

RESERVOIR SEDIMENTATION
DATA SUMMARY

E. W. Howell

NAME OF RESERVOIR

31-14

DATA SHEET NO.

DAM	1. OWNER E. W. Howell			2. RIVER Trib. of Tarkio Cr.		3. STATE Missouri		
	4. SEC. 5 TWP. 65 N RANGE 40 W			5. NEAREST TOWN Tarkio		6. COUNTY Atchison		
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV.		9. SPILLWAY CREST ELEV.		
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		3.73	14.07	47.75	July 1934		
	b. POWER							
	c. WATER SUPPLY		2.88	33.68	33.68	16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION							
	e. CONSERVATION							
	f. INACTIVE					July 1934		
17. LENGTH OF RESERVOIR				MILES	AV. WIDTH OF RESERVOIR			
WATERSHED	18. TOTAL DRAINAGE AREA 0.509			SQ. MI.	22. MEAN ANNUAL PRECIPITATION 34 (32)			
	19. NET SEDIMENT CONTRIBUTING AREA 0.505			SQ. MI.	23. MEAN ANNUAL RUNOFF 4.1 *			
	20. LENGTH		MILES	AV. WIDTH		MILES	24. MEAN ANNUAL RUNOFF	
							AC.-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/W RATIO AC.-FT. PER SQ. MI.
	July 1934	-	-	-	-	2.88	33.68	66.2
	May 1949	6.9 1/	6.9	Range Detailed	11	0.13	0.03	0.06
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE ACRE- FT		
			a. MEAN ANNUAL (inches)	b. MAX. ANNUAL	c. PERIOD TOTAL	d. MEAN ANNUAL (inches)	e. TOTAL TO DATE	
	May 1949		3.3 *			3.3 *		
	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	
	May 1949	33.65 (40.11) 2/	4.88 (5.81)	9.66 (11.6)	33.65 (40.11)	4.88 (5.81)	9.66 (11.6)	
	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	c. PERIOD	d. TOT. TO DATE	
May 1949	72.5 (3)	15,250 (18,180)	15,250 (18,180)	12.1 (14.5) 3/	83.8 (99.9) 3/	63,300 4/ (75,400) 4/	63,300 4/ (75,400) 4/	

* Estimated

1/ Reservoir silted full Dec. 1936, crest raised June 1937, silted full again Dec. 1940, crest raised again May 1945, silted full again May 1946. Age computed as 6.9 yrs.

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 Gottschalk, L. C., and G. M. Brune. Sediment design criteria for the Missouri Basin Loess Hills. U.S. Soil Conserv. Serv., SCS-TP-97. 21 pp., illus., processed, Milwaukee, Wisconsin, 1950.
 All figures based on 1949 crest elevation.
 Mechanical analysis curves available.
 2/ Above-crest deposits within original flow-line. 0.10 acre-foot of sediment above emergency spillway elevation.
 3/ Based on water supply pool. $4/ 42 = \frac{37b \times 39 \times 1,000,000}{35a \times 18 \times \frac{640 \times 62.4}{12}}$
 49. DATE 12 May 10, 1950

48. AGENCY SUPPLYING DATA Region 3, Soil Conservation Service
 U. S. Department of Agriculture
 Milwaukee, Wisconsin