

RESERVOIR SEDIMENTATION
DATA SUMMARY

Farmers' Ditch Old Desilting Basin
NAME OF RESERVOIR

36 - 3

DATA SHEET NO.

DAM	1. OWNER Farmers' Drainage Dist.		2. RIVER Farmers' Ditch		3. STATE Iowa			
	4. SEC. 25,26 TWP. 88N RANGE 46W		5. NEAREST TOWN Bronson		6. COUNTY Woodbury			
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		225	1,278	1,952	Apr. 1941		
	b. POWER							
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION							
	e. CONSERVATION		194	674	674	Apr. 1941		
	f. INACTIVE							
WATERSHED	17. LENGTH OF RESERVOIR		MILES	AV. WIDTH OF RESERVOIR		MILES		
	18. TOTAL DRAINAGE AREA		22.9	SQ. MI.	22. MEAN ANNUAL PRECIPITATION		26 (40) INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA		21.4	SQ. MI.	23. MEAN ANNUAL RUNOFF		3.1 * INCHES	
	20. LENGTH		MILES	AV. WIDTH		MILES	24. MEAN ANNUAL RUNOFF	AC-FT.
	21. MAX. ELEV.		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/W RATIO AC-FT. PER SQ. MI.
	April 1941	-	-	-	-	194	674	29.4
	Feb. 1945	3.8	3.8	Topographic Survey	1 ft.	165	275	12.0
	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	a. MEAN ANNUAL	b. TOTAL TO DATE	
	Feb. 1945		(inches)			(inches)		
			4.3 *			4.3 *		
	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	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	
	Feb. 1945	399 (468) 1/	105 (123)	4.91 (5.75)	399 (468)	105 (123)	4.91 (5.75)	
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. 1945	68.3 (4)	7,300 (8,560)	7,300 (8,560)	6.32 (15.6) 2/	24.0 (59.2) 2/	21,880 3/ (25,640) 3/	21,880 3/ (25,640) 3/	

1/ Above-crest deposits within original flow line at emergency spillway elevation.
 2/ Based on conservation pool.
 * Estimated

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														
<p>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.</p> <p>Net sediment contributing area (item 19) excludes 1.2 sq. mi. of Missouri River bottomland.</p> <p>3/ 42 = $\frac{37b \times 37 \times 1,000,000}{35a \times 18 \times 640 \times 62.4}$ Region 3, Soil Conservation Service U. S. Dept. of Agriculture Milwaukee, Wisconsin</p>														
48. AGENCY SUPPLYING DATA 12														
49. DATE January 9, 1950														