

RESERVOIR SEDIMENTATION
DATA SUMMARY

G. & A. Evers Lower Reservoir
NAME OF RESERVOIR

35-4
DATA SHEET NO.

DAM	1. OWNER G. & A. Evers			2. RIVER Trib. of Boyer R.			3. STATE Iowa					
	4. SEC. 7 TWP. 83N RANGE 39W			5. NEAREST TOWN Denison			6. COUNTY Crawford					
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV. 109.2*			9. SPILLWAY CREST ELEV. 100.0*					
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	106.8	4.58	21.63	28.26	Dec. 1938						
	b. POWER											
	c. WATER SUPPLY	100.0	1.81	6.63	6.63	16. DATE NORMAL OPER. BEGAN						
	d. IRRIGATION											
	e. CONSERVATION											
	f. INACTIVE					Dec. 1938						
17. LENGTH OF RESERVOIR			MILES			AV. WIDTH OF RESERVOIR			MILES			
WATERSHED	18. TOTAL DRAINAGE AREA 0.187			SQ. MI.			22. MEAN ANNUAL PRECIPITATION 28 (40)			INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA 0.139			SQ. MI.			23. MEAN ANNUAL RUNOFF 4.8 *			INCHES		
	20. LENGTH			MILES			AV. WIDTH			MILES		
	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.				
	Dec. 1938	-	-	-	-	1.81	6.63	35.5				
	April 1949	10.3	10.3	Range Detailed	3	1.05	1.26	6.74				
SURVEY DATA	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW			36. WATER INFL. TO DATE						
	April 1949		d. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE					
			(inches)			(inches)						
		6.1*			6.1*							
SURVEY DATA	26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS ACRE- FEET			38. TOTAL SED. DEPOSITS TO DATE ACRE- FEET							
	April 1949	a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR					
		5.37 (7.30) ^{1/}	0.521 (0.708)	3.75 (5.09)	5.37 (7.30)	0.521 (0.708)	3.75 (5.09)					
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					
	April 1949	69.8 (3)	a. PERIOD	b. TOTAL TO DATE	a. AV. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE				
			5,700 (7,740)	5,700 (7,740)	2.51 (7.86) ^{2/}	25.8 (81.0) ^{2/}	9,580 ^{3/} (13,020) ^{3/}	9,580 ^{3/} (13,020) ^{3/}				

* Assumed

^{1/} Above-crest deposits within original flow line of reservoir 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 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.
 G. & A. Evers Upper Reservoir constructed upstream 3/39 (drainage area - 0.045 square miles, C/W ratio 42).

$$\frac{3}{42} = \frac{370 \times 39 \times 1,000,000}{35a \times 18 \times 640 \times 62.4}$$

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

49. DATE January 9, 1950