

RESERVOIR SEDIMENTATION DATA SUMMARY

Frazeo

NAME OF RESERVOIR

30-2

DATA SHEET NO.

DAM	1. OWNER City of Frazeo			2. RIVER Otter Tail			3. STATE Minn.				
	4. SEC. 35 TWP. 138N RANGE 40W			5. NEAREST TOWN Frazeo			6. COUNTY Becker				
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV.			9. SPILLWAY CREST ELEV. 100.0 <i>assumed</i>				
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					1926					
	b. POWER										
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN					
	d. IRRIGATION										
	e. CONSERVATION	100.0	50.6	155.0	155.0	1926					
	f. INACTIVE										
17. LENGTH OF RESERVOIR			MILES	AV. WIDTH OF RESERVOIR			MILES				
WATERSHED	18. TOTAL DRAINAGE AREA 210			SQ. MI.	22. MEAN ANNUAL PRECIPITATION 24.06 (40 yr)					INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA 24			SQ. MI.	23. MEAN ANNUAL RUNOFF					INCHES	
	20. LENGTH		MILES	AV. WIDTH		MILES	24. MEAN ANNUAL RUNOFF 270 ac.ft./sq.mi.				ACFT.
	21. MAX. ELEV.		MIN. ELEV.			25. CLIMATIC CLASSIFICATION Subhumid					
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 $\frac{1}{2}$ AC-FT. PER SQ. MI.			
	1926	-	-	-	-	50.6	155.0	0.738			
	May 1952	26	26	Detailed	6 ranges	50.6	137.1	0.653			
	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	a. MEAN ANNUAL	b. 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	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR				
	May 1952	17.9	0.689	0.029	17.9	0.689	0.029				
	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 1952	20.0 (3)	12.6	12.6	0.44	11.5	-	-				

1/ C/I ratio estimated to be 0.00273 in 1926 and 0.00242 in 1952. Trap efficiency estimated to be 10% in 1926 and 8% in 1952.

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 Formerly a power dam and also used to float logs. Old mill dam formerly located above highway bridge, washed out in 1919. Sediment contains 51.4% organic matter and sawdust. Mechanical analysis of sediment made. Total rate of sediment production adjusted for trap efficiency, 140 tons/sq.mi./yr.