Melton Hill Reservoir

Annual Report 2005

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Melton Hill Reservoir – 2005

Largemouth Bass

Population Parameter	Annual Rating	Measure	Gear	Value
Recruitment	Good	Substock CPUE (per hr)	Electrofishing	19.0/hr
Structure	Fair	PSD	Electrofishing	72
Density	Good	CPUE ≥ Stock Size (203 mm) (per/hr)	Electrofishing	50.3/hr
	Fair	CPUE ≥ Minimum Size Limit (356 mm) (per hr)	Electrofishing	16.3/hr
Angling Pressure	Fair	Fishing Effort (hr)	Creel Survey	32,341 hr
Fishing Success	Fair	Angler Catch Rate (per hr)	Creel Survey	0.5/hr
Value of Fishery	Fair	Trip Expenditures ($)	Creel Survey	$110,470

Fishery Forecast: Excellent recruitment of the 2001-2004 year classes will continue to improve the quality of the fishery for the next several years. Electrofishing catch rates of greater than 356 mm largemouth have improved slightly.

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 will take several years to determine the effects of this new regulation. There will no new management recommendations concerning largemouth bass for several years to give the new creel limit time to work.

White Crappie

Population Parameter	Annual Rating	Measure	Gear	Value
Structure	Good	PSD	Electrofishing	100
Density	Fair	CPUE ≥ Stock Size (127 mm)	Electrofishing	10.0/hr
	Good	CPUE ≥ Minimum size limit (254 mm)	Electrofishing	7.7/hr
Angling Pressure	Fair	Fishing Effort (hr)	Creel Survey	9,126 hr
Fishing Success	Good	Angler Catch Rate (per hr)	Creel Survey	1.2/hr
Value of Fishery	Good	Trip Expenditures ($)	Creel Survey	$23,430

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 planed for the future.

Stocking and Stocking Evaluations

Species	Number Stocked	Mark	Evaluation	Value
Musky	2,537	NA	NA	NA

Habitat Enhancement and Monitoring

Fish Attractors	Expanded	2 sites, 405 units, 8.10 acres
	Renovated	none

Tables

Table 1. Melton Hill Reservoir physical and chemical characteristics.

Surface Area	5,690 acres	2,303 hectares
Drainage Area	3,343 sq. mi.	8,665 sq. km
Full Pool Elevation	795 feet-msl	242 m-msl
Mean Annual Fluctuation	5 feet	1.5 m
Shoreline Distance	193 miles	310.6 km
Total Developed Shoreline	18%	
Maximum Depth	60 feet	18.3 m
Thermocline Depth	9 feet	2.7 m
Trophic Status (Forebay)	Mesotrophic	
Mean Chlorophyll (Forebay)	5.6 mg/L	
Trophic Index Value Carlson (1977)	47.5	
Hydraulic Retention Time	12 days	
Reservoir Age	42 years	

Table 2. Melton Hill Reservoir fish stockings 1993 - 2005.

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

Table 3. Relative stock density, mean relative weight, and catch per unit effort by RSD catagory for target species collected in Melton Hill Reservoir 1998-2005.

				Substock			RSD-stock				RSD-quality				RSD-preferred				RSD-memorable				RSD-trophy				Total		PSD
Species	**Year**	**Gear**	**Samples**	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	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
Bass	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
Smallmouth	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
Bass	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
Spotted	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	
Bass	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
White	1998	Electro	20	0	0.0	0.0	0	0.0	0.0	0.0	12	2.4	31.6	82.3	20	4.0	52.6	84.6	6	1.2	15.8	80.6	0	0.0	0.0	0.0	38	7.6	100
Crappie	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
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	12	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
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 2005 electrofishing sample.

Size Class	Mean Wr	Std. Error	N
175	88.631		1
200	84.525		1
225	92.645	2.991	4
250	90.525	1.880	16
275	91.536	1.541	22
300	88.699	1.303	32
325	87.220	1.371	24
350	90.775	1.382	23
375	91.474	1.506	15
400	93.365	4.781	7
425			
450	91.161	3.789	2
475	89.929	2.424	2
500	97.051	5.929	3
		Total Catch	152

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

Size Class	Mean Wr	Std. Error	N
200	84.856	2.327	3
225	93.838		1
250	90.098	2.320	9
275	92.253	1.327	13
300	85.044	2.588	4
		Total Catch	30

Table 6. Melton Hill Reservoir water levels for 2005. (TVA)

ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY
792.93	JANUARY	1	793.29	FEBRUARY	24	793.23	APRIL	19
793.42	JANUARY	2	793.47	FEBRUARY	25	793.53	APRIL	20
792.52	JANUARY	3	793.77	FEBRUARY	26	793.24	APRIL	21
792.72	JANUARY	4	794.05	FEBRUARY	27	793.72	APRIL	22
793.78	JANUARY	5	793.14	FEBRUARY	28	793.87	APRIL	23
793.24	JANUARY	6	793.21	MARCH	1	793.59	APRIL	24
792.52	JANUARY	7	793.01	MARCH	2	793.76	APRIL	25
793.40	JANUARY	8	792.89	MARCH	3	793.24	APRIL	26
792.74	JANUARY	9	793.61	MARCH	4	793.43	APRIL	27
792.71	JANUARY	10	793.19	MARCH	5	793.62	APRIL	28
793.91	JANUARY	11	793.55	MARCH	6	793.64	APRIL	29
793.30	JANUARY	12	793.55	MARCH	7	793.58	APRIL	30
793.47	JANUARY	13	793.54	MARCH	8	793.61	MAY	1
793.46	JANUARY	14	793.28	MARCH	9	794.35	MAY	2
794.08	JANUARY	15	793.64	MARCH	10	794.29	MAY	3
793.83	JANUARY	16	794.00	MARCH	11	794.25	MAY	4
793.41	JANUARY	17	793.55	MARCH	12	794.40	MAY	5
793.22	JANUARY	18	793.50	MARCH	13	794.37	MAY	6
793.06	JANUARY	19	793.69	MARCH	14	793.42	MAY	7
793.32	JANUARY	20	793.54	MARCH	15	793.83	MAY	8
793.78	JANUARY	21	792.95	MARCH	16	793.73	MAY	9
793.88	JANUARY	22	793.23	MARCH	17	793.70	MAY	10
793.25	JANUARY	23	793.49	MARCH	18	794.13	MAY	11
793.10	JANUARY	24	793.79	MARCH	19	793.41	MAY	12
793.40	JANUARY	25	793.83	MARCH	20	793.91	MAY	13
792.77	JANUARY	26	793.90	MARCH	21	794.15	MAY	14
792.92	JANUARY	27	794.23	MARCH	22	793.95	MAY	15
793.28	JANUARY	28	793.04	MARCH	23	794.46	MAY	16
793.51	JANUARY	29	791.78	MARCH	24	793.60	MAY	17
793.71	JANUARY	30	790.97	MARCH	25	793.48	MAY	18
793.97	JANUARY	31	790.83	MARCH	26	793.90	MAY	19
793.66	FEBRUARY	1	790.83	MARCH	27	793.93	MAY	20
793.81	FEBRUARY	2	791.24	MARCH	28	793.24	MAY	21
793.08	FEBRUARY	3	791.52	MARCH	29	794.02	MAY	22
792.32	FEBRUARY	4	791.37	MARCH	30	793.90	MAY	23
793.56	FEBRUARY	5	791.41	MARCH	31	794.04	MAY	24
793.56	FEBRUARY	6	791.36	APRIL	1	793.79	MAY	25
793.95	FEBRUARY	7	791.96	APRIL	2	794.17	MAY	26
793.70	FEBRUARY	8	791.29	APRIL	3	794.24	MAY	27
792.91	FEBRUARY	9	791.28	APRIL	4	793.63	MAY	28
793.60	FEBRUARY	10	793.27	APRIL	5	793.41	MAY	29
793.43	FEBRUARY	11	792.43	APRIL	6	793.88	MAY	30
793.07	FEBRUARY	12	793.13	APRIL	7	793.98	MAY	31
793.21	FEBRUARY	13	793.32	APRIL	8	794.20	JUNE	1
794.06	FEBRUARY	14	793.20	APRIL	9	794.42	JUNE	2
793.64	FEBRUARY	15	792.73	APRIL	10	794.30	JUNE	3
793.80	FEBRUARY	16	793.81	APRIL	11	794.11	JUNE	4
793.82	FEBRUARY	17	793.22	APRIL	12	793.82	JUNE	5
793.73	FEBRUARY	18	794.11	APRIL	13	793.59	JUNE	6
793.82	FEBRUARY	19	793.99	APRIL	14	793.58	JUNE	7
794.04	FEBRUARY	20	793.66	APRIL	15	794.17	JUNE	8
794.30	FEBRUARY	21	793.96	APRIL	16	794.23	JUNE	9
793.06	FEBRUARY	22	794.05	APRIL	17	793.81	JUNE	10
793.08	FEBRUARY	23	793.64	APRIL	18	793.68	JUNE	11

Table 7. Melton Hill Reservoir water levels for 2005. (TVA)

ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY	ELEVATION	MONTH	DAY
793.89	JUNE	12	793.46	AUGUST	5	793.39	SEPTEMBER	28
793.71	JUNE	13	793.33	AUGUST	6	793.75	SEPTEMBER	29
793.68	JUNE	14	793.44	AUGUST	7	794.32	SEPTEMBER	30
793.92	JUNE	15	793.76	AUGUST	8	793.48	OCTOBER	1
793.87	JUNE	16	793.27	AUGUST	9	793.23	OCTOBER	2
793.91	JUNE	17	792.87	AUGUST	10	793.67	OCTOBER	3
793.92	JUNE	18	792.87	AUGUST	11	793.90	OCTOBER	4
793.84	JUNE	19	793.55	AUGUST	12	793.65	OCTOBER	5
793.98	JUNE	20	793.76	AUGUST	13	793.36	OCTOBER	6
794.13	JUNE	21	793.59	AUGUST	14	793.59	OCTOBER	7
793.87	JUNE	22	793.51	AUGUST	15	793.89	OCTOBER	8
793.85	JUNE	23	793.06	AUGUST	16	793.97	OCTOBER	9
793.90	JUNE	24	793.51	AUGUST	17	793.60	OCTOBER	10
793.93	JUNE	25	793.54	AUGUST	18	793.51	OCTOBER	11
793.50	JUNE	26	793.49	AUGUST	19	793.55	OCTOBER	12
793.63	JUNE	27	793.42	AUGUST	20	793.18	OCTOBER	13
793.83	JUNE	28	793.62	AUGUST	21	792.97	OCTOBER	14
794.07	JUNE	29	793.16	AUGUST	22	793.53	OCTOBER	15
793.86	JUNE	30	793.06	AUGUST	23	793.61	OCTOBER	16
793.56	JULY	1	792.88	AUGUST	24	793.67	OCTOBER	17
794.02	JULY	2	792.92	AUGUST	25	794.11	OCTOBER	18
793.88	JULY	3	793.31	AUGUST	26	793.71	OCTOBER	19
793.83	JULY	4	793.21	AUGUST	27	793.39	OCTOBER	20
793.95	JULY	5	793.39	AUGUST	28	793.34	OCTOBER	21
794.28	JULY	6	793.65	AUGUST	29	793.63	OCTOBER	22
794.02	JULY	7	793.20	AUGUST	30	793.78	OCTOBER	23
793.79	JULY	8	792.94	AUGUST	31	794.09	OCTOBER	24
793.84	JULY	9	793.03	SEPTEMBER	1	793.16	OCTOBER	25
793.61	JULY	10	793.34	SEPTEMBER	2	792.80	OCTOBER	26
792.78	JULY	11	793.77	SEPTEMBER	3	793.40	OCTOBER	27
793.29	JULY	12	794.28	SEPTEMBER	4	793.28	OCTOBER	28
793.63	JULY	13	793.69	SEPTEMBER	5	793.20	OCTOBER	29
794.54	JULY	14	793.02	SEPTEMBER	6	793.60	OCTOBER	30
792.86	JULY	15	792.90	SEPTEMBER	7	793.92	OCTOBER	31
793.06	JULY	16	792.46	SEPTEMBER	8	793.99	NOVEMBER	1
793.74	JULY	17	793.54	SEPTEMBER	9	793.83	NOVEMBER	2
793.62	JULY	18	793.32	SEPTEMBER	10	793.63	NOVEMBER	3
793.56	JULY	19	793.19	SEPTEMBER	11	793.70	NOVEMBER	4
793.71	JULY	20	793.05	SEPTEMBER	12	793.86	NOVEMBER	5
793.85	JULY	21	793.82	SEPTEMBER	13	793.82	NOVEMBER	6
793.76	JULY	22	793.46	SEPTEMBER	14	793.45	NOVEMBER	7
793.90	JULY	23	793.37	SEPTEMBER	15	793.83	NOVEMBER	8
793.72	JULY	24	793.58	SEPTEMBER	16	794.09	NOVEMBER	9
793.45	JULY	25	794.02	SEPTEMBER	17	793.75	NOVEMBER	10
793.45	JULY	26	793.79	SEPTEMBER	18	793.50	NOVEMBER	11
793.59	JULY	27	793.23	SEPTEMBER	19	793.52	NOVEMBER	12
793.57	JULY	28	794.05	SEPTEMBER	20	793.64	NOVEMBER	13
794.26	JULY	29	793.18	SEPTEMBER	21	793.83	NOVEMBER	14
793.75	JULY	30	793.37	SEPTEMBER	22	794.09	NOVEMBER	15
793.18	JULY	31	793.35	SEPTEMBER	23	794.11	NOVEMBER	16
793.06	AUGUST	1	793.60	SEPTEMBER	24	794.11	NOVEMBER	17
794.46	AUGUST	2	793.82	SEPTEMBER	25	793.71	NOVEMBER	18
793.63	AUGUST	3	793.73	SEPTEMBER	26	793.76	NOVEMBER	19
793.75	AUGUST	4	793.78	SEPTEMBER	27	793.72	NOVEMBER	20

Table 8. Melton Hill Reservoir water levels for 2005. (TVA)

ELEVATION	MONTH	DAY
793.76	NOVEMBER	21
794.15	NOVEMBER	22
794.03	NOVEMBER	23
794.20	NOVEMBER	24
794.02	NOVEMBER	25
794.31	NOVEMBER	26
794.22	NOVEMBER	27
794.20	NOVEMBER	28
793.10	NOVEMBER	29
793.65	NOVEMBER	30
793.69	DECEMBER	1
794.12	DECEMBER	2
793.94	DECEMBER	3
794.17	DECEMBER	4
794.39	DECEMBER	5
793.27	DECEMBER	6
794.22	DECEMBER	7
794.00	DECEMBER	8
794.00	DECEMBER	9
793.98	DECEMBER	10
794.05	DECEMBER	11
793.26	DECEMBER	12
793.50	DECEMBER	13
793.88	DECEMBER	14
794.05	DECEMBER	15
793.48	DECEMBER	16
793.79	DECEMBER	17
793.89	DECEMBER	18
793.82	DECEMBER	19
793.81	DECEMBER	20
793.75	DECEMBER	21
793.98	DECEMBER	22
793.84	DECEMBER	23
793.83	DECEMBER	24
793.61	DECEMBER	25
793.75	DECEMBER	26
793.60	DECEMBER	27
793.74	DECEMBER	28
793.72	DECEMBER	29
793.96	DECEMBER	30
793.90	DECEMBER	31

Table 9. Melton Hill Reservoir fish habitat enhancement summary for 2005.

LOCATION	NEW SITES			RENOVATED SITES			EXPANDED SITES		
	NUMBER	UNITS	ACRES	NUMBER	UNITS	ACRES	NUMBER	UNITS	ACRES
CRM 58.95 L*							1	105	2.10
CRM 37.5 L*							1	300	6.00
							2	405	8.10

*Christmas trees

Figures

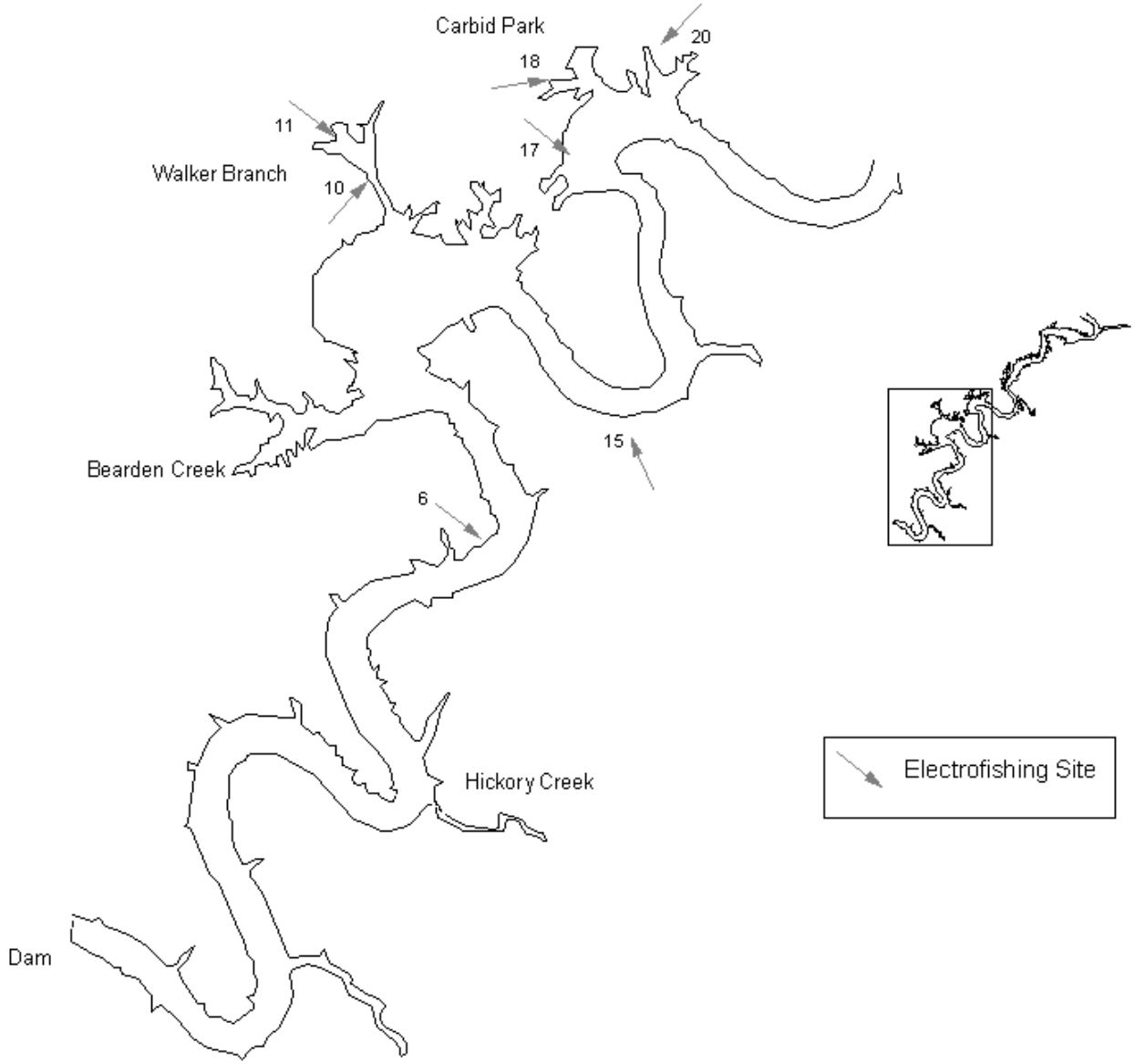

Figure 1. Electrofishing sites in the lower section of Melton Hill Reservoir in 2005.

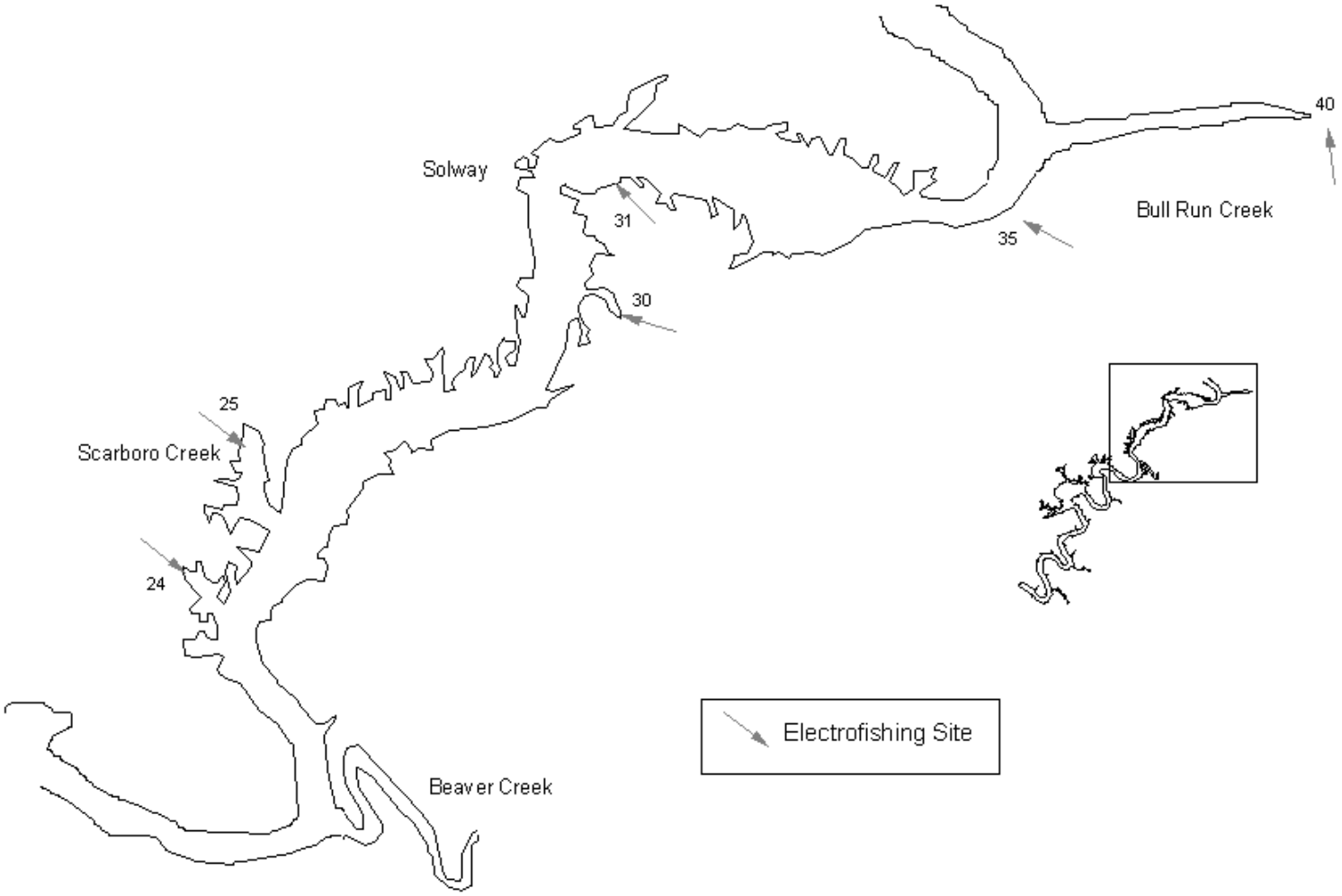

Figure 2. Electrofishing sites in the upper section of Melton Hill Reservoir in 2005.

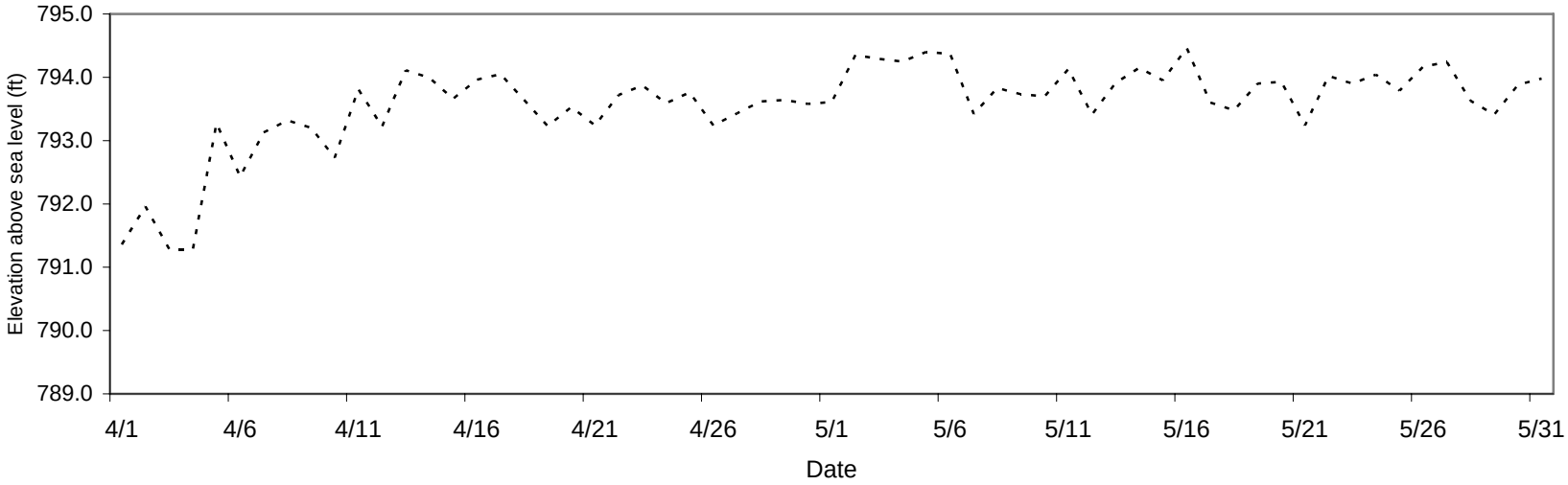

Figure 3. April and May water levels in Melton Hill Reservoir in 2005 (TVA data).

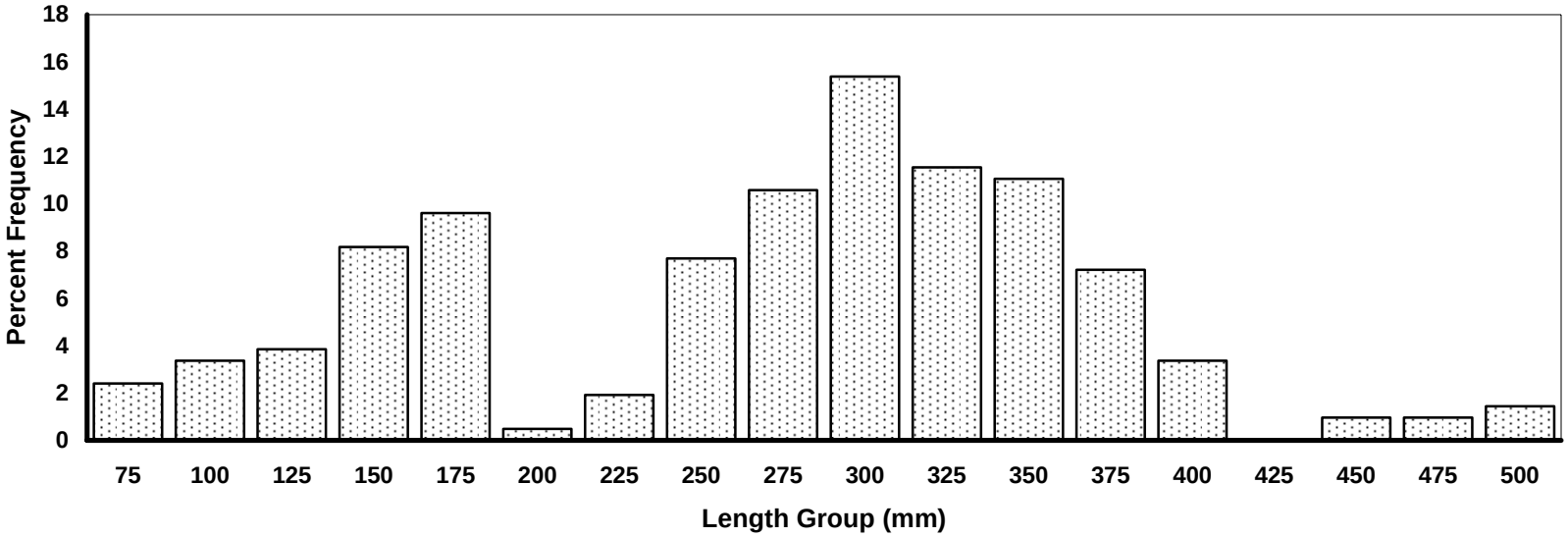

Figure 4. Melton Hill Reservoir largemouth bass length frequency by percent for 2005 electrofishing sample (n=208).

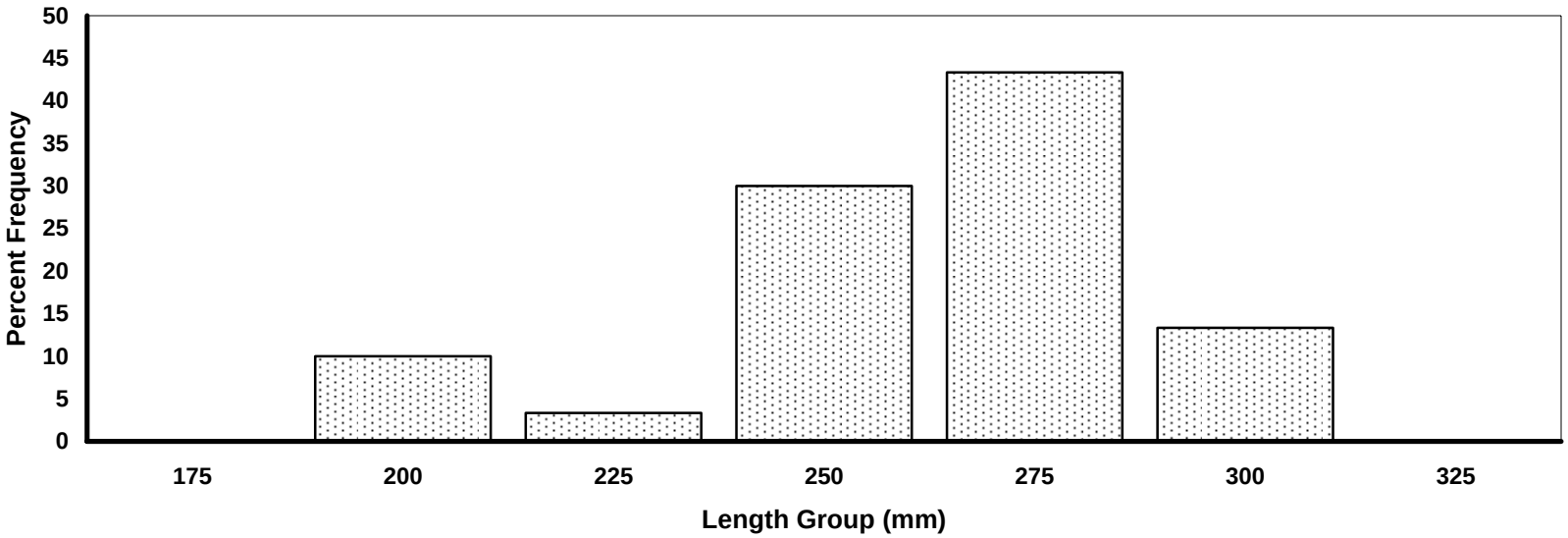

Figure 5. Melton Hill Reservoir white crappie length frequency by percent for 2005 electrofishing sample (n=30).

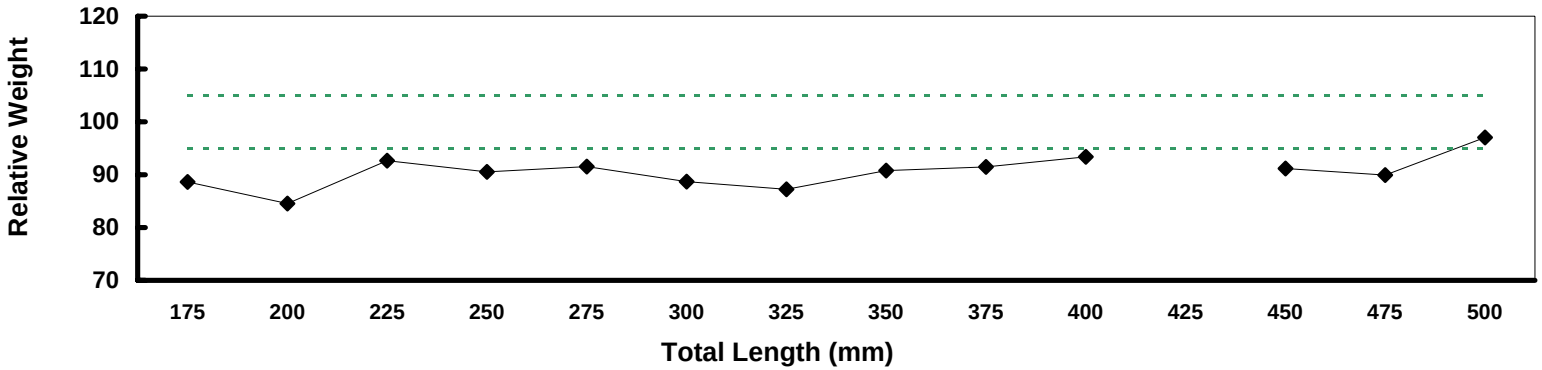

Figure 6. Melton Hill Reservoir largemouth bass mean relative weight values from the 2005 electrofishing sample (n=152).

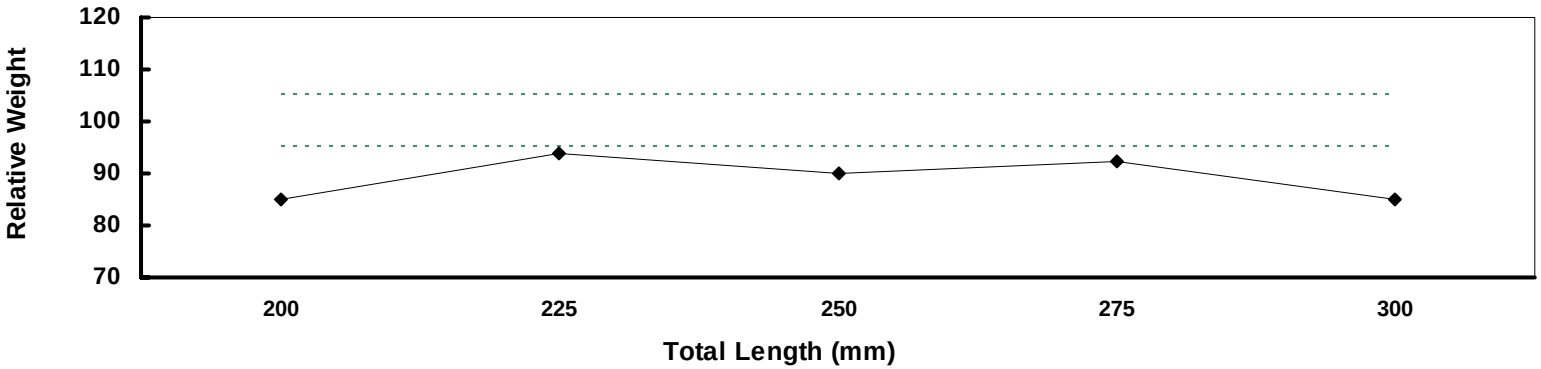

Figure 7. Melton Hill Reservoir white crappie mean relative weight values from the 2005 electrofishing sample (n=30).

Appendix – Creel

MONTHLY ANGLING EFFORT FOR ALL ANGLERS - 2005

LAKE=MELTON HILL

MONTH	ANGLER HOURS	RELATIVE STANDARD ERROR	HOURS PER ACRE	ANGLER TRIPS	TRIPS PER ACRE	PERCENT EFFORT
01 JANUARY	2814	53.8	0.5	596	0.1	3.0
02 FEBRUARY	5314	26.8	0.9	1238	0.2	5.7
03 MARCH	7138	30.7	1.3	1817	0.3	7.6
04 APRIL	8935	27.6	1.6	1978	0.3	9.5
05 MAY	11318	10.0	2.0	2462	0.4	12.1
06 JUNE	11540	19.0	2.0	2361	0.4	12.3
07 JULY	12059	21.3	2.1	2757	0.5	12.9
08 AUGUST	10143	19.6	1.8	2045	0.4	10.8
09 SEPTEMBER	5983	29.5	1.1	1225	0.2	6.4
10 OCTOBER	9234	21.3	1.6	1680	0.3	9.8
11 NOVEMBER	6270	30.9	1.1	1174	0.2	6.7
12 DECEMBER	3078	44.7	0.5	755	0.1	3.3
TOTAL	**93826**			**20088**		

MONTHLY CATCH STATISTICS FOR ALL ANGLERS - 2005

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	2054	76.2	0.73	47.4	535	93.0	0.19	67.7
02 FEBRUARY	2391	41.5	0.45	30.4	585	53.6	0.11	44.2
03 MARCH	7424	42.4	1.04	27.9	3926	65.1	0.55	55.4
04 APRIL	13134	47.8	1.47	37.6	2323	59.5	0.26	50.5
05 MAY	18109	27.9	1.60	25.9	3169	55.1	0.28	54.0
06 JUNE	15464	23.8	1.34	14.1	1154	44.6	0.10	40.6
07 JULY	16400	29.0	1.36	19.4	1206	53.6	0.10	49.5
08 AUGUST	14910	41.1	1.47	35.4	1724	79.6	0.17	77.5
09 SEPTEMBER	1795	104.8	0.30	96.8	60	81.5	0.01	100.0
10 OCTOBER	13297	30.4	1.44	21.3	2401	53.2	0.26	48.6
11 NOVEMBER	7211	39.8	1.15	23.9	188	91.8	0.03	89.1
12 DECEMBER	3140	.	1.02	.	185	.	0.06	.
LAKE	**115329**				**17456**			

SUMMARY OF SPECIES CATCH STATISTICS - 2005

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
SKIPJACK HERRING	166	971.6	0.1	166	0	.	0.0	0	100.0	.	0
GIZZARD SHAD	415	609.6	0.4	415	0	.	0.0	0	100.0	.	0
CARP	183	787.9	0.2	137	0	.	0.0	0	100.0	.	0
ANY BUFFALO	41	1974.7	0.0	0	0	.	0.0	0	100.0	.	0
YELLOW BULLHEAD	95	568.0	0.1	95	95	568.0	0.5	95	0.0	2.67	3
BLUE CATFISH	107	990.5	0.1	107	0	.	0.0	0	100.0	.	0
CHANNEL CATFISH	302	573.4	0.3	302	0	.	0.0	0	100.0	.	0
FLATHEAD CATFISH	86	1118.4	0.1	86	33	674.5	0.2	33	61.6	6.80	1
MUSKELLUNGE	441	277.4	0.4	353	45	169.0	0.3	34	89.8	28.50	1
RAINBOW TROUT	1420	177.8	1.2	1065	870	163.2	5.0	628	38.7	1.05	18
WHITE BASS	1294	190.7	1.1	946	32	696.8	0.2	32	97.5	22.00	1
YELLOW BASS	367	512.7	0.3	367	65	340.9	0.4	65	82.3	1.10	2
STRIPED BASS	1570	172.3	1.4	1018	505	188.4	2.9	505	67.8	5.00	11
CHEROKEE BASS	73	1190.0	0.1	37	32	983.7	0.2	0	56.2	0.90	1
ROCK BASS	170	748.3	0.1	85	32	983.7	0.2	32	81.2	15.00	1
GREEN SUNFISH	423	509.6	0.4	254	0	.	0.0	0	100.0	.	0
BLUEGILL	47705	16.0	41.3	35724	3237	39.6	18.5	2868	93.2	0.39	104
REDEAR SUNFISH	269	527.9	0.2	179	0	.	0.0	0	100.0	.	0
COOSA BASS	41	1974.7	0.0	0	0	.	0.0	0	100.0	.	0
SMALLMOUTH BASS	6019	53.8	5.2	3160	1673	56.6	9.6	976	72.2	2.65	23
SPOTTED BASS	689	251.2	0.6	551	0	.	0.0	0	100.0	.	0
LARGEMOUTH BASS	30114	16.5	26.1	27890	5421	31.4	31.1	5220	82.0	2.45	92
WHITE CRAPPIE	9261	43.2	8.0	8260	1271	68.4	7.3	1271	86.3	0.74	30
BLACK CRAPPIE	874	225.1	0.8	874	103	240.9	0.6	103	88.2	0.71	4
YELLOW PERCH	974	201.4	0.8	820	306	221.2	1.8	255	68.6	0.56	5
FRESHWATER DRUM	290	541.0	0.3	97	0	.	0.0	0	100.0	.	0

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

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	1825	34.0	394	1.9	0.34	112.6	0.13	165.1	9
MUSKELLUNGE	858	43.0	194	0.9	0.37	52.4	0.09	117.3	8
RAINBOW TROUT	279	79.7	63	0.3	1.12		0.41		2
ANY TROUT	238	96.5	49	0.3	0.00		0.00		1
LAKE TROUT	314	79.5	67	0.3	0.00		0.00		2
WHITE BASS	307	100.0	63	0.3	0.00		0.00		1
STRIPED BASS	2382	27.2	514	2.5	0.43	164.1	0.08	138.6	18
ANY SUNFISH	1339	40.4	272	1.4	4.09	26.3	0.23	0.0	7
ANY BLACK BASS	7350	19.8	1374	7.8	0.75	20.3	0.03	0.0	45
SMALLMOUTH BASS	2712	31.9	587	2.9	0.21	46.3	0.06	111.5	19
LARGEMOUTH BASS	32341	9.8	6977	34.5	0.50	24.1	0.12	37.1	196
ANY CRAPPIE	9126	17.9	2068	9.7	1.24	33.0	0.28	74.3	60
SAUGER	99	137.8	23	0.1	0.00		0.00		1
WALLEYE	99	137.8	23	0.1	0.00		0.00		1
ANY SPECIES	32946	9.1	7074	35.1	1.45	27.5	0.23	62.1	201
OTHER	1618	36.9	348	1.7	0.00		0.00		9
TOTAL	**93833**		**20090**						

SUMMARY OF RELATIVE SPECIES CATCH RATES WITHIN TARGET GROUPS - 2005

LAKE=MELTON HILL

TARGET GROUP	SPECIES WITHIN TARGET GROUPS	RELATIVE CATCH RATE	RELATIVE HARVEST RATE
ANY CATFISH			
	YELLOW BULLHEAD	0.05	0.10
	ANY CATFISH	0.00	0.00
	BLUE CATFISH	0.06	0.00
	CHANNEL CATFISH	0.17	0.00
	FLATHEAD CATFISH	0.05	0.03
ANY TROUT			
	RAINBOW TROUT	0.00	0.00
ANY SUNFISH			
	ANY SUNFISH	0.00	0.00
	GREEN SUNFISH	0.03	0.00
	BLUEGILL	4.04	0.23
	REDEAR SUNFISH	0.02	0.00
ANY BLACK BASS			
	COOSA BASS	0.00	0.00
	SMALLMOUTH BASS	0.07	0.02
	SPOTTED BASS	0.01	0.00
	LARGEMOUTH BASS	0.66	0.12
ANY CRAPPIE			
	ANY CRAPPIE	0.00	0.00
	WHITE CRAPPIE	1.12	0.26
	BLACK CRAPPIE	0.12	0.02

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	64	0.00	7	0.22	8
02 FEBRUARY	0		0	0.72	5
03 MARCH	0		0	0.41	19
04 APRIL	0		0	0.23	21
05 MAY	6	0.57	3	0.33	36
06 JUNE	49	0.56	8	0.69	26
07 JULY	0		0	0.58	37
08 AUGUST	7	0.75	4	0.78	31
09 SEPTEMBER	0		0	0.12	13
10 OCTOBER	0		0	0.82	24
11 NOVEMBER	0		0	0.66	16

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

LAKE=MELTON HILL

INTENDED SPECIES	TOTAL TRIP EXPENDITURES	TOTAL CONSUMER SURPLUS	TOTAL VALUE BY ANGLERS	NUMBER OF INTERVIEWS
ANY CATFISH	4810	210	1940	9
MUSKELLUNGE	2680	3180	5560	8
RAINBOW TROUT	290			2
ANY TROUT	490			1
LAKE TROUT	340			2
WHITE BASS	940			1
STRIPED BASS	5770	2150	7430	18
ANY SUNFISH	3020	1020	2990	7
ANY BLACK BASS	19340	13530	31320	44
SMALLMOUTH BASS	10200	0	1060	19
LARGEMOUTH BASS	110470	31290	132670	195
ANY CRAPPIE	23430	21390	43350	60
SAUGER	680			1
WALLEYE	450			1
ANY SPECIES	44880	27460	66690	199
OTHER	2430	320	1500	9
TOTAL	**230220**	**100550**	**294510**	**576**

SUMMARY OF SOCIOLOGICAL QUESTIONS - 2005

LAKE=MELTON HILL

DISTRIBUTION OF STATES OF RESIDENCE OF INTERVIEWED ANGLERS

STATE	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
TN	933	97.4
OTHERS	25	2.6

DISTRIBUTION OF COUNTIES OF RESIDENCE OF INTERVIEWED ANGLERS

COUNTY	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
ANDERSON	427	46.2
KNOX	338	36.5
OTHERS IN TN	154	16.6
OUT-OF-STATE	6	0.6

DISTRIBUTION OF ONE-WAY MILEAGE OF ANGLERS INTERVIEWED

ONE-WAY MILES TRAVELED	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) 0-25	728	77.4
B) 26-100	186	19.8
C) 101-250	11	1.2
D) > 250	16	1.7

DISTRIBUTION OF REASONS WHY INTERVIWED ANGLERS MADE THE TRIP

REASON FOR TRIP	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) FISHING	555	96.2
B) VACATION	10	1.7
C) BUSINESS	1	0.2
D) OTHER	11	1.9

DISTRIBUTION OF NUMBER OF DAYS IN TRIPS OF INTERVIEWED ANGLERS

NUMBER DAYS IN TRIP	NUMBER ANGLERS INTERVIEWED	PERCENT CONTRIBUTION
A) 1	562	97.4
B) 2-5	14	2.4
F) >20	1	0.2