

RESERVOIR SEDIMENTATION
DATA SUMMARY

Shawnee Lake

NAME OF RESERVOIR

45 - 7a

DATA SHEET NO.

DAM	1. OWNER City of Shawnee			2. RIVER Deer Creek			3. STATE Oklahoma							
	4. SEC. 11 TWP. 10N RANGE 2E			5. NEAREST TOWN Shawnee			6. COUNTY Pottawatomie							
	7. STREAM BED ELEV. 1028			8. TOP OF DAM ELEV.			9. SPILLWAY CREST ELEV. 1072.5							
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					6-1-1935								
	b. POWER													
	c. WATER SUPPLY	1072.5	1320 1/	23,429 1/	23,429 1/	16. DATE NORMAL OPER. BEGAN								
	d. IRRIGATION					8-1-1936								
	e. CONSERVATION													
	f. INACTIVE													
17. LENGTH OF RESERVOIR		3.4 4/	MILES		AV. WIDTH OF RESERVOIR		0.31 MILES							
WATERSHED	18. TOTAL DRAINAGE AREA			21.2	SQ. MI.		22. MEAN ANNUAL PRECIPITATION			37.58 6/	INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA			18.9	SQ. MI.		23. MEAN ANNUAL RUNOFF			4.0 7/	INCHES			
	20. LENGTH		5.5	MILES		AV. WIDTH		3.85	MILES		24. MEAN ANNUAL RUNOFF		213.20 7/	AC.-FT.
	21. MAX. ELEV.			Approx 1210	MIN. ELEV.			1028	25. CLIMATIC CLASSIFICATION				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.					
	1/ Aug. 1937	-	-	Topo Range	9	1320	5/	22,600	1066.0					
	2/ 12-11-1947	2/ 12.3	12.3	Detail Range	11	1316	3/	24,468	1154.2					
						1320		23,816	1123.4					
						1320		23,429	1105.1					
						1315	3/	22,327	1053.2					
	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	d. MEAN ANNUAL	e. TOTAL TO DATE						
	26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS ACRE- FEET			38. TOTAL SED. DEPOSITS TO DATE ACRE- FEET.									
	c. PERIOD TOTAL	d. AV. ANNUAL	e. PER SQ. MI.-YEAR	f. TOTAL TO DATE	g. AV. ANNUAL	h. PER SQ. MI.-YEAR								
Dec 11, 1947	652	53.0	2.8	652.0	53.0	2.8								
Mar 1, 1957	1102	51.0	2.7	1102.0	51.0	2.7								
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	c. AV. ANNUAL	d. TOT. TO DATE	e. PERIOD	f. TOT. TO DATE							
Dec 11, 1947	94.72	5776	5776	.23	2.78	3/	30 to 400							
Mar 1, 1957	94.72	5339	5570	.22	4.70									

1/ Original area & storage as shown by 1957 survey. 2/ From "A" reconnaissance investigations, Shawnee Lake, by Victor H. Jones, Geologist, SCS. 3/ Present ac-ft as shown by the two surveys. 4/ 2 side arms 2.2 mi. and 1.1 mi. resp., looking upstream. 5/ Original topographic survey. 6/ At Shawnee, Okla., years 1931-1952. 7/ Estimated.

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
1072.5	1315.00	22,327.0	1032.5	47.56	151.69			
1067.5	1056.51	16,388.91	1027.5	12.59	9.66			
1062.5	825.10	11,680.21	1022.5	0.00	0.00			
1057.5	647.06	8,001.47						
1052.5	493.00	5,156.03						
1047.5	346.14	3,064.81						
1045.5	245.93	1,594.39						
1037.5	148.65	619.79						

47. REMARKS AND REFERENCES
8/ Spillway elevation 1072.5 equivalent to 45 degree gage height. (C/I ratio (1066.0 = 5.0); (1154.2) = 5.4); (1123.4 = 5.2); (1053.2 = 4.9).
 Est. trap efficiency = 97 percent.

Soil Conservation Service
 Stillwater, Oklahoma

48. AGENCY SUPPLYING DATA
 49. DATE March 28, 1957