

RESERVOIR SEDIMENTATION
DATA SUMMARY

Charles Fienhold
NAME OF RESERVOIR

35-6
DATA SHEET NO.

DAM	1. OWNER Charles Fienhold			2. RIVER Trib. of Boyer R.			3. STATE Iowa					
	4. SEC. 31 TWP. 82N RANGE 40W			5. NEAREST TOWN Dunlap			6. COUNTY Crawford					
	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		3.48	14.67	27.30	May 1945						
	b. POWER											
	c. WATER SUPPLY		1.87	12.63	12.63	16. DATE NORMAL OPER. BEGAN						
	d. IRRIGATION					May 1945						
	e. CONSERVATION											
	f. INACTIVE											
17. LENGTH OF RESERVOIR			MILES			AV. WIDTH OF RESERVOIR			MILES			
WATERSHED	18. TOTAL DRAINAGE AREA 0.428			SQ. MI.			22. MEAN ANNUAL PRECIPITATION 28 (40)			INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA 0.425			SQ. MI.			23. MEAN ANNUAL RUNOFF 4.5*			INCHES		
	20. LENGTH			MILES			AV. WIDTH			MILES		
	21. MAX. ELEV.			MIN. ELEV.			25. CLIMATIC CLASSIFICATION Sub-humid					
	24. MEAN ANNUAL RUNOFF			MILES			AC-FT.					
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.				
	May 1945	-	-	-	-	1.87	12.63	29.5				
	April 1949	3.9	3.9	Range Detailed	9	1.53	2.90	6.78				
	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.						
	April 1949		(inches) 7.9*			(inches) 7.9*						
	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					
	April 1949	9.73 (10.94) 1/	2.49 (2.81)	5.87 (6.60)	9.73 (10.94)	2.49 (2.81)	5.87 (6.60)					
	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					
April 1949	63.1 (3)	8,070 (9,070)	8,070 (9,070)	10.3 (19.7) 2/	40.1 (77.0) 2/	13,960 3/	13,960 3/	13,960 3/	13,960 3/	13,960 3/		

* Estimated

1/ Above-crest deposits within original flow line at 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 Brune, G.M. Sediment design criteria for the Missouri Basin Loess Hills. Soil Conserv. Serv. 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 9, 1950
 U. S. Dept. of Agriculture, Milwaukee, Wisconsin