

RESERVOIR SEDIMENTATION
DATA SUMMARY

Carl Chinquist

31-2

NAME OF RESERVOIR

River

DATA SHEET NO.

DAM	1. OWNER Carl Chinquist				2. RIVER Trib. of West Nodaway				STATE Iowa							
	4. SEC. 35 TWP. 72N RANGE 37W				5. NEAREST TOWN Stanton				6. COUNTY Montgomery							
	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				2.82		7.01		16.47		June 1938					
	b. POWER															
	c. WATER SUPPLY				1.67		9.46		9.46		16. DATE NORMAL OPER. BEGAN June 1938					
	d. IRRIGATION															
	e. CONSERVATION															
	f. INACTIVE															
WATERSHED	17. LENGTH OF RESERVOIR				MILES				AV. WIDTH OF RESERVOIR				MILES			
	18. TOTAL DRAINAGE AREA 0.166				SQ. MI.				22. MEAN ANNUAL PRECIPITATION 31 (22)				INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA 0.163				SQ. MI.				23. MEAN ANNUAL RUNOFF 4.6 *				INCHES			
	20. LENGTH				MILES				AV. WIDTH				MILES			
	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.	
	June 1938		-		-		-		-		1.67		9.46		57.0	
	May 1949		10.9		10.9		Range Detailed		3		1.34		2.59		15.6	
	26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW				36. WATER INFL. TO DATE							
					a. MEAN ANNUAL		b. MAX. ANNUAL		c. PERIOD TOTAL		d. MEAN ANNUAL		e. TOTAL TO DATE			
					(inches)						(inches)					
	May 1949				5.7*						5.7*					
	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		6.87 (8.22) 1/		0.630 (0.754)		3.87 (4.63)		6.87 (8.22)		0.630 (0.754)		3.87 (4.63)			
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				
May 1949		49.9 (3)		4,200 (5,030)		4,200 (5,030)		4.43 (6.66) 2/		48.3 (72.6) 2/		9,980 3/ (11,940) 3/				

* Estimated

1/ Above-crest deposits within original flow line at emergency spillway elevation. 0.27 acre-feet of sediment above emergency spillway elevation.

2/ Based on water supply pool.

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
 1. Gottschalk, L.C., and Bruns, G.M. Sediment design criteria for the Missouri Basin Loess Hills. Soil Conservation Service SCS-TP-97, 21 pp., illus., processed Milwaukee, Wisconsin, 1950.
 2. U.S.D.A. Yearbook of Agriculture, Washington, D.C., 1941.

$$\frac{3}{42} = \frac{37b \times 39 \times 1,000,000}{35a \times 18 \times \frac{640 \times 62.4}{12}}$$

48. AGENCY SUPPLYING DATA Region 3, Soil Conservation Service 49. DATE January 6, 1950
U. S. Dept. of Agriculture, Milwaukee, Wis.