

RESERVOIR SEDIMENT DATA SUMMARY

Finstad Farm Pond
NAME OF RESERVOIR

29-1

DATA SHEET NO.

DAM	1. OWNER <u>Morris Finstad</u>			2. STREAM <u>Unnamed</u>			3. STATE <u>Minnesota</u>					
	4. SEC. <u>15</u> TWP. <u>66N</u> RANGE <u>17W</u>			5. NEAREST P.O. <u>Orr</u>			6. COUNTY <u>St. Louis</u>					
	7. LAT. <u>48° 12' 30"</u> LONG. <u>92° 30' 45"</u>			8. TOP OF DAM ELEVATION <u>49.6*</u>			9. SPILLWAY CREST ELEV. <u>48.0*</u>					
RESERVOIR	10. STORAGE ALLOCATION		11. ELEVATION TOP OF POOL		12. ORIGINAL SURFACE AREA, ACRES		13. ORIGINAL CAPACITY, ACRE-FEET		14. GROSS STORAGE, ACRE-FEET		15. DATE STORAGE BEGAN	
	a. FLOOD CONTROL										11/66	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION <u>1/</u>		<u>46.5*</u>		<u>10.4</u>		<u>22.91</u>		<u>22.91</u>		11/66	
g. INACTIVE												
WATERSHED	17. LENGTH OF RESERVOIR <u>0.28</u> MILES			AV. WIDTH OF RESERVOIR <u>0.06</u> MILES								
	18. TOTAL DRAINAGE AREA <u>1.11</u> SQ. MI.			22. MEAN ANNUAL PRECIPITATION <u>27.5</u> ^{2/} INCHES								
	19. NET SEDIMENT CONTRIBUTING AREA <u>1.09</u> SQ. MI.			23. MEAN ANNUAL RUNOFF <u>8.5</u> ^{3/} INCHES								
	20. LENGTH <u>1.14</u> MILES			AV. WIDTH <u>0.97</u> MILES			24. MEAN ANNUAL RUNOFF <u>503</u> AC.-FT.					
	21. MAX. ELEV. <u>1400.0 (MSL)</u>			MIN. ELEV. <u>1247.0 (MSL)</u>			25. ANNUAL TEMP.: MEAN <u>38.4</u> RANGE <u>25° to 47.5°</u>					
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/I. RATIO, AC.-FT. PER AC.-FT.			
	11/66		-	-	Range (R)	8	10.4	22.91	0.05			
	4/74		7.4	7.4	Range (R)	8	10.4	19.34	0.04			
	12/79		5.7	13.1	Range (R)	8	10.4	19.00	0.04			
	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				
	4/74		29.73		543	684	4073	543	4073			
	12/79		22.57		412	543	2348	486	6421			
	26. DATE OF SURVEY		37. PERIOD CAPACITY LOSS, 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				
4/74		3.57	0.48	0.44	3.57	0.48	0.44					
12/79		0.34	0.06	0.05	3.91	0.30	0.27					
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. ANN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE					
4/74		45**	431	431	2.1	15.6	627	632				
12/79		45**	54	265	1.3	17.1	103	439				

*Assumed
**Estimated

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, 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														
4/74	1	16	14.6	14.8	19.5	20.7	13.4								
12/79	3.4	24.3	23.0	17.4	13.4	10.8	6.0	1.2	0.1						

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/ Sediment storage

2/ MN Hydrology Guide, Figure 1.1

3/ MN Hydrology Guide, Figure 7.1

Reported 35-40% of pond used for wild rice production for the majority of the period of operation of reservoir.

48. AGENCY MAKING SURVEY USDA-SCS

49. AGENCY SUPPLYING DATA USDA-SCS

50. DATE 8/80