

RESERVOIR SEDIMENTATION

HULAH RESERVOIR

DATA SUMMARY

NAME OF RESERVOIR

45-35
DATA SHEET NO.

DAM	1. OWNER Corps of Engineers			2. RIVER Caney		3. STATE Oklahoma		
	4. SEC. 2 TWP. 28N RANGE 11E		5. NEAREST TOWN Hulah, Okla.			6. COUNTY Osage		
	7. STREAM BED ELEV. 686			8. TOP OF DAM ELEV. 779.5		9. SPILLWAY CREST ELEV. 765(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	765.0	13,000	258,700	295,100	6 Feb 1950 (2)		
	b. POWER							
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION							
	e. CONSERVATION	733.0 (3)	3,600	36,410	36,410	24 Sept 1951		
WATERSHED	17. LENGTH OF RESERVOIR 18.4 MILES			AV. WIDTH OF RESERVOIR 0.6 MILES				
	18. TOTAL DRAINAGE AREA 732 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 35.63 INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA 712 SQ. MI.			23. MEAN ANNUAL RUNOFF (20.7 yrs.) 6.8 INCHES				
	20. LENGTH 69 MILES AV. WIDTH 14 MILES			24. MEAN ANNUAL RUNOFF (20.7 yrs.) 266,200 AC.-FT.				
	21. MAX. ELEV. 1500 MIN. ELEV. 685			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.
	Feb. 1950			Range	29	13,000	295,130	403
	June 1958	8.4	8.4	Range (detailed)	29	13,000	292,565	400
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	
	June 1958	32.53	241,900	471,600	2,031,600	241,900	2,031,600	
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.-YR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YR.	
	June 1958	2565	305	0.429	2565	305	0.429	
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. TO DATE	a. PERIOD	b. TO DATE
	June 1958	44.2 (13)	413	413	0.103	0.869	894	894

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION									
	79-69	69-59	59-49	49-39	39-29	29-19	19-9	9-Crest		
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
June 1958	7.1	25.8	17.3	18.1	1.0	7.3	8.1	15.3		

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															
June 1958	44.1	8.9	1.9	3.1	14.9	12.1	5.7	6.3	2.8	0.2					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT
1950 (8 mo.)			409,000				
1951	745.4	702.5	407,200				
1952	740.3	728.6	288,300				
1953	733.1	726.8	39,570				
1954	739.3	728.1	59,100				
1955	741.7	728.1	109,000				
1956	734.4	725.5	31,100				
1957	764.9	723.2	471,600				
1958 (9 mos.)	740.6	731.9	216,700				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
696	0	0	733	3,592	34,670			
700	21	3	735	4,001	42,300			
705	133	375	740	5,296	65,610			
710	243	1,280	745	6,735	95,520			
715	448	2,990	750	8,323	133,200			
720	830	5,950	755	9,873	178,800			
725	1885	12,660	760	11,340	231,800			
730	3003	24,860	765	13,000	292,600			

47. REMARKS AND REFERENCES

- (1) Top of 25-ft. high tainter gates closed.
- (2) Date of diversion; start of embankment closure.
- (3) Prior to Feb. 1958 the conservation pool was maintained at elevation 731.0.

48. AGENCY SUPPLYING DATA Dept of Army, Corps of Engineers 49. DATE May 1959