

RESERVOIR SEDIMENT
DATA SUMMARY

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

LEWISVILLE LAKE

NAME OF RESERVOIR

51-32a

DATA SHEET NO.

DAM	1. OWNER CORPS OF ENGINEERS		2. STREAM ELM FORK TRINITY		3. STATE TEXAS			
	4. SEC. TWP. RANGE		5. NEAREST P O LEWISVILLE S. I MI.		6. COUNTY DENTON			
	7. LAT 33° 04' 00" LONG 96° 58' 00"		8. TOP OF DAM ELEVATION 560.0		9. SPILLWAY CREST ELEV 532.0			
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	532.0	38,920 ¹ 39,136 ²	520,900 ¹ 525,615 ²	1,002,900 ¹ 1,003,414 ²		1 NOV 1954	
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY	515.0	22,970 ¹ 23,265 ²	481,800 ¹ 477,543 ²	482,000 ¹ 477,800 ²		16 DATE NORMAL OPER. BEGAN	
	e. IRRIGATION							
	f. CONSERVATION							
g. INACTIVE	448.0	37 ¹ 36 ²	240 ¹ 257 ²	240 ¹ 257 ²		29 APR 1957 ³		
17. LENGTH OF RESERVOIR		29 MILES		AV. WIDTH OF RESERVOIR		2.1 MILES		
WATERSHED	18. TOTAL DRAINAGE AREA		1660 SQ. MI.	22. MEAN ANNUAL PRECIPITATION		36.04 (42) INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA		1599 SQ. MI.	23. MEAN ANNUAL RUNOFF		4.97 (42) INCHES		
	20. LENGTH	80 MILES	AV. WIDTH	20.75 MILES	24. MEAN ANNUAL RUNOFF		439,977 (42) AC.-FT.	
	21. MAX. ELEV.		1,100	MIN. ELEV.		435.0		25. ANNUAL TEMP MEAN 64.8 RANGE -3 TO 113
	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.
1946	-	-	Map (R)	-	38,920	1,016,200	2.31	
1952 ^{1/}	-	-	Map (R)	-	38,920	1,002,900	2.28	
Nov 1954 ^{2/}	0	0	Range (D)	119	39,136	1,003,414	2.28	
Sep 1960	5.88	5.88	Range (D)	46	39,078	989,728	2.25	
Sep 1965	5.04	10.92	Range (D)	56	39,168	981,763	2.23	
SURVEY DATA	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	
	Sep 1960	34.20	561,916	1,562,200	3,304,065	561,916	3,304,065	
Sep 1965	34.92	463,749	775,182	2,337,295	516,608	5,641,360		
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		
Sep 1960	13,686	2,328	1.46	13,686	2,328	1.46		
Sep 1965	7,965	1,580	0.99	21,651	1,983	1.24		
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. PERIOD	b. TOTAL TO DATE	a. AV. ANN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
Sep 1960	50.6 (39)	1,609	1,609	0.23	1.36	3,369	3,369	
Sep 1965	37.6 (10) ^{4/}	1,089 ^{5/}	1,367 ^{5/}	0.20	2.16	2,763 ^{5/}	3,112 ^{5/}	

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	97-90	90-80	80-70	70-60	60-50	50-40	40-30	30-20	20-10	10	Crest				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
Sep 1960	0.2	2.2	4.0	12.8	14.8	21.8	15.0	27.4	-2.0	3.8					
Sep 1965	0.6	1.4	2.3	12.9	16.0	21.6	20.1	18.3	3.1	3.7					
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														
Sep 1960	2.2	18.7	20.8	16.2	2.1	-2.4	1.6	0.7	0.1	0.0					
Sep 1965	18.6	31.4	18.8	19.6	8.0	0.5	2.5	0.4	0.2	0.0					
45. RANGE IN RESERVOIR OPERATION															
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.								
1955 ^{6/}	477.55	450.30	145,300	1962	525.21	509.45	590,378								
1956	478.53	459.60	65,900	1963	520.39	510.95	262,370								
1957	535.57	460.40	1,562,200	1964	518.18	507.00	453,459								
1958	529.34	512.55	935,978	1965	524.28	511.67	775,182								
1959	513.00	509.49	155,854												
1960	516.58	510.91	438,833												
1960			1,117												
1961	516.05	511.00	254,789												
46. ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
455	0	0	475	3,596	17,137	505	14,862	269,398							
450	17	29	480	4,564	37,958	510	18,012	251,858							
455	45	159	485	6,007	63,333	515	23,210	457,611							
460	111	560	490	8,211	99,470	520	27,917	583,471							
465	259	1,405	495	10,225	144,971	525	31,683	732,905							
470	1,196	4,241	500	12,439	201,157	530	37,007	905,491							
47. REMARKS AND REFERENCES															
<u>1/</u> Adjusted for 1952 survey of Lake Dallas <u>2/</u> Adjusted in April 1963 for detailed range survey in 1952-1954 <u>3/</u> Conservation pool level reached. <u>4/</u> Samples taken from main channel. <u>5/</u> The 1960 dry weight used. <u>6/</u> Partial year															
48. AGENCY MAKING SURVEY Department of Army, CE, Fort Worth															
49. AGENCY SUPPLYING DATA Department of Army, CE, Fort Worth 50 DATE July 1975															