

RESERVOIR SEDIMENT

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

DATA SUMMARY

Sturgis Watershed No. 2

NAME OF RESERVOIR

38-7

DATA SHEET NO.

SCS-34 Rev. 6-66

DAM	1. OWNER <b>USDA Forest Service</b>			2. STREAM <b>Alkali Creek</b>			3. STATE <b>So. Dak.</b>					
	4. SEC. <b>4</b> TWP. <b>4N</b> RANGE <b>5E</b>			5. NEAREST P.O. <b>Sturgis 6 Mi. S</b>			6. COUNTY <b>Meade</b>					
	7. LAT. <b>40° 20' 10"</b> LONG. <b>103° 31' 50"</b>			8. TOP OF DAM ELEVATION <b>4710</b>			9. SPILLWAY CREST ELEV.					
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										12/1/63	
	b. MULTIPLE USE		<u>1/</u>		N/A		N/A		N/A			
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION											
	g. INACTIVE										12/1/63	
17. LENGTH OF RESERVOIR					MILES		AV. WIDTH OF RESERVOIR		MILES			
WATERSHED	18. TOTAL DRAINAGE AREA <b>0.139</b>				SQ. MI.		22. MEAN ANNUAL PRECIPITATION <b>26.41</b>		2/ INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA <b>0.139</b>				SQ. MI.		23. MEAN ANNUAL RUNOFF <b>7.48</b>		INCHES			
	20. LENGTH <b>0.675</b>		MILES		AV. WIDTH <b>.205</b>		MILES		24. MEAN ANNUAL RUNOFF <b>55.44</b>		AC.-FT.	
	21. MAX. ELEV. <b>5283</b>			MIN. ELEV. <b>4715</b>			25. ANNUAL TEMP: MEAN <b>43</b>		RANGE <b>130</b>			
	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.	
10/1/65		-	-	See Remark <u>3/</u>								
10/1/66		1.00	1.00									
10/1/67		1.00	2.00									
10/1/68		1.00	3.00									
10/1/69		1.00	4.00									
10/1/70		1.00	5.00									
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		
10/1/66		23.95		178.0	178.0	178.0		178.0		178.0		
10/1/67		31.85		235.8	235.8	235.8		100.8		201.6		
10/1/68		24.11		178.9	178.9	178.9		126.8		380.5		
10/1/69		20.59		153.1	153.1	153.1		133.4		533.6		
10/1/70		31.57		234.1	234.1	234.1		153.5		767.7		
26. DATE OF SURVEY		37. <u>4/</u> 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		
10/1/66		3.5x10 <sup>-6</sup>		3.5x10 <sup>-6</sup>	25.1x10 <sup>-6</sup>	3.5x10 <sup>-6</sup>		5.5x10 <sup>-6</sup>		25.2x10 <sup>-6</sup>		
10/1/67		155.6x10 <sup>-6</sup>		155.6x10 <sup>-6</sup>	1119.6x10 <sup>-6</sup>	159.1x10 <sup>-6</sup>		79.6x10 <sup>-6</sup>		572.7x10 <sup>-6</sup>		
10/1/68		2.7x10 <sup>-6</sup>		2.7x10 <sup>-6</sup>	19.7x10 <sup>-6</sup>	161.8x10 <sup>-6</sup>		53.9x10 <sup>-6</sup>		387.8x10 <sup>-6</sup>		
10/1/69		2.5x10 <sup>-6</sup>		2.5x10 <sup>-6</sup>	17.9x10 <sup>-6</sup>	164.3x10 <sup>-6</sup>		41.1x10 <sup>-6</sup>		295.7x10 <sup>-6</sup>		
10/1/70		602.6x10 <sup>-6</sup>		602.6x10 <sup>-6</sup>	4334.9x10 <sup>-6</sup>	766.9x10 <sup>-6</sup>		153.4x10 <sup>-6</sup>		1103.6x10 <sup>-6</sup>		
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		
10/1/66		92.2		.050	.050							
10/1/67				2.248	1.150							
10/1/68				.040	.779							
10/1/69				.036	.594							
10/1/70				8.705	2.216							
SURVEY DATA	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	
	10/1/66		23.95		178.0	178.0	178.0		178.0		178.0	
	10/1/67		31.85		235.8	235.8	235.8		100.8		201.6	
	10/1/68		24.11		178.9	178.9	178.9		126.8		380.5	

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														
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															
<p>1/ 10-14, a-g: Water yield research facility; inflow = outflow over weir.</p> <p>2/ 5 year average 1966 - 1970.</p> <p>3/ Volumetric streamflow facility.</p> <p>4/ Period sediment deposit, acre-feet, bedload; no permanent capacity loss since material cleaned from weir pond periodically.</p>															
N/A Not applicable															
48. AGENCY MAKING SURVEY															
49. AGENCY SUPPLYING DATA Forest Service															
50. DATE July 10, 1972															