

RESERVOIR SEDIMENTATION
DATA SUMMARY

West Frankfort Reservoir

NAME OF RESERVOIR

16 - 8

DATA SHEET NO.

DAM	1. OWNER City of West Frankfort			2. RIVER Tilley Creek		3. STATE Illinois											
	4. SEC. 19 TWP. 7S RANGE 4E			5. NEAREST TOWN West Frankfort		6. COUNTY Franklin											
	7. STREAM BED ELEV. app. 416			8. TOP OF DAM ELEV. 447		9. SPILLWAY CREST ELEV. 441.77											
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										Aug. 1926						
	b. POWER																
	c. WATER SUPPLY		441.77 1/		182.6		1,608.4		1,608.4		16. DATE NORMAL OPER. BEGAN						
	d. IRRIGATION																
	e. CONSERVATION																
	f. INACTIVE										Aug. 1926						
WATERSHED	17. LENGTH OF RESERVOIR 1.0 MILES				AV. WIDTH OF RESERVOIR 0.28 MILES												
	18. TOTAL DRAINAGE AREA 4.03 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 41.10 INCHES												
	19. NET SEDIMENT CONTRIBUTING AREA 3.75 SQ. MI.				23. MEAN ANNUAL RUNOFF INCHES												
	20. LENGTH MILES		AV. WIDTH MILES		24. MEAN ANNUAL RUNOFF AC.-FT.												
	21. MAX. ELEV. 520		MIN. ELEV. 416		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.		
	Aug. 1926		-		-		-		-		182.6		1,608.4		399		
	Sept. 1936		10.1		10.1		Range detailed		15		182.6		1,515.0		376		
	July 1949		12.8		22.9		"		17		182.6		1,487.8		369		
	26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION			35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AC.-FT.								
			a. MEAN ANNUAL			b. MAX. ANNUAL			c. PERIOD TOTAL			d. MEAN ANNUAL			e. TOTAL TO DATE		
	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				
	Sept. 1936		93.3		9.24		2.46		93.3		9.24		2.46				
July 1949		44.8		3.50		0.933		120.5 2/		5.26		1.40					
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					
Sept. 1936						0.57		5.80									
July 1949						0.33		7.49									

1/ Spillway crest raised from 439 ft. m.s.l. to 441.77 ft. m.s.l. in April 1943. All data computed on basis of 441.77 ft. at spillway elevation.

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
 2/ Net sediment volume in 1949. The 93.3 acre feet of sediment deposited prior to 1936 had compacted, due to exposure to 75.7 acre feet.
 Jones, Victor H., Advance report on the sedimentation survey of West Frankfort Reservoir, West Frankfort, Ill., U.S. Soil Conserv. Serv., SCS-SS-15, 9 pp., illus. Processed. Washington, D. C. May 1937.
 Stall, J.B., Klingebiel, A.A., Melsted, S.W., and Sauer, E.L. The silting of West Frankfort Res., West Frankfort, Ill., Rept. of Investigation No. 11, Ill. Dept. of Registration and Education, State Water Survey Div. Urbana, Ill. 1951.

48. AGENCY SUPPLYING DATA Illinois State Water Survey
 Urbana, Illinois

49. DATE July 1951