

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Rush Creek No. 2
NAME OF RESERVOIR

SCS-34 Rev. 6-66

50-51
DATA SHEET NO.

DAM	1. OWNER Carl J. Caveny			2. STREAM Rush Creek			3. STATE Oklahoma									
	4. SEC. 15 TWP. 3N RANGE 7W			5. NEAREST P.O. Rush Springs			6. COUNTY Grady									
	7. LAT 97° 53' 50" LONG 94° 33' 40"			8. TOP OF DAM ELEVATION 1286.0			9. SPILLWAY CREST ELEV. 1281.4									
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		1281.4		60.07		454.95		655.99		8-20-59					
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION															
g. INACTIVE 1/		1271.0		30.24		201.04		201.04		8-20-59						
WATERSHED	17. LENGTH OF RESERVOIR .78 MILES				AV. WIDTH OF RESERVOIR .09 MILES											
	18. TOTAL DRAINAGE AREA 2.13 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 33.26 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 2.05 SQ. MI.				23. MEAN ANNUAL RUNOFF 2.5 INCHES											
	20. LENGTH 2.9 MILES		AV. WIDTH 0.73 MILES		24. MEAN ANNUAL RUNOFF 284 AC.-FT.											
	21. MAX. ELEV. 1440.0		MIN. ELEV. 1252.0		25. ANNUAL TEMP: MEAN 62 RANGE 11° - 109°											
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.	
	8-20-59		-		-		-		-		30.24 (60.07)		201.0 (656.0)		0.71 (2.31)	
	7-17-65		5.90		5.90		Range Contour (D)		23R		29.30 (60.07)		186.0 (639.6)		0.66 (2.25)	
	9-25-70		5.19		11.09		Range Contour (D)		23R		29.32 (60.08)		183.8 (635.4)		0.65 (2.24)	
	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			
	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			
	7-15-65		14.40 (16.39)		2.44 (2.78)		1.19 (1.36)		14.40 (16.39)		2.44 (2.78)		1.19 (1.36)			
9-25-70		2.84 (4.17)		0.55 (0.80)		0.27 (0.39)		17.24 (20.56)		1.55 (1.85)		0.76 (0.90)				
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				
7-15-65		77.75 (3)		2015 (2303)		2015 (2303)		1.2 (0.4)		7.2 (2.5)						
9-25-70		69 Sed P(4) 95 Det P(3)		406 (654)		1142 (1432)		0.8 (0.3)		8.6 (3.1)						

Weighted Avg. approx. 77 lbs./ft.³

26. DATE OF SURVEY 81.	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION										
	4-73	73-71	71-68	68-66	66-64	64-62	62-60	60-58	58-56	56-54	54-52
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
7-15-65	0	12	16	12	13	13	12	9	8	4	1
9-25-70	2	14	11	10	15	8	24	7	3	5	1

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. 1970 Capacity			ELEVATION-AREA-CAPACITY DATA					
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
81.4	60.1	635.43	63.0	10.0	29.72			
79.0	52.9	500.01	61.0	6.6	13.24			
77.0	45.2	402.09	59.0	3.0	3.93			
75.0	39.1	317.95	57.0	0.7	0.47			
73.0	33.0	246.03	55.0	0.0	0.00			
71.0	29.3	183.80						
69.0	24.0	130.53						
67.0	19.4	87.20						
65.0	14.7	53.79						

47. REMARKS AND REFERENCES

1/ Refers to sediment pool.

Land Use 14% cropland, 35% tame pasture, 43% pasture-range, 6% woodland
2% miscellaneous (1970)
14% cropland, 62% pasture-range, 22% woodland, 2% misc. (1965)

Geology Rush Springs Sandstone Formation, Permian Age

Land Resource Area-Central Rolling Red Prairie

() Figures enclosed in parentheses include sediment and flood pool

48. AGENCY MAKING SURVEY Oklahoma Watershed Planning Staff
S.C.S. U.S.D.A.

49. AGENCY SUPPLYING DATA

50. DATE December 18, 1970

RUSH CREEK SITE NO. 2

Original Survey (1959)

1965 Survey

Elevation	Area	Capacity	Elevation	Area	Capacity
81.4	60.07	655.99	81.4	60.07	639.60
79.0	52.15	531.53	79.0	52.15	515.14
77.0	46.24	432.72	77.0	46.24	416.33
75.0	41.54	344.54	75.0	41.54	328.15
73.0	35.58	267.12	73.0	34.54	250.73
71.0	30.24	201.04	71.0	29.30	186.64
68.0	22.37	122.42	68.0	21.51	110.67
66.0	18.23	81.62	66.0	16.93	71.98
64.0	12.88	50.51	64.0	12.10	42.88
62.0	9.49	28.11	62.0	8.22	22.59
60.0	5.63	13.08	60.0	4.89	9.56
58.0	2.80	4.77	58.0	2.16	2.66
56.0	0.99	1.13	56.0	0.37	0.37
54.0	0.21	0.02	54.0	0.05	0.00
52.0	0.01	0.00			

RESERVOIR SEDIMENT
DATA SUMMARY

Rush Creek Site No. 2

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50 - 51a

DATA SHEET NO.

DAM	1. OWNER Carl J. Caveny				2. STREAM Rush Creek		3. STATE Oklahoma							
	4. SEC. 15 TWP. 3N RANGE 7W			5. NEAREST P.O. Rush Springs, Okla.				6. COUNTY Grady						
	7. LAT. 34° 33' 40" LONG. 97° 53' 50"			8. TOP OF DAM ELEVATION 1286.0		9. SPILLWAY CREST ELEV. 1281.4								
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		1281.4		60.07		454.95		655.99		8-20-59			
	b. MULTIPLE USE										16. DATE NORMAL OPER. BEGAN			
	c. POWER										8-20-59			
	d. WATER SUPPLY													
	e. IRRIGATION													
	f. CONSERVATION													
	g. INACTIVE 1/		1271.0		30.24		201.04		201.04					
WATERSHED	17. LENGTH OF RESERVOIR				0.78 MILES		AV. WIDTH OF RESERVOIR				0.09 MILES			
	18. TOTAL DRAINAGE AREA				2.13 SQ. MI.		22. MEAN ANNUAL PRECIPITATION				33.26 INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA				2.05 SQ. MI.		23. MEAN ANNUAL RUNOFF				2.5 INCHES			
	20. LENGTH		2.9 MILES		AV. WIDTH		0.73 MILES		24. MEAN ANNUAL RUNOFF		284 AC.-FT.			
	21. MAX. ELEV.		1440.0		MIN. ELEV.		1252.0		25. ANNUAL TEMP: MEAN 62° F RANGE 11° - 109° 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/I. RATIO, AC.-FT. PER AC.-FT.		
	8-20-59		-	-	-		-	30.24 (60.07)		201.0 (656.0)		0.71 (2.31)		
	7-15-65		5.90	5.90	Range-Contour (D)		23 R, 2' CI	29.30 (60.07)		186.0 (639.6)		0.66 (2.25)		
	9-25-70		5.19	11.09	Range-Contour (D)		23 R, 2' CI	29.32 (60.08)		183.8 (635.4)		0.65 (2.24)		
	9-25-76		6.00	17.09	Range-Contour (D)		23 R, 2' CI	28.12 (59.89)		178.6 (626.8)		0.63 (2.20)		
	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	
	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						
7-15-65		14.40	2.44	1.19	14.40	2.44	1.19							
		(16.39)	(2.78)	(1.36)	(16.39)	(2.78)	(1.36)							
9-25-70		2.84	0.55	0.27	17.24	1.55	0.76							
		(4.17)	(0.80)	(0.39)	(20.56)	(1.85)	(0.90)							
9-25-76		5.20	0.87	0.42	22.40	1.31	0.64							
		(8.60)	(1.43)	(0.70)	(29.20)	(1.71)	(0.83)							
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
7-15-65		77.75 (3)		(2303)		(2303)		1.2 (.4)		7.2 (2.5)				
9-25-70		Sed.P 69 (4)		406 (654)		1142 (1432)		0.8		8.6				
		Det.P 95 (3)						(0.3)		(3.1)				
9-25-76		Sed.P 69 (6)		631 (1240)		962 (1363)								
		Det.P 97 (3)												

CREST 2.4 6.4 8.4 10.4 12.4 14.4 16.4 18.4 20.4 22.4 24.4

26. DATE OF SURVEY	43. to DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION to														
	2.4	6.4	8.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4	24.4	26.4			
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
7-15-65	0	12	16	12	13	13	12	9	7	4	1	1			
9-25-70	2	14	11	10	15	8	24	7	2	5	1	1			
9-25-76	0	0	1	23	17	9	7	13	7	5	16	2			
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/ Refers to sediment pool.</p> <p>Land Use 1965: 14% cropland, 62% pasture-rangeland, 22% woodland, 2% misc.</p> <p>Land Use 1970: 14% cropland, 35% pasture, 43% rangeland, 6% woodland, 2% misc.</p> <p>Land Use 1976: 20% cropland, 45% pasture, 24% rangeland, 6% woodland, 5% misc.</p> <p>Geology: Rush Springs Sandstone, Permian Age.</p> <p>Land Resource Area: Central Rolling Red Prairies.</p> <p>Figures enclosed in parentheses () include sediment and flood pools.</p> <p>* See attached sheet</p>															
48. AGENCY MAKING SURVEY				Oklahoma Watershed Planning Staff				50. DATE							
49. AGENCY SUPPLYING DATA				Soil Conservation Service, USDA				April 25, 1977							

RUSH CREEK SITE NO. 2

Original Survey 1959

Elevation	Area	Capacity
1281.4	60.07	655.99
1279.0	52.15	531.53
1277.0	46.24	432.72
1275.0	41.54	344.54
1273.0	35.58	267.12
1271.0	30.24	201.04
1268.0	22.37	122.42
1266.0	18.23	81.62
1264.0	12.88	50.51
1262.0	9.49	28.11
1260.0	5.63	13.08
1258.0	2.80	4.77
1256.0	0.99	1.13
1254.0	0.21	0.02
1252.0	0.01	0.00

1965 Capacity

Elevation	Area	Capacity
1281.4	60.07	639.60
1279.0	52.15	515.14
1277.0	46.24	416.33
1275.0	41.54	328.15
1273.0	34.54	250.73
1271.0	29.30	186.64
1268.0	21.51	110.67
1266.0	16.93	71.98
1264.0	12.10	42.88
1262.0	8.22	22.59
1260.0	4.89	9.56
1258.0	2.16	2.66
1256.0	0.37	0.37
1254.0	0.05	0.00

1970 Capacity

Elevation	Area	Capacity
1281.4	60.1	635.43
1279.0	52.9	500.01
1277.0	45.2	402.09
1275.0	39.1	317.95
1273.0	33.0	246.03
1271.0	29.3	183.80
1269.0	24.0	130.53
1267.0	19.4	87.20
1265.0	14.7	53.79
1263.0	10.0	29.27
1261.0	6.6	13.24
1259.0	3.0	3.93
1257.0	0.7	0.47
1255.0	0.0	0.00

1976 Capacity

Elevation	Area	Capacity
1281.4	59.9	626.77
1279.0	52.7	491.67
1277.0	45.4	393.59
1275.0	38.4	309.90
1273.0	33.2	238.34
1271.0	28.1	178.60
1269.0	23.1	126.38
1267.0	18.4	84.92
1265.0	14.0	52.56
1263.0	9.6	29.04
1261.0	6.5	12.99
1259.0	2.9	3.87
1257.0	0.7	0.49
1255.0	0.0	0.00