

RESERVOIR SEDIMENT  
DATA SUMMARY

SCS-34 Rev. 6-66

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Richmond Lake

NAME OF RESERVOIR

36-22

DATA SHEET NO.

DAM	1. OWNERS <u>S.D. Dept. Game, Fish, Pks.</u>		2. STREAM <u>Foot Creek</u>		3. STATE <u>South Dakota</u>	
	4. SEC. <u>19</u> TWP. <u>12 1/4 N</u> RANGE <u>6 1/4 W</u>		5. NEAREST P.O. <u>Aberdeen, S.D.</u>		6. COUNTY <u>Brown</u>	
	7. LAT. " " " " " " " "		8. TOP OF DAM ELEVATION <u>102 *</u>		9. SPILLWAY CREST ELEV. <u>95.3 *</u>	
RESERVOIR	10. STORAGE ALLOCATION		11. ELEVATION TOP OF POOL		12. ORIGINAL SURFACE AREA, ACRES	
	a. FLOOD CONTROL					
	b. MULTIPLE USE					
	c. POWER					
	d. WATER SUPPLY					
	e. IRRIGATION					
	f. CONSERVATION		<u>95.3</u>		<u>839.5</u>	
	g. INACTIVE				<u>9880.9</u>	
WATERSHED	13. ORIGINAL CAPACITY, ACRE-FEET		14. GROSS STORAGE, ACRE-FEET		15. DATE STORAGE BEGAN	
					<u>Jan. 1937</u>	
	16. DATE NORMAL OPER. BEGAN					
					<u>Jan. 1937</u>	
	17. LENGTH OF RESERVOIR		<u>7.3</u> MILES		AV. WIDTH OF RESERVOIR	
SURVEY DATA	18. TOTAL DRAINAGE AREA		<u>82</u> SQ. MI.		22. MEAN ANNUAL PRECIPITATION	
	19. NET SEDIMENT CONTRIBUTING AREA		<u>73.5</u> SQ. MI.		<u>18</u> INCHES	
	20. LENGTH		<u>28</u> MILES		24. MEAN ANNUAL RUNOFF	
	21. MAX. ELEV.		<u>1800</u>		<u>1312</u> AC.-FT.	
	25. ANNUAL TEMP: MEAN		<u>43.7</u>		RANGE <u>46° to 115°</u>	
SURVEY DATA	26. DATE OF SURVEY		27. PERIOD YEARS		28. ACCL. YEARS	
	<u>Sept. 22, 1969</u>		<u>32.75</u>		<u>32.75</u>	
	29. TYPE OF SURVEY		<u>Range</u>		30. NO. OF RANGES OR CONTOUR INT.	
					<u>28</u>	
	31. SURFACE AREA, ACRES		<u>839.3</u>		32. CAPACITY, ACRE-FEET	
					<u>8971.08</u>	
	33. C/I. RATIO, AC.-FT. PER AC.-FT.		<u>7.53</u>		<u>6.84</u>	
	26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET	
	<u>Sept. 1969</u>		<u>16.71 - 19.16</u>		a. MEAN ANNUAL b. MAX. ANNUAL c. PERIOD TOTAL	
					a. MEAN ANNUAL b. TOTAL TO DATE	
26. DATE OF SURVEY		37. PERIOD CAPACITY LOSS, ACRE-FEET		38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET		
<u>Sept. 1969</u>		<u>909.82</u>		a. TOTAL TO DATE b. AV. ANNUAL c. PER SQ. MI. YEAR		
		<u>27.78</u>		a. TOTAL TO DATE b. AV. ANNUAL c. PER SQ. MI. YEAR		
		<u>0.378</u>		<u>909.82</u> <u>27.78</u> <u>0.378</u>		
26. DATE OF SURVEY		39. AV. DRY WGT., LBS. PER CU. FT.		40. SED. DEP., TONS PER SQ. MI.-YR.		
<u>Sept. 1969</u>		<u>51.8</u>		a. PERIOD b. TOTAL TO DATE		
		<u>426</u>		a. AV. ANN. b. TOT. TO DATE		
		<u>426</u>		a. PERIOD b. TOT. TO DATE		
		<u>.281</u>		<u>9.2</u>		

\* assumed elevations

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														
9-22-69	11.04	13.76	6.45	6.82	6.99	6.06	7.21	8.61	4.4	1.81					
West arm of Lake where Foot Creek enters is 2.7 miles long and contains 23.82% of the sediment.															

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

- Land Use 82% grassland-hayland  
18% cultivated
- Geology - Late Wisconsin Till overlying Pierre Shale. Abundant potholes and sloughs.

48. AGENCY MAKING SURVEY Soil Conservation Service, Huron, South Dakota  
 49. AGENCY SUPPLYING DATA 50. DATE 9-20-70