

RESERVOIR SEDIMENT DATA SUMMARY

SCS-34 Rev. 6-62

Lake Nasworthy

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

54-2b

DATA SHEET NO.

DAM	1. OWNER <u>San Angelo</u>		2. STREAM <u>South Concho</u>		3. STATE <u>Texas</u>			
	4. SEC. <u>TWP. RANGE</u>		5. NEAREST TOWN <u>San Angelo</u>		6. COUNTY <u>Tom Green</u>			
	7. STREAM BED ELEVATION <u>1,835</u>		8. TOP OF DAM ELEVATION <u>1,885</u>		9. SPILLWAY CREST ELEV. <u>1,872.3</u>			
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. MULTIPLE USE					Oct. 1930		
	b. FLOOD CONTROL							
	c. POWER							
	d. WATER SUPPLY	<u>1,870.0</u>	<u>1,326</u>	<u>11,485</u>	<u>11,485</u>	16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION							
	f. CONSERVATION							
	g. SEDIMENT							
h. INACTIVE								
WATERSHED	17. LENGTH OF RESERVOIR <u>5.44</u> MILES		AV. WIDTH OF RESERVOIR <u>0.5</u> MILES					
	18. TOTAL DRAINAGE AREA <u>3,294</u> SQ. MI.		22. MEAN ANNUAL PRECIPITATION <u>21.99</u> INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA <u>3,119</u> SQ. MI.		23. MEAN ANNUAL RUNOFF <u>Approx. 1.5</u> INCHES					
	20. LENGTH <u>90</u> MILES AV. WIDTH <u>26</u> MILES		24. MEAN ANNUAL RUNOFF <u>Approx. 249,518</u> AC.-FT.					
	21. MAX. ELEV. <u>2,800</u> MIN. ELEV. <u>1,872.3</u>		25. CLIMATIC CLASSIFICATION <u>Dry Subhumid</u>					
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/W RATIO AC.-FT. PER SQ. MI.
	Oct. 1930	-	-	-	-	1,326	11,485	3.49
	Dec. 1938	8.2	8.2	Range	-	1,326	10,294	3.13
	May 1953	14.5	22.6	Detail Survey	45	1,596	12,628 ^{1/}	3.83
	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	
	26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS 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	
	Dec. 1938	1191	145	0.046	1,191	145	0.046	
May 1953	1023	71	0.023	2,214	98	0.031		
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. PERIOD	b. TOTAL TO DATE	a. AV. AN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
Dec. 1938	67.5	68.0	68.0	1.26	10.33	-	-	
May 1953	67.5	34.0	46.0	0.85 ^{2/} 0.77 ^{3/}	17.53 ^{2/} 11.17 ^{3/}	-	-	

- 1/ Spillway raised 2.3 feet Sept. 1948.
- 2/ Based on original capacity.
- 3/ Based on increased capacity as of Sept. 1948.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											

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	70-8'	80-90	90-100	-105	-110	-115	-120	-125
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV. ✓	INFLOW AC.-FT.

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

C/I ratio = 1930 - 0.044, 1938 - 0.039, 1953 - 0.048.
 Estimated trap efficiency = 1953 - 78%
 Total sediment load, adjusted for trap efficiency = 0.038 ac.ft./sq. mi.

48. AGENCY MAKING SURVEY
 49. AGENCY SUPPLYING DATA SCS, Ft. Worth, Texas
 50. DATE Jan. 1954