

RESERVOIR SEDIMENTATION  
DATA SUMMARY

Possum Kingdom Lake

NAME OF RESERVOIR

53-16

DATA SHEET NO.

DAM	1. OWNER Brazos R. Cons. & Reclamation District			2. RIVER Brazos River		3. STATE Texas										
	4. SEC. 32052 <sup>1</sup> N. W. P. RANGE 98° 26' W			5. NEAREST TOWN Graford		6. COUNTY Palo Pinto										
	7. STREAM BED ELEV. 855			8. TOP OF DAM ELEV. 1024		9. SPILLWAY CREST ELEV. 1000										
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										May 1941					
	b. POWER		1000		20,600		729,985		729,985							
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	d. IRRIGATION															
	e. CONSERVATION															
	f. INACTIVE										May 1941					
17. LENGTH OF RESERVOIR 65 MILES					AV. WIDTH OF RESERVOIR 0.5 MILES											
WATERSHED	18. TOTAL DRAINAGE AREA 14,098 1/2 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 24 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 12,955 2/2 SQ. MI.				23. MEAN ANNUAL RUNOFF INCHES											
	20. LENGTH 250 MILES		AV. WIDTH 90 MILES		24. MEAN ANNUAL RUNOFF AC.- FT.											
	21. MAX. ELEV. 4500		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 <sub>w</sub> RATIO AC.- FT. PER SQ. MI.	
	May 1941		-		-		-		-		20,600		729,985		51.8	
	Feb. 1949		7.75		7.75		Range Recon.		33		20,600		672,420		47.7	
	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			
	Feb. 1949				900,000 (Oct. 1940 to Sept. 1947)		2,402,000		6,975,000		900,000		6,975,000			
	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		d. TOTAL TO DATE		e. AV. ANNUAL		f. PER SQ. MI.- YEAR			
	Feb. 1949		57,565		7,428		0.57		57,565		7,428		0.57			
	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		
Feb. 1949								1.02		7.89		-		-		

1/ Includes 1,111 sq. miles of partially contributing drainage above other lakes in watershed. Excludes 8,950 sq. miles of non-contributing drainage at head of watershed.

2/ Excludes all of non-contributing drainage enumerated in 1/.

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  
 Reference: Unpublished report of sedimentation in Possum Kingdom Lake by Alexis N. Garin, Dec. 1941. Jones, Victor H. and Rogers, Ross E., Reconnaissance Investigation of Sedimentation in Possum Kingdom Lake; U. S. Soil Conserv. Serv., SCS-TP-87., 22 pp., illus., processed. Fort Worth, Texas, December 1949.

The sediment is chiefly silt and clay ranging from light tan to dark brown in color.

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