

RESERVOIR SEDIMENTATION  
DATA SUMMARY

Broderson Farm Pond

36-5

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER <u>Vernon Broderson</u>			2. RIVER <u>Trib. Clay Creek</u>			3. STATE <u>South Dakota</u>						
	4. SEC. <u>SE 1/4 T10 94N</u> RANGE <u>R54W</u>			5. NEAREST TOWN <u>Volin</u>			6. COUNTY <u>Yankton</u>						
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV.			9. SPILLWAY CREST ELEV.						
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					July 1951							
	b. POWER												
	c. WATER SUPPLY												
	d. IRRIGATION					16. DATE NORMAL OPER. BEGAN							
	e. CONSERVATION			4.80	25.19	25.19	July 1951						
	f. INACTIVE												
17. LENGTH OF RESERVOIR			MILES			AV. WIDTH OF RESERVOIR			MILES				
WATERSHED	18. TOTAL DRAINAGE AREA		2.46	SG. MI.	22. MEAN ANNUAL PRECIPITATION		25.24 (54) INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA		2.45	SQ. MI.	23. MEAN ANNUAL RUNOFF		1.2 INCHES						
	20. LENGTH		MILES		AV. WIDTH		MILES		24. MEAN ANNUAL RUNOFF	AG.-FT.			
	21. MAX. ELEV.		MIN. ELEV.		25. CLIMATIC CLASSIFICATION								
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.					
	July 1951	-	-	-	-	4.80	25.19	10					
	July 1953	2	2	Detailed Recon.	7 ranges	4.80	20.10	8					
	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			
	July 1953	26.78 1/		-		-		-		-			
	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 1953	5.09			2.55		1.04		5.09		2.55		1.04
	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 1953	55*		1246		1246		10.12		20.21		-	-	

\*Assumed

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/ Vermillion, South Dakota, rainfall record.  
2/ Mean annual runoff - Colby & Oltman.

48. AGENCY SUPPLYING DATA                      SCS, Lincoln, Nebraska                      49. DATE 1954