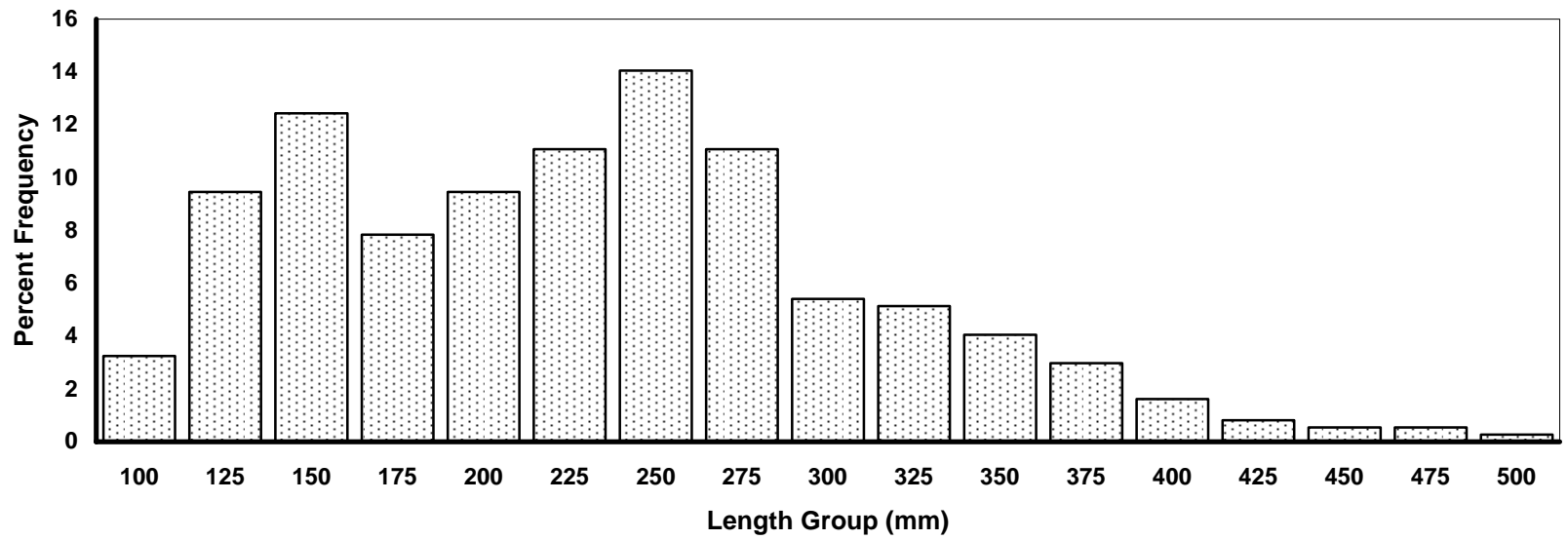


Figure 4. Melton Hill Reservoir largemouth bass length frequency by percent for 2006 electrofishing sample (n=370).

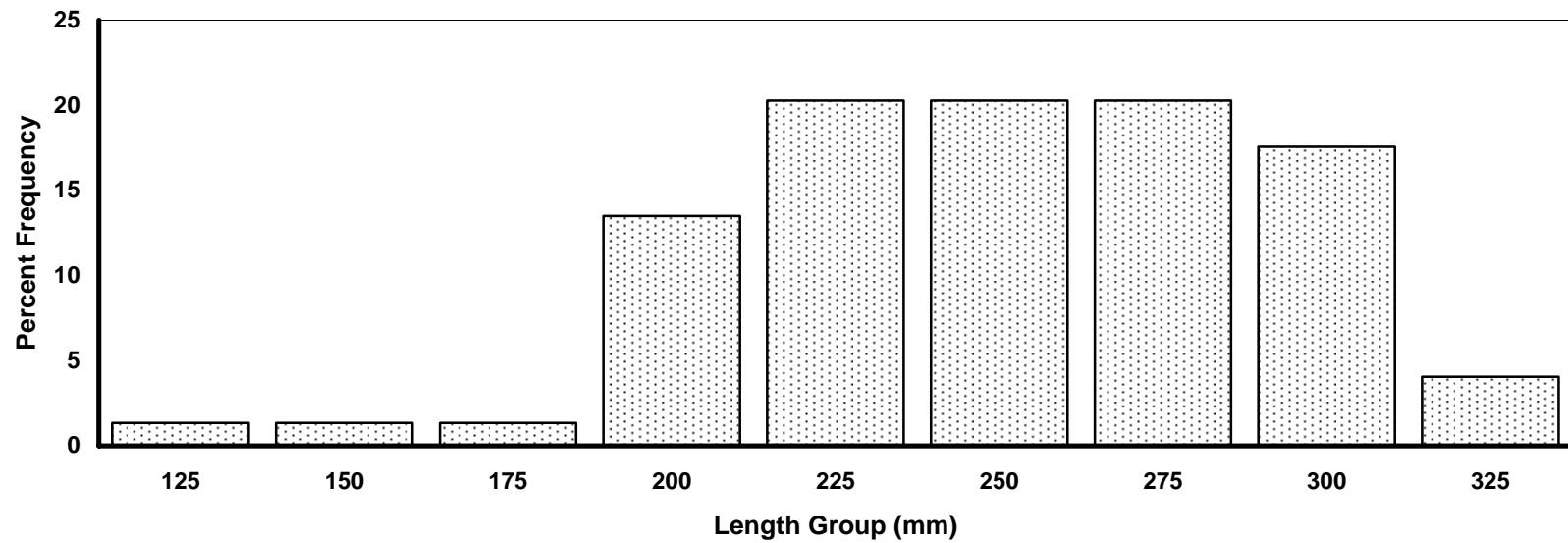


Figure 5. Melton Hill Reservoir white crappie length frequency by percent for 2006 electrofishing sample (n=74).

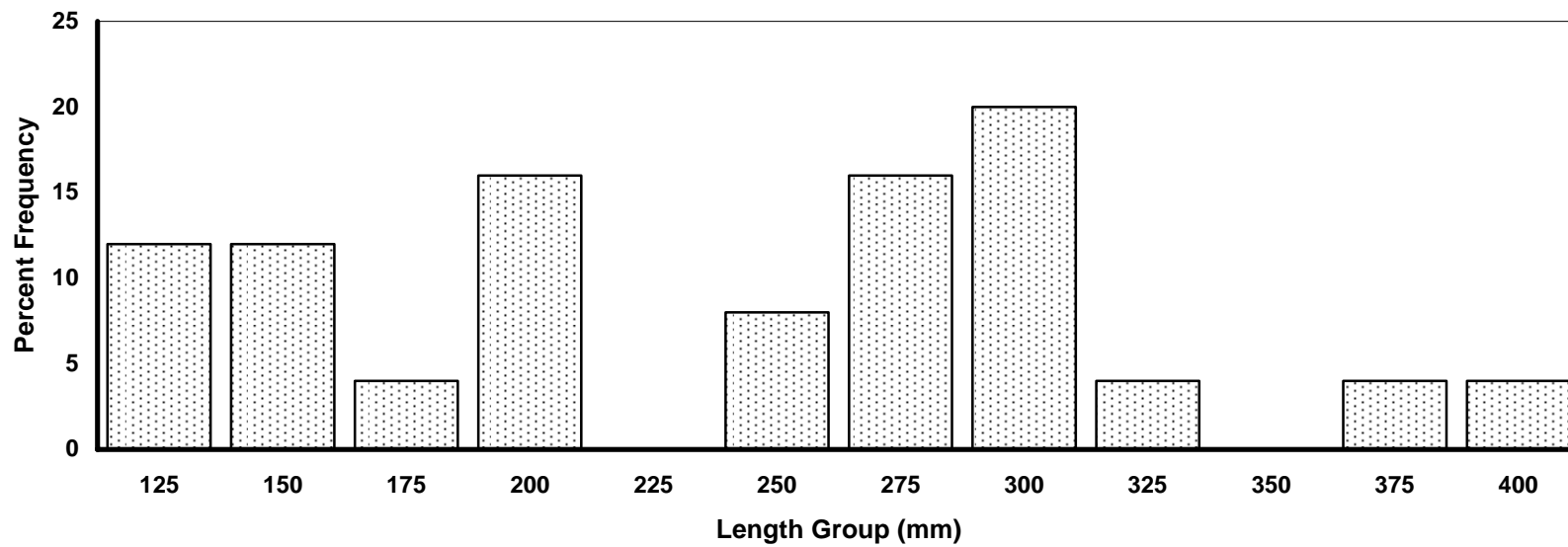


Figure 6. Melton Hill Reservoir smallmouth bass length frequency by percent for 2006 electrofishing sample (n=25).

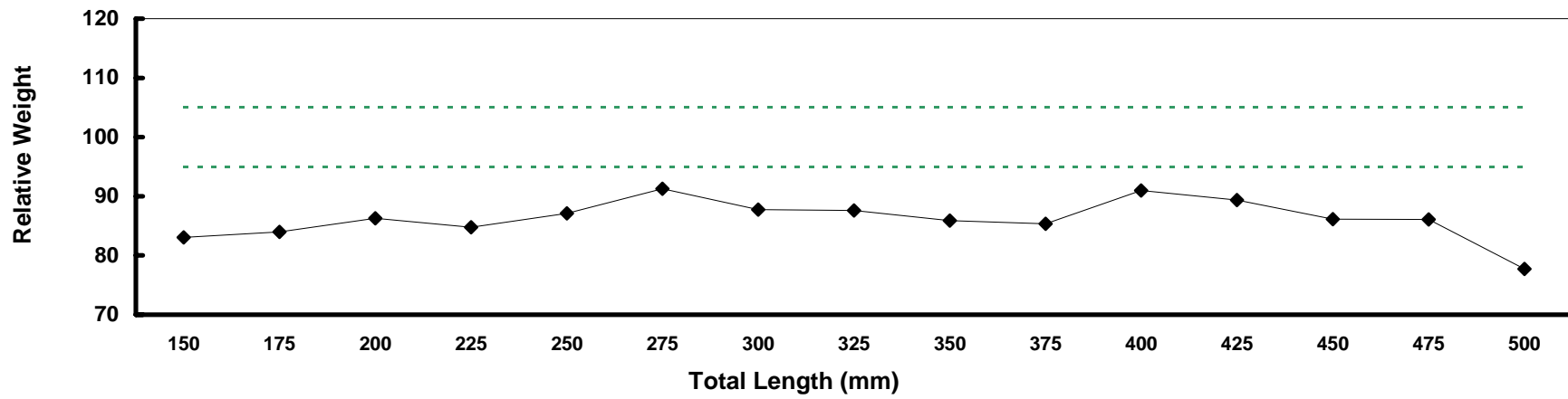


Figure 7. Melton Hill Reservoir largemouth bass mean relative weight values from the 2006 electrofishing sample (n=293).

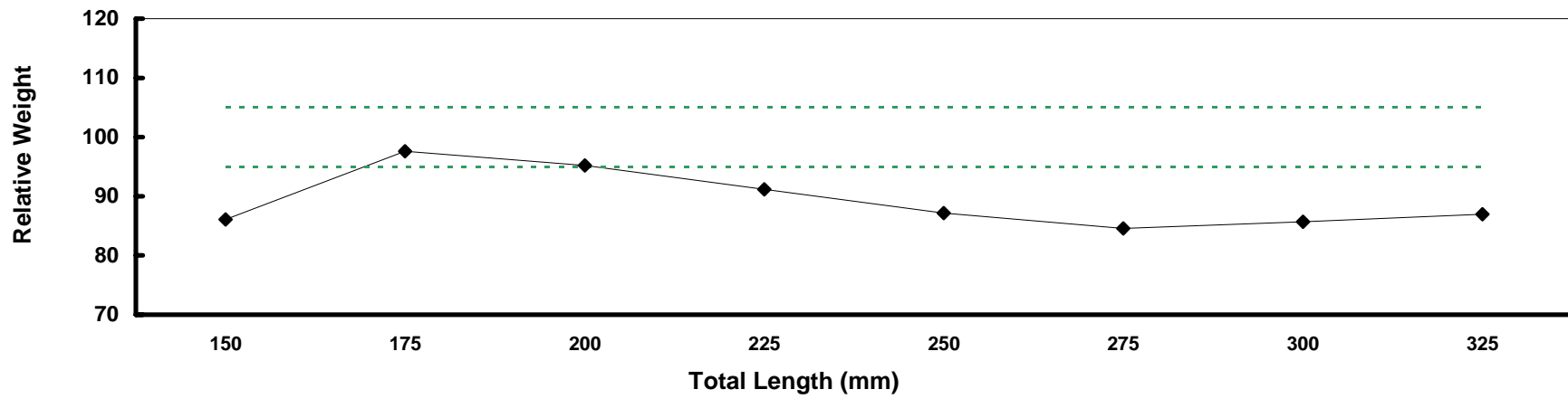


Figure 8. Melton Hill Reservoir white crappie mean relative weight values from the 2006 electrofishing sample (n=73).

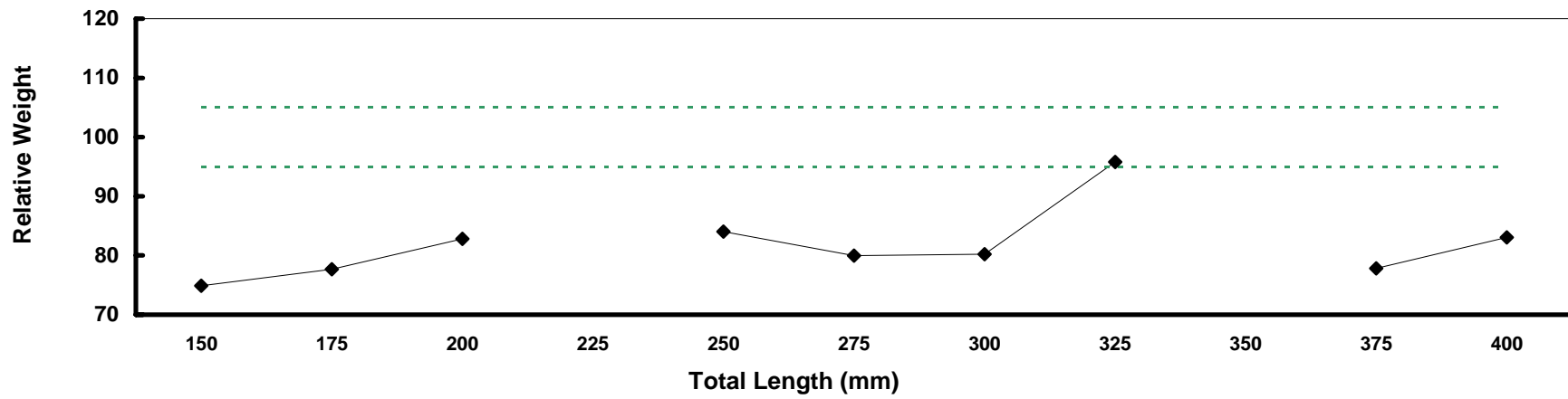


Figure 9. Melton Hill Reservoir smallmouth bass mean relative weight values from the 2006 electrofishing sample (n=20).

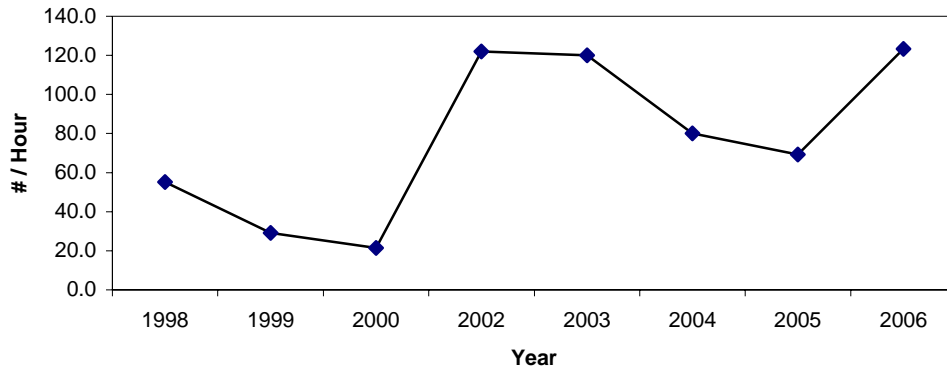


Figure 10. Melton Hill Reservoir largemouth bass electrofishing catch rates from 1998 to 2006.

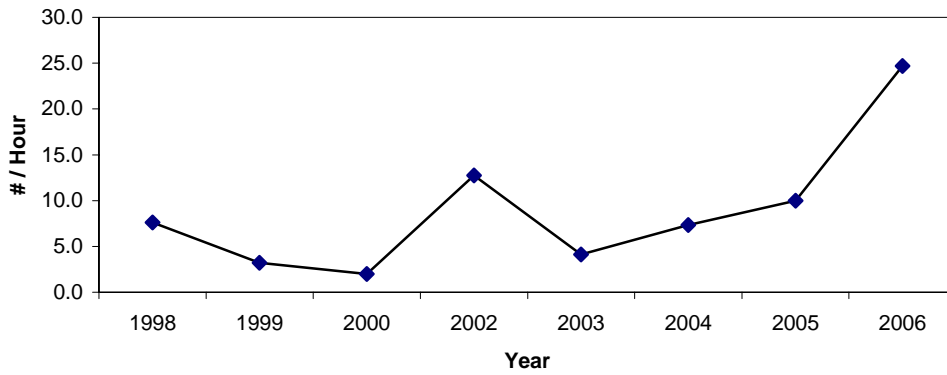


Figure 11. Melton Hill Reservoir white crappie electrofishing catch rates from 1998 to 2006.



Figure 12. TVA's black bass electrofishing catch rates for 31 reservoirs sampled in 2006

Appendix – Creel

MONTHLY ANGLING EFFORT FOR ALL ANGLERS - 2006

LAKE=MELTON HILL

MONTH	ANGLER HOURS	RELATIVE STANDARD ERROR	HOURS PER ACRE	ANGLER TRIPS	TRIPS PER ACRE	PERCENT EFFORT
01 JANUARY	5127	42.1	0.9	909	0.2	4.6
02 FEBRUARY	3042	47.1	0.5	700	0.1	2.7
03 MARCH	6234	46.1	1.1	1211	0.2	5.6
04 APRIL	11592	19.4	2.0	2684	0.5	10.4
05 MAY	16941	17.3	3.0	4211	0.7	15.2
06 JUNE	14122	15.0	2.5	3547	0.6	12.7
07 JULY	16829	36.9	3.0	3816	0.7	15.1
08 AUGUST	12277	19.7	2.2	3232	0.6	11.1
09 SEPTEMBER	9848	25.3	1.7	2827	0.5	8.9
10 OCTOBER	8025	10.4	1.4	2792	0.5	7.2
11 NOVEMBER	3301	15.8	0.6	1080	0.2	3.0
12 DECEMBER	3755	38.3	0.7	1074	0.2	3.4
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TOTAL	111093			28083		

MONTHLY CATCH STATISTICS FOR ALL ANGLERS - 2006

LAKE=MELTON HILL

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	2615	66.6	0.51	47.5	410	108.9	0.08	92.6
02 FEBRUARY	1460	53.6	0.48	23.1	365	104.9	0.12	82.6
03 MARCH	2618	46.6	0.42	6.4	1247	79.4	0.20	58.5
04 APRIL	11708	33.1	1.01	26.2	1159	33.0	0.10	26.6
05 MAY	13722	19.9	0.81	9.8	847	52.0	0.05	48.3
06 JUNE	16664	17.4	1.18	8.7	1412	63.6	0.10	61.2
07 JULY	18512	39.0	1.10	11.7	505	75.5	0.03	53.4
08 AUGUST	15592	25.2	1.27	15.5	614	46.3	0.05	44.7
09 SEPTEMBER	11030	29.9	1.12	15.4	788	74.2	0.08	69.5
10 OCTOBER	7303	25.9	0.91	23.7	562	85.8	0.07	82.9
11 NOVEMBER	2641	52.7	0.80	49.9	1023	92.8	0.31	89.6
12 DECEMBER	4356	53.5	1.16	34.7	1540	91.0	0.41	76.6
----- TOTAL	108221				----- 10472			

SUMMARY OF SPECIES CATCH STATISTICS - 2006

LAKE=MELTON HILL

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 GAR	60	1370.5	0.1	0	0	.	0.0	0	100.0	.	0
CARP	1844	147.3	1.7	1788	60	198.2	0.6	60	96.7	2.83	2
ANY BUFFALO	128	1104.6	0.1	128	0	.	0.0	0	100.0	.	0
BLUE CATFISH	85	1360.0	0.1	85	0	.	0.0	0	100.0	.	0
MUSKELLUNGE	175	448.9	0.2	175	0	.	0.0	0	100.0	.	0
RAINBOW TROUT	2572	173.6	2.4	2471	557	131.6	5.3	557	78.3	0.70	18
ANY TEMPERATE BASS	552	452.5	0.5	0	0	.	0.0	0	100.0	.	0
WHITE BASS	2802	139.0	2.6	1401	0	.	0.0	0	100.0	.	0
YELLOW BASS	265	174.8	0.2	0	265	174.8	2.5	0	0.0	0.71	15
STRIPED BASS	2478	132.0	2.3	1549	0	.	0.0	0	100.0	.	0
GREEN SUNFISH	719	253.0	0.7	719	121	219.8	1.2	121	83.2	0.45	2
WARMOUTH	418	362.8	0.4	119	0	.	0.0	0	100.0	.	0
BLUEGILL	25457	20.0	23.5	22236	2420	37.3	23.1	2278	90.5	0.52	75
SMALLMOUTH BASS	7224	46.5	6.7	7005	18	313.4	0.2	18	99.8	2.20	1
SPOTTED BASS	1704	179.4	1.6	1491	0	.	0.0	0	100.0	.	0
LARGEMOUTH BASS	39517	14.7	36.5	38299	933	38.7	8.9	903	97.6	2.20	31
WHITE CRAPPIE	16731	24.2	15.5	16465	5674	33.7	54.2	5674	66.1	0.82	105
BLACK CRAPPIE	396	279.4	0.4	396	102	283.8	1.0	102	74.2	0.92	5
YELLOW PERCH	159	776.9	0.1	119	91	401.4	0.9	61	42.8	1.15	3
FRESHWATER DRUM	355	344.7	0.3	355	0	.	0.0	0	100.0	.	0

SUMMARY OF FISHING EFFORT AND CATCH RATES FOR INTENDED SPECIES GROUPS - 2006

LAKE=MELTON HILL

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	1290	43.0	348	1.2	0.15	0.0	0.03	0.0	6
MUSKELLUNGE	4538	23.4	1116	4.1	0.02	99.9	0.00		34
ANY TROUT	2155	33.1	558	1.9	0.88	27.3	0.35	44.3	12
BROWN TROUT	147	96.5	37	0.1	0.00		0.00		1
WHITE BASS	241	85.7	58	0.2	0.00		0.00		2
STRIPED BASS	2812	27.0	695	2.5	0.47	86.4	0.00		18
ANY SUNFISH	1535	38.2	400	1.4	2.16	31.0	0.49	95.5	9
ANY BLACK BASS	43001	10.7	10889	38.7	0.98	22.0	0.04	87.4	262
SMALLMOUTH BASS	246	88.5	56	0.2	0.75		0.00		2
LARGEMOUTH BASS	444	83.7	96	0.4	1.25		0.23		2
ANY CRAPPIE	16141	13.3	4006	14.5	0.97	31.7	0.30	47.7	118
ANY SPECIES	38548	11.3	9820	34.7	1.08	20.0	0.13	74.4	196
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TOTAL	111098		28079						

**SUMMARY OF RELATIVE SPECIES CATCH RATES
WITHIN TARGET GROUPS - 2006**

LAKE=MELTON HILL

TARGET GROUP	SPECIES WITHIN TARGET GROUPS	RELATIVE CATCH RATE	RELATIVE HARVEST RATE
ANY CATFISH	ANY CATFISH	0.00	0.00
	BLUE CATFISH	0.15	0.00
ANY TROUT	RAINBOW TROUT	0.88	0.35
ANY SUNFISH	GREEN SUNFISH	0.07	0.02
	WARMOUTH	0.01	0.00
	BLUEGILL	2.08	0.47
ANY BLACK BASS			
ANY BLACK BASS			
ANY BLACK BASS			
	SMALLMOUTH BASS	0.16	0.00
	SPOTTED BASS	0.03	0.00
	LARGEMOUTH BASS	0.88	0.02
ANY CRAPPIE			
	WHITE CRAPPIE	0.95	0.29
	BLACK CRAPPIE	0.02	0.01

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=MELTON HILL

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	0		0	1.11	8
02 FEBRUARY	0		0	1.70	3
03 MARCH	21	0.67	3	0.31	22
04 APRIL	2	0.71	1	0.88	26
05 MAY	8	1.09	1	0.82	24
06 JUNE	26	0.78	16	1.01	46
07 JULY	46	1.88	7	0.93	24
08 AUGUST	24	1.35	4	0.76	25
09 SEPTEMBER	3	1.47	2	0.91	34
10 OCTOBER	0		0	1.25	14
11 NOVEMBER	0		0	0.43	4
12 DECEMBER	0		0	0.62	2

**SUMMARY OF TRIP EXPENDITURES AND CONSUMER SURPLUS
FOR INTENDED SPECIES - 2006**

LAKE=MELTON HILL

INTENDED SPECIES	TOTAL TRIP EXPENDITURES	TOTAL CONSUMER SURPLUS	TOTAL VALUE BY ANGLERS	NUMBER OF INTERVIEWS
ANY CATFISH	2550	1810	4360	6
MUSKELLUNGE	29350	33970	63320	34
ANY TROUT	6360	5080	11430	12
BROWN TROUT	480	260	740	1
WHITE BASS	850	290	1140	2
STRIPED BASS	8590	10260	18850	18
ANY SUNFISH	4240	3630	7870	9
ANY BLACK BASS	183340	99400	282740	262
SMALLMOUTH BASS	820	820	1630	2
LARGEMOUTH BASS	4780	0	4780	2
ANY CRAPPIE	47330	40350	87680	118
ANY SPECIES	80710	51640	132360	196
TOTAL	369400	247510	616900	662

SUMMARY OF SOCIOLOGICAL QUESTIONS - 2006

LAKE=MELTON HILL

DISTRIBUTION OF STATES OF RESIDENCE OF INTERVIEWED ANGLERS

STATE	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
TN	1160	97.7
OTHERS	27	2.3

DISTRIBUTION OF COUNTIES OF RESIDENCE OF INTERVIEWED ANGLERS

COUNTY	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
ANDERSON	496	42.7
KNOX	572	49.2
OTHERS IN TN	92	7.9
OUT-OF-STATE	2	0.2

DISTRIBUTION OF ONE-WAY MILEAGE OF ANGLERS INTERVIEWED

ONE-WAY MILES TRAVELED	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) 0-25	1154	97.7
B) 26-100	12	1.0
C) 101-250	12	1.0
D) > 250	3	0.3

DISTRIBUTION OF REASONS WHY INTERVIEWED ANGLERS MADE THE TRIP

REASON FOR TRIP	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) FISHING	659	99.7
B) VACATION	1	0.2
D) OTHER	1	0.2

DISTRIBUTION OF NUMBER OF DAYS IN TRIPS OF INTERVIEWED ANGLERS

NUMBER DAYS IN TRIP	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) 1	655	99.1
B) 2-5	6	0.