

RESERVOIR SEDIMENTATION  
DATA SUMMARY

Lake Leon

NAME OF RESERVOIR

53-21

DATA SHEET NO.

DAM	1. OWNER Texas Elec. Service Co.			2. RIVER Leon River		3. STATE Texas		
	4. SEC. TWP. RANGE		5. NEAREST TOWN Eastland			6. COUNTY Eastland		
	7. STREAM BED ELEV. 1,430			8. TOP OF DAM ELEV. 1,450		9. SPILLWAY CREST ELEV. 1,450 1/		
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. SURFACE AREA ACRES	13. STORAGE ACRE- FEET	14. ACCUMULATED ACRE- FEET	15. DATE STORAGE BEGAN		
	a. FLOOD CONTROL							
	b. POWER	1,450 2/	175 3/	1,637 3/	1,637 3/	June 1920		
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION							
	e. CONSERVATION							
	f. INACTIVE					June 1920		
17. LENGTH OF RESERVOIR 6.0 MILES			AV. WIDTH OF RESERVOIR .04 MILES					
WATERSHED	18. TOTAL DRAINAGE AREA 225 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 25.9 (35) INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA 224.7 SQ. MI.			23. MEAN ANNUAL RUNOFF INCHES				
	20. LENGTH MILES		AV. WIDTH MILES		24. MEAN ANNUAL RUNOFF AC.- FT.			
	21. MAX. ELEV.		MIN. ELEV.		25. CLIMATIC CLASSIFICATION Sub-humid			
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.
	June 1920	-	-	-	-	175	1,637 3/	7.3
	March 1941	20.75	20.75	Recon.	36 meas.	175	1,275	5.7
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	
SURVEY DATA	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	
	March 1941	362	17.4	0.08 4/	362	17.4	0.08 4/	
SURVEY DATA	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. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE
	March 1941				1.06	22.09	-	-

1/ Dam is the spillway

2/ Provides circulating water for steam power plant.

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	70-80	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

The sediment is predominantly silt and clay, with clay content high

3/ Originally the reservoir covered 170 acres and had 1,462 ac.-ft. capacity. Dam was raised 1 foot in 1928. Area and capacity above are at 1928 dam and spillway level.

4/ Lake Leon is a channel type reservoir with low c/w ratio. Much sediment passes through the reservoir which has not been measured.

48. AGENCY SUPPLYING DATA Region 4, Soil Conservation Service <sup>49.</sup> DATE January 2, 1951