

RESERVOIR SEDIMENT
DATA SUMMARY

Red Bud Lake

NAME OF RESERVOIR

16-43

DATA SHEET NO.

DAM	1. OWNER TVA			2. STREAM Dry Creek			3. STATE Tennessee								
	4. SEC. TWP. RANGE			5. NEAREST 'POST' OFF, Chesterfield			6. COUNTY Henderson								
	7. LAT. 35° 41' 08" LONG. 88° 15' 34"			8. TOP OF DAM ELEVATION 496.4			9. SPILLWAY CREST ELEV. 442.4 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		442.4 1/		240		735		3,195		6/28/65				
	b. MULTIPLE USE														
	c. POWER														
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN				
	e. IRRIGATION														
	f. CONSERVATION		439.15 2/		211		237		2,462		5/8/67				
g. INACTIVE		438.0 3/		201		2,225		2,225							
17. LENGTH OF RESERVOIR 1.64 MILES					AV. WIDTH OF RESERVOIR 0.20 MILES										
WATERSHED	18. TOTAL DRAINAGE AREA 2.77 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 49.09 INCHES										
	19. NET SEDIMENT CONTRIBUTING AREA 2.44 SQ. MI.				23. MEAN ANNUAL RUNOFF 17.40 INCHES										
	20. LENGTH 3.5 MILES				AV. WIDTH 0.8 MILES				24. MEAN ANNUAL RUNOFF 2571 AC.-FT.						
	21. MAX. ELEV. 660				MIN. ELEV. 440				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.
Oct. 27, 1976		0		0		Range		6		211		2,462		0.196	
Oct. 14, 1972		5.0		5.0		Range		4		4/		2,430		0.193	
						(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			
Oct. 14, 1972		52.33		2512		2878		12,561		2512		12,561			
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. 14, 1972		32		6.4		2.62		32		6.4		2.62			
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	
Oct. 14, 1972		65*		3709		3709		0.26		1.30					

*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION												
	25-20	20-15	15-10	10-5	5-0								
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
Oct. 14, 1972	22	17	45	16	0								

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. 14, 1972	19	19	18	18	11	5	5	3	1	1					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1966			1220				
1967	440.37		1740				
1968	440.03	434.98	2418				
1969	439.98	434.93	1733				
1970	440.31	435.13	2359				
1971	440.66	435.00	2765				
1972	440.13	435.00	2878				
1973	441.55	438.96	6100				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
		<u>1967</u>		<u>4/</u>	<u>1972</u>			
414	0	0			0			
420	37	71			62			
425	84	373			360			
430	128	900			871			
435	176	1659			1626			
439 ¹⁵	211	2462			2430			
442.4	240	3196			3163			

47. REMARKS AND REFERENCES

1/ Emergency spillway crest.
2/ Main spillway crest; normal full pool.
3/ Planned minimum pool.
4/ Not measured or calculated after initial survey.