

RESERVOIR SEDIMENT  
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Wild Rice WR-3

SCS-34 Rev. 6-66

NAME OF RESERVOIR

36-24

DATA SHEET NO.

DAM	1. OWNER		2. STREAM Wild Rice Creek		3. STATE South Dakota			
	4. SEC. 32 TWP. 128N. RANGE 56W.		5. NEAREST P.O. Britton		6. COUNTY Marshall			
	7. LAT. " " " " LONG. " " " "		8. TOP OF DAM ELEVATION 1,502.1		9. SPILLWAY CREST ELEV 1,496.61			
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	1,496.6	46.7	855.2	855.2	May 1961		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION							
	f. CONSERVATION	1,471.5	13.67	114.43	114.43	May 1961		
	g. INACTIVE							
WATERSHED	17. LENGTH OF RESERVOIR 0.91 MILES		AV. WIDTH OF RESERVOIR 0.08 MILES					
	18. TOTAL DRAINAGE AREA 17.0 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 18.33 INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 5.95 SQ. MI.		23. MEAN ANNUAL RUNOFF INCHES					
	20. LENGTH 6.0 MILES		AV. WIDTH 2.83 MILES		24. MEAN ANNUAL RUNOFF 98 AC.-FT.			
	21. MAX. ELEV. 2,070		MIN. ELEV. 1,444.0		25. ANNUAL TEMP: MEAN 43.50 RANGE 110 OF. to -45 OF.			
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. CH. RATIO, AC. FT PER AC.-FT.
	Sept. 1973	12.25	12.25	Range	4	46.7	843.64	8.61
	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	
	Sept. 1973	20.12						
	26. DATE OF SURVEY	37. 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	
	Sept. 1973	11.56	.94	.16	11.56	.94	.16	
	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
Sept. 1973	69.67	242.78	242.78	0.11	1.35			

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
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
1,442.0 <sup>2/</sup>	0	0	1,472.0	14.15	121.38	1,500.0	51.5	1,022.11
1,444.0	.88	.08	1,476.0	18.33	186.34	1,502.14 <sup>1/</sup>	54.89	1,133.82
1,448.0	.33	.90	1,480.0	24.77	272.54			
1,452.0	.95	3.46	1,484.0	29.87	381.82			
1,456.0	1.77	8.90	1,488.0	34.29	510.14			
1,460.0	3.23	18.90	1,492.0	39.26	657.24			
1,464.0	6.63	38.62	1,496.0	45.84	827.44			
1,468.0	10.3	72.48	1,496.6 <sup>3/</sup>	46.68	855.20			

47. REMARKS AND REFERENCES

1/ Emergency spillway  
2/ From "As Built" plans, original capacity  
3/ Crest of emergency spillway  
4/ Top of dam

Only the sediment pool was measured because cattle grazing activities have obscured any sediment deposition making it impossible to measure sediment in the flood pool. Geology: Entire watershed Late Wisconsin drift. Over half of area has poorly defined drainage with potholes, sloughs, and shallow lakes. Land use: (sediment contributing area) Range: 88.5%; cultivated: 7.1%; hayland: 4.3%

48. AGENCY MAKING SURVEY SCS, USDA, Watershed Planning Staff, Huron, SD  
49. AGENCY SUPPLYING DATA Soil Conservation Service  
50. DATE 8/16/74

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	4. SEC. 32 TWP. 128N. RANGE 56W.			5. NEAREST P.O. Britton			6. COUNTY Marshall					
	7. LAT 45° 50' 53" LONG 97° 34' 21"			8. TOP OF DAM ELEVATION 1,502.1			9. SPILLWAY CREST ELEV. 1,496.6					
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		1,496.6		46.7		740.77		855.2		5/61	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION										5/61	
	f. CONSERVATION		1,471.5		13.67		114.43		114.43			
	g. INACTIVE											
WATERSHED	17. LENGTH OF RESERVOIR 0.91 MILES				AV. WIDTH OF RESERVOIR 0.08 MILES							
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	21. MAX. ELEV. 2,070		MIN. ELEV. 1,444.0		25. ANNUAL TEMP.: MEAN 43.5° RANGE 110° F. to -45° F.							
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/H. RATIO, AC.-FT. PER AC.-FT.			
	5/61 9/73		-	-	-	-	46.7 46.7	855.20 843.64	8.73 8.61			
	26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET			36. WATER INFL. TO DATE, AC.-FT.				
	9/73		20.12		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						
	9/73		a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR				
	9/73		11.56	.94	.16	11.56	.94	.16				
	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			
	9/73		a. PERIOD	b. TOTAL TO DATE	a. AV. ANN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE				
	9/73		69.67	242.78	242.78	0.11	1.35					

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							
1,442.0 <sup>2/</sup>	-0-	-0-	1,472.0	14.15	121.38	1,500.0	51.5	1,022.11							
1,444.0	.88	.08	1,476.0	18.33	186.34	1,502.1 <sup>4/</sup>	54.89	1,133.82							
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1,452.0	.95	3.46	1,484.0	29.87	381.82										
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1,468.0	10.3	72.48	1,496.6 <sup>3/</sup>	46.68	855.20										
47. REMARKS AND REFERENCES															
<u>1/</u> Excludes pothole area and area of reservoir. <u>2/</u> Original capacity. <u>3/</u> Crest of emergency spillway. <u>4/</u> Top of dam. Land use (sediment contributing area ) 88.5% rangeland, 7.1% cultivated, 4.3% hayland. Geology-Wisconsin drift mantles entire watershed. Over half of area has poorly defined drainage with potholes, sloughs, and shallow lakes.															
48. AGENCY MAKING SURVEY Soil Conservation Service, Huron, S. Dak.															
49. AGENCY SUPPLYING DATA Soil Conservation Service 50. DATE 8/16/74															