

RESERVOIR SEDIMENT

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

DATA SUMMARY

Sturgis Watershed No. 1

SCS-34 Rev. 6-66

NAME OF RESERVOIR

38 - 6

DATA SHEET NO.

DAM	1. OWNER USDA Forest Service		2. STREAM Alkali Creek		3. STATE So. Dak.			
	4. SEC. 4 TWP. 4N RANGE 5E		5. NEAREST P.O. Sturgis 6S		6. COUNTY Meade			
	7. LAT. 44° 20' 30" LONG. 103° 31' 30"		8. TOP OF DAM ELEVATION 4580		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					12/1/1962		
	b. MULTIPLE USE	1/	N/A	N/A	N/A			
	c. POWER							
	d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION					12/1/1962		
	f. CONSERVATION							
g. INACTIVE								
WATERSHED	17. LENGTH OF RESERVOIR - MILES		AV. WIDTH OF RESERVOIR - MILES					
	18. TOTAL DRAINAGE AREA 0.339 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 27.04 2/ INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 0.339 SQ. MI.		23. MEAN ANNUAL RUNOFF 6.95 INCHES					
	20. LENGTH 0.884 MILES	AV. WIDTH 0.383 MILES	24. MEAN ANNUAL RUNOFF 125.64 AC.-FT.					
	21. MAX. ELEV. 528.3	MIN. ELEV. 4580	25. ANNUAL TEMP: MEAN 43 RANGE 130					
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.
	10/1/65	-	-	See Remark 3/				
	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	24.82	69.4	69.4	69.4	69.4	69.4	
	10/1/67	32.35	256.5	256.5	256.5	162.9	325.9	
	10/1/68	24.46	35.2	35.2	35.2	120.4	361.1	
	10/1/69	21.18	58.2	58.2	58.2	104.8	419.3	
	10/1/70	32.38	207.5	207.5	207.5	113.7	625.8	
	26. DATE OF SURVEY	37. 4/ 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	3.2 x 10 ⁻⁶	Same	9.5 x 10 ⁻⁶	3.2 x 10 ⁻⁶	3.2 x 10 ⁻⁶	9.5 x 10 ⁻⁶		
10/1/67	116.0 x 10 ⁻⁶	"	342.3 x 10 ⁻⁶	119.3 x 10 ⁻⁶	59.6 x 10 ⁻⁶	175.8 x 10 ⁻⁶		
10/1/68	7.5 x 10 ⁻⁶	"	22.0 x 10 ⁻⁶	126.7 x 10 ⁻⁶	42.2 x 10 ⁻⁶	124.4 x 10 ⁻⁶		
10/1/69	42.6 x 10 ⁻⁶	"	125.6 x 10 ⁻⁶	169.3 x 10 ⁻⁶	42.3 x 10 ⁻⁶	124.8 x 10 ⁻⁶		
10/1/70	82.9 x 10 ⁻⁶	"	244.6 x 10 ⁻⁶	252.3 x 10 ⁻⁶	50.4 x 10 ⁻⁶	148.7 x 10 ⁻⁶		
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		.019	.019					
10/1/67	92.2	.687	.353					
10/1/68		.044	.250					
10/1/69		.252	.251					
10/1/70		.495	.299					

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>															
<p>N/A Not applicable</p> <p>48. AGENCY MAKING SURVEY</p> <p>49. AGENCY SUPPLYING DATA Forest Service</p> <p>50. DATE July 10, 1972</p>															