

**RESERVOIR SEDIMENTATION  
 DATA SUMMARY**

Dempsy Pond

33-7

		NAME OF RESERVOIR				DATA SHEET NO.				
DAM	1. OWNER	Bruce Dempsy				2. RIVER to	3. STATE	Nebraska		
	4. LONG. Sec. 6	LAT. T-9N	RANGE	R27W	5. NEAREST TOWN	6. COUNTY	Lincoln			
	7. STREAM BED ELEV.	---				8. TOP OF DAM ELEV.	9. SPILLWAY CREST ELEV. *	104.0 * 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					June 1949				
	b. POWER					16. DATE NORMAL OPER. BEGAN				
	c. WATER SUPPLY					June 1949				
	d. IRRIGATION									
	e. CONSERVATION	100.0			11.00	11.00				
	f. INACTIVE									
WATERSHED	17. LENGTH OF RESERVOIR			0.12 <sup>1</sup>	MILES	AV. WIDTH OF RESERVOIR		99	FEET	
	18. TOTAL DRAINAGE AREA			0.516 approx.	SQ. MI.	22. MEAN ANNUAL PRECIPITATION		21.5 (60 yr)	INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA			0.51	SQ. MI.	23. MEAN ANNUAL RUNOFF			INCHES	
	20. LENGTH		MILES	AV. WIDTH	MILES	24. MEAN ANNUAL RUNOFF			AG.-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.		
	June 1949			Detailed Range	13	2.88	11.00	21.31		
	July 24, 1953	4.0			16	2.78	10.10	19.57		
	June 10, 1958	4.9	8.9				9.12	17.67		
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AG.-FT.				
			a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE			
	July 24, 1953									
	June 10, 1958	17.0	15.84	27.58	79.20	15.84	79.20			
	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			
July 24, 1953	0.90	0.225	0.441	0.90	0.225	0.441				
June 10, 1958	0.98	0.200	0.392	1.88	0.211	0.414				
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			
July 24, 1953	75.6 (16)	645	682	2.05	8.18	14,991	28,759			
June 10, 1958				1.92	17.09					

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION <sup>3</sup>												
				115-8.5	8.5-8	8-6	6-4	4-2	2-0				
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
Sed. accumula- tion between 1953 & 1958	There is no contour map for 1949 survey.												
				12.30	5.89	17.22	34.14	16.20	14.25				

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
91.5	0	0	104.0	4.508	23.518			
92.0	.063	0.011						
94.0	.338	0.376						
95.5	.589	1.062						
96.0	.965	1.447						
98.0	2.007	4.356						
100.0	2.782	9.124						
102.0	3.569	15.459						

47. REMARKS AND REFERENCES 1/Reservoir consists of two arms, both 0.12 miles in length.

1953 Survey was made by Soil Conservation Service and Geological Survey personnel.  
1958 Survey conducted by Agricultural Research Service, Lincoln, Nebraska

USDA, Agricultural Research Service  
Sedimentation Studies, Room 505,

48. AGENCY SUPPLYING DATA 134 So. 12th St., Lincoln, Nebraska DATE Jan. 10, 1962