

RESERVOIR SEDIMENT  
DATA SUMMARY

Beech Lake

NAME OF RESERVOIR

16-36

DATA SHEET NO.

DAM	1. OWNER TVA		2. STREAM Beech River		3. STATE Tennessee			
	4. SEC. TWP. RANGE		5. NEAREST POST OFF. Lexington		6. COUNTY Henderson			
	7. LAT. 35° 39' 51" LONG. 88° 25' 08"		8. TOP OF DAM ELEVATION 471.0		9. SPILLWAY CREST ELEV. 464.5 1/			
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	464.5 1/	1,070	4,440	15,540	10/15/63		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY							
	e. IRRIGATION					16. DATE NORMAL OPER. BEGAN		
	f. CONSERVATION	459.2 2/	880	3,560	11,100			
g. INACTIVE	455.4 3/	710	7,540	7,540				
17. LENGTH OF RESERVOIR 4/	5.48 MILES	AV. WIDTH OF RESERVOIR	0.25 MILES					
WATERSHED	18. TOTAL DRAINAGE AREA		15.74 SQ. MI.		22. MEAN ANNUAL PRECIPITATION		49.50 INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA		14.36 SQ. MI.		23. MEAN ANNUAL RUNOFF		17.32 INCHES	
	20. LENGTH 5.1 MILES	AV. WIDTH 3.1 MILES	24. MEAN ANNUAL RUNOFF		14,539 AC.-FT.			
	21. MAX. ELEV. 640	MIN. ELEV. 425	25. ANNUAL TEMP; MEAN 60°		RANGE 4° to 98°			
	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.
Apr. 17, 1964	0	0	Range	27	880	11,100	0.763	
Oct. 16, 1972	8.5	8.5	Range	11	6/	10,932	0.752	
			(D)					
SURVEY DATA	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW ACRE-FEET			36. WATER INFL. TO DATE AC.-FT.	
		a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	
	Oct. 16, 1972	51.64	13,067	18,056	111,070	13,067	111,070	
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		
Oct. 16, 1972	168	19.8	1.38	168	19.8	1.38		
26. DATE OF SURVEY	39. AV. DRY WGT. LBS. PER CU. FT.	40. SED. DEP. TONS PERSQ. 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	
Oct. 16, 1972	65*	1954	1954	0.179	1.52			

\*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION												
	32.9-30	30-25	25-20	20-15	15-10	10-5	5-0						
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
Oct. 16, 1972	1	11	32	23	29	11	5/	-7					

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														
Oct. 16, 1972	12	11	8	19	19	14	8	8	1	0					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1964	457		11,316				
1965	461	455.42	18,056				
1966	461	456.99	9,597				
1967	461	456.88	12,185				
1968	461	456.24	13,273				
1969	461	457.03	11,983				
1970	461	456.88	14,465				
1971	461	456.37	11,185				
1972	460	457.09	11,560				
1973	462	457.02	31,771				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
		1964			1972			
427	0	0		6/	0			
432	3	13			10			
436	70	125			100			
440	200	675			600			
444	320	1,725			1,620			
452	580	5,350			5,180			
459.9	880	11,100			10,930			
464.5	1070	15,540			15,380			

47. REMARKS AND REFERENCES

1/ Emergency spillway crest.

2/ Main spillway crest; normal full pool. Includes 1,560 ac-ft for water supply between elevation 455.4 and 457.5.

3/ Planned minimum pool.

4/ Beech River 3.79 miles; Black Bottom Creek tributary 1.69 miles.

5/ (-) Minus designates scour. Treated as negative sediment.

6/ Not measured or calculated after initial survey.