

**RESERVOIR SEDIMENT
DATA SUMMARY**

Melton Hill
NAME OF RESERVOIR

20-27
DATA SHEET NO.

DAM	1. OWNER TVA			2. STREAM Clinch River			3. STATE Tennessee						
	4. SEC. TWP. RANGE			5. NEAREST POST OFF. 17-211			6. COUNTY Knox-Anderson						
	7. LAT. 35° 53' 09" LONG. 84° 18' 04"			8. TOP OF DAM ELEVATION 805.48			9. SPILLWAY CREST ELEV. 1/ 796						
RESERVOIR	10. STORAGE ALLOCATION		11. ELEVATION TOP OF POOL		12. ORIGINAL SURFACE AREA ACRES		13. ORIGINAL CAPACITY ACRE-Feet		14. GROSS STORAGE ACRE-Feet		15. DATE STORAGE BEGAN		
	a. FLOOD CONTROL										16. DATE NORMAL OPER. BEGAN 5/1/63		
	b. MULTIPLE USE		796		5,887		31,375		125,900				
	c. POWER												
	d. WATER SUPPLY												
	e. IRRIGATION										5/30/63		
	f. CONSERVATION		2/ 790		4,566		93,055		94,525				
g. INACTIVE		3/ 740		369		1,470		1,470					
WATERSHED	17. LENGTH OF RESERVOIR 44 MILES				AV. WIDTH OF RESERVOIR 0.2 MILES								
	18. TOTAL DRAINAGE AREA 3,343 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 47.0 INCHES								
	19. NET SEDIMENT CONTRIBUTING AREA 422 SQ. MI.				23. MEAN ANNUAL RUNOFF 16.45 INCHES								
	20. LENGTH 337 MILES		AV. WIDTH 10 MILES		24. MEAN ANNUAL RUNOFF 2,932,425 AC.-FT.								
	21. MAX. ELEV. 4,604		MIN. ELEV. 725		25. ANNUAL TEMP; MEAN 57° RANGE 2° to 95°								
SURVEY DATA	26. DATE OF SURVEY		27. PERIOD YEARS	28. ACCL. YEARS	29. TYPE OF SURVEY	30. NO. OF RANGES OR CONTOUR INT.	31. SURFACE AREA ACRES	32. CAPACITY ACRE-Feet	33. C/I. RATIO AC.-FT. PER AC.-FT.				
	July 12, 1963		0.0	0.0	Range	41	5,887	125,900	0.0429				
	May 4, 1970		4/7.0	4/7.0	Range	41	5,887	125,578	0.0428				
	(D)												
	26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW ACRE-Feet			36. WATER INFL. TO DATE AC.-FT.					
					a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL		b. TOTAL TO DATE			
	May 4, 1970		45.0		2,932,425	3,825,231	20,526,974	2,932,425		20,526,974			
	26. DATE OF SURVEY		37. PERIOD CAPACITY LOSS ACRE-Feet			38. TOTAL SED. DEPOSITS TO DATE ACRE-Feet							
			a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE		b. AV. ANNUAL	c. PER SQ. MI.-YEAR				
	May 4, 1970		322	46	0.109	322		46	0.109				
26. DATE OF SURVEY		39. AV. DRY WGT. LBS. PER CU. FT.	40. SED. DEP. TONS PER SQ. MI.-YR.		41. STORAGE LOSS PCT.		42. SED. INFLOW PPM						
			a. TOTAL TO DATE	b. PERIOD	a. AV. AN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE					
May 4, 1970		55*	131	131	0.037	0.256	14	14					

*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION										
	70-60	60-50	50-40	40-30	30-20	20-10	10-Top of Gates				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
May 4, 1970	16	20	11	13	30	24	5/-14				

26. DATE OF SURVEY	44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGTH OF RESERVOIR														
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	-105	-110	-115	-120	-125
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
May 4, 1970	0	20	23	28	3	5/-5	17	5/-3	13	4					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1963	795.41	766.10	1,091,528				
1964	795.36	790.22	2,174,729				
1965	795.40	789.81	3,825,231				
1966	795.17	784.10	2,142,757				
1967	795.94	792.44	3,668,755				
1968	795.77	789.68	3,618,265				
1969	795.13	790.05	2,278,849				
1970	795.41	789.50	3,215,634				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
		1963	795	5,672	120,121	760		15,668
726	0	0	796	5,887	125,900	770		30,413
730	29	51	800	6,748	151,172	780		55,659
740	369	1,470				790		94,139
750	729	6,546			1970	795		119,788
760	1,141	15,829	726		0	796		125,578
770	1,942	30,627	730		51	800		150,852
780	3,162	55,997	740		1,386			
790	4,566	94,525	750		6,409			

47. REMARKS AND REFERENCES
- 1/ Top of gates.
 - 2/ Lowest elevation for flat pool navigation requirements. Normal full pool level elevation 795. Normal minimum pool level elevation 790.
 - 3/ Centerline of turbine intake.
 - 4/ Period of time from date of closure.
 - 5/ (-) Minus indicates scour. Considered as negative sediment.