

RESERVOIR SEDIMENTATION  
DATA SUMMARY

Boomer Lake  
NAME OF RESERVOIR

46-3  
DATA SHEET NO.

DAM	1. OWNER <b>City of Stillwater</b>			2. RIVER <b>Boomer Creek</b>			3. STATE <b>Oklahoma</b>			
	4. SEC. <b>2</b> , 11 TWP. <b>19N</b> RANGE <b>2E</b>			5. NEAREST TOWN <b>Stillwater</b>			6. COUNTY <b>Payne</b>			
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV.			9. SPILLWAY CREST ELEV. <b>912 1/2</b>			
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				
	d. FLOOD CONTROL					March 1925				
	b. POWER									
	c. WATER SUPPLY	912	292	2,812	2,812	16. DATE NORMAL OPER. BEGAN				
	d. IRRIGATION					March 1925				
	e. CONSERVATION									
	f. INACTIVE									
WATERSHED	17. LENGTH OF RESERVOIR		2.74	MILES	AV. WIDTH OF RESERVOIR		0.24	MILES		
	18. TOTAL DRAINAGE AREA			9.13	SQ. MI.	22. MEAN ANNUAL PRECIPITATION			32 (36)	INCHES
	19. NET SEDIMENT CONTRIBUTING AREA			8.67	SQ. MI.	23. MEAN ANNUAL RUNOFF				INCHES
	20. LENGTH		MILES	AV. WIDTH	MILES	24. MEAN ANNUAL RUNOFF				AG.-FT.
	21. MAX. ELEV.		MIN. ELEV.		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 <sub>w</sub> RATIO AC.-FT. PER SQ. MI.		
	March 1925	-	-	-	-	292	2,812	308		
	June 1935	10.25	10.25	Range Detailed	19	292	2,641	289		
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AG.-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			
	June 1935	171	16.7	1.93	171	16.7	1.93			
	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		
June 1935	60*	2,522	2,522	0.59	6.08	-	-			

1/ In August, 1933 2' of concrete was added to the spillway to raise the crest to elev. 912, and that elev. used in compiling this data.

\* 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
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  
 Eakin, Henry M. and Brown, Carl B., Silting of Reservoirs, (revised) U. S. Dept. of Agric. Tech. Bull. 524, 1939, pp. 85-88.  
 The sediment is classified as entirely bottom-set silt and clay. No delta deposits were found.

48. AGENCY SUPPLYING DATA Region 4, Soil Conservation Service 49. DATE Aug. 14, 1950  
 U. S. Dept. of Agriculture  
 Fort Worth, Texas