

**RESERVOIR SEDIMENT
DATA SUMMARY**
SCS-34 Rev. 6-62

**Flood Retarding Structure
No. 2, Rush Creek Watershed**
NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50-47
DATA SHEET NO.

DAM	1. OWNER Caveny, Carl J.			2. STREAM Rush Creek			3. STATE Oklahoma									
	4. SEC. 15 TWP. 3N RANGE 7W			5. NEAREST TOWN Rush Springs			6. COUNTY Grady									
	7. STREAM BED ELEVATION 52.0*			8. TOP OF DAM ELEVATION 86.0*			9. SPILLWAY CREST ELEV. 81.4*									
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. MULTIPLE USE										8-20-59					
	b. FLOOD CONTROL		81.4*		60.07		454.95		655.99							
	c. POWER															
	d. WATER SUPPLY															
	e. IRRIGATION										16. DATE NORMAL OPER. BEGAN					
	f. CONSERVATION															
	g. SEDIMENT		71.0*		30.24		201.04		201.04		8-20-59					
h. INACTIVE																
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 3.0 INCHES											
	20. LENGTH 2.9 MILES		AV. WIDTH 0.73 MILES		24. MEAN ANNUAL RUNOFF 340 AC.-FT.											
	21. MAX. ELEV. 1440		MIN. ELEV. 1260		25. CLIMATIC CLASSIFICATION Humid											
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/W RATIO AC.-FT. PER SQ. MI.	
	8-20-59		-		-		-		-		30.24		201.04		94.38	
	7-17-65		5.90		5.90		Range Contour (D)		23 R CI-2'		29.30		186.64		87.62	
											(60.07)		(655.99)		(307.98)	
											(60.07)		(639.60)		(300.28)	
	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 SEDIMENT DEPOSITS 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)				
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. AN.		b. TOT. TO DATE		a. PERIOD		b. TOT. TO DATE				
7-15-65		77.75(3)		2015 (2303)		2015 (2303)		1.21 (0.42)		7.16 (2.50)						

*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	81.4-73	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	12.0	16.1	12.8	12.8	12.8	12.1	8.5	8.1	4.4	1.0	

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. Original Capacity								
ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
81.4	60.07	655.99	62.0	9.49	28.11	77.0	46.24	416.33
79.0	52.15	531.53	60.0	5.63	13.08	75.0	41.54	328.15
77.0	46.24	432.72	58.0	2.80	4.77	73.0	34.54	250.73
75.0	41.54	344.54	56.0	0.99	1.13	71.0	29.30	186.64
73.0	35.58	267.12	54.0	0.21	0.02	68.0	21.51	110.67
71.0	30.24	201.04	52.0	0.01	0	66.0	16.93	71.98
68.0	22.37	122.42	1965 Capacity			64.0	12.10	42.88
66.0	18.23	81.62	81.4	60.07	639.60	62.0	8.22	22.59
64.0	12.88	50.51	79.0	52.15	515.14	60.0	4.89	9.56

47. REMARKS AND REFERENCES

Topography - Rolling Dominant Slope - 7% : 58.0 2.16 2.66

Geology - Rush Springs Sandstone : 56.0 0.37 0.37

Land Use - Cultivated 14%, Pasture (formerly cultivated) 64% : 54.0 0.05 0.00

Native brush pasture 22%

() Includes both sediment and flood pool

48. AGENCY MAKING SURVEY Soil Conservation Service

49. AGENCY SUPPLYING DATA Stillwater, Oklahoma

50. DATE September 17, 1965

**RESERVOIR SEDIMENT
DATA SUMMARY**

SCS-34 Rev. 6-66

Barnitz #14

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50- 47a

DATA SHEET NO.

DAM	1. OWNER Granny Sullivan			2. STREAM Barnitz			3. STATE Oklahoma					
	4. SEC 28-29 TWP 16N RANGE 17W			5. NEAREST P. O. Clinton			6. COUNTY Dewey					
	7. LAT. " " " " " " " " " " " "			8. TOP OF DAM ELEVATION 1835.7			9. SPILLWAY CREST ELEV. 1831.2					
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		1831.2		136.4		1090.9		1723.2		11-17-58	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION										11-17-58	
	f. CONSERVATION											
g. INACTIVE		1820.3		64.9		632.30		632.30				
WATERSHED	17. LENGTH OF RESERVOIR 1.25 MILES				AV. WIDTH OF RESERVOIR 0.09 MILES							
	18. TOTAL DRAINAGE AREA 4.22 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 26.7 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 4.11 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.75 INCHES							
	20. LENGTH 2.2 MILES		AV. WIDTH 1.96 MILES		24. MEAN ANNUAL RUNOFF 403 AC.-FT.							
	21. MAX. ELEV. Est. 1904.0		MIN. ELEV. 1792.0		25. ANNUAL TEMP.: MEAN RANGE Subhumid							
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.		
	11-17-58				Range		4' C.I.	64.9	632.3	4.28		
	9-24-63		4.85	4.85	Contour (D)			(136.4)	(1723.2)	4.08		
	8-8-68		4.87	9.72	Range		4' C.I.	64.9	555.1	4.05		
					Contour (D)			(136.4)	(1645.9)			
					Range		21 (R)	65.3	546.4			
					Contour (D)		2' C.I.	(136.6)	(1633.9)			
	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					
9-24-63		77.2	15.9	3.87	77.2	15.9	3.87					
		(77.3)	(15.9)	(3.87)	(77.3)	(15.9)	(3.87)					
8-8-68		8.7	1.8	.44	85.9	8.8	2.1					
		(12.0)	(2.5)	(.61)	(89.3)	(9.2)	(2.2)					
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					
9-24-63		70 Sed P(3)	5900	5900	2.51	12.21						
		86 Det P(3)	(5900)	(5900)	(.92)	(4.49)						
8-8-68		58 Sed P(3)	555.8	2652.8	1.39	13.59						
		87 Det P(2)	(877.9)	(2842.3)	(.53)	(5.18)						

NOTE: Figures in parenthesis represent sediment and flood control pools.

we lighted Av. 70 lbs

corrected Av. 70 lbs

26. DATE OF SURVEY 183	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	-28	28-24	24-20	20.3-16	16-12	12-08	08-04	04-00	00-96	98-96	96-92				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
1963	0	0	0	4.4	14.8	14.4	17.3	22.5	10.3	9.6	6.7				
1968	3.0	0.8	0	3.7	10.2	12.9	19.7	22.0	13.1	8.7	5.9				
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							
See attached sheet															
47. REMARKS AND REFERENCES															
<p>Geology - 33% Rush Springs, 67% Cloud Chief FM - Permian Age Land Resource Area - Central Rolling Red Plains 1968 Land Use - 26% Native Pasture 71% Cult. 3% Misc.</p>															
48. AGENCY MAKING SURVEY										Oklahoma Watershed Planning Staff #2					
49. AGENCY SUPPLYING DATA										S.C.S. U.S.D.A.					
										50. DATE October 1, 1968					

ELEVATION-AREA-CAPACITY DATA

Elevation	Area	Capacity	Elevation	Area	Capacity	Elevation	Area	Capacity
Original Survey			1963 Survey			1968 Survey		
1831.2	136.6	1723.2	1831.2	136.6	1645.9	1831.2	136.6	1633.9
28.0	112.9	1324.0	28.0	111.9	1246.6	1830.0	126.3	1476.2
24.0	89.8	918.5	24.0	89.8	841.2	1828.0	112.7	1237.4
<u>20.3</u>	<u>64.9</u>	<u>632.3</u>	<u>20.3</u>	<u>64.9</u>	<u>555.1</u>	1826.0	100.8	1024.0
16.0	48.0	389.5	16.0	<u>46.4</u>	315.8	1824.0	89.8	833.5
12.0	33.0	227.4	12.0	28.9	165.2	1822.0	76.8	667.0
08.0	18.0	125.4	08.0	16.6	74.3	<u>1820.3</u>	<u>65.3</u>	<u>546.4</u>
04.0	12.0	65.3	04.0	6.8	27.7	1818.0	54.8	408.4
00.0	7.6	26.2	00.0	4.1	6.0	1816.0	46.8	306.9
1798.0	5.5	13.1	1798.0	1.0	1.0	1814.0	38.0	222.3
96.0	2.5	5.2				1812.0	30.5	153.9
92.0	0.1	0.1				1810.0	22.0	101.7
						1808.0	16.4	63.4
						1806.0	9.7	37.6
						1804.0	7.1	20.9
						1802.0	4.9	8.9
						1800.0	2.7	1.4
						1798.4	0.0	0.0

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS 34 Rev. 6-66

Barnitz No. 14

NAME OF RESERVOIR

50-47b

DATA SHEET NO.

DAM	1. OWNER Mrs. G. Sullivan		2. STREAM Barnitz		3. STATE Oklahoma			
	4. SEC. 28-29 TWP. 16N RANGE 17W		5. NEAREST P.O. Clinton		6. COUNTY Dewey			
	7. LAT. 35° 47' 30" LONG. 99° 05' 30"		8. TOP OF DAM ELEVATION 1835.3		9. SPILLWAY CREST ELEV. 1831.2			
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	1831.2	136.4	1090.9	1723.2	11/17/58		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION							
	f. CONSERVATION							
g. INACTIVE 1/	1820.3	64.9	632.3	632.3	11/17/58			
WATERSHED	17. LENGTH OF RESERVOIR 1.25 MILES		AV. WIDTH OF RESERVOIR 0.17 MILES					
	18. TOTAL DRAINAGE AREA 4.22 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 26.7 INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 4.01 SQ. MI.		23. MEAN ANNUAL RUNOFF 1.75 INCHES					
	20. LENGTH 2.2 MILES		AV. WIDTH 1.92 MILES		24. MEAN ANNUAL RUNOFF 393.8 AC.-FT.			
	21. MAX. ELEV. 1970		MIN. ELEV. 1792		25. ANNUAL TEMP: MEAN 60° RANGE -14° to 115°			
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.
	11/17/58	-	-	Range Contour (D)	4' C.I.	64.9 (136.4)	632.3 (1723.2)	4.34
	9/24/63	4.85	4.85	"	4' C.I.	64.9 (136.4)	555.1 (1645.9)	4.18
	8/ 8/68	4.87	9.72	"	21 (R)	65.3 (136.6)	546.4 (1633.9)	4.15
	6/ 5/73	4.82	14.54	"	2' C.I.	75.3 (135.5)	529.8 (1606.7)	4.08
	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	
		9/24/63	77.2 (77.3)	15.9 (15.9)	3.9 (3.9)	77.2 (77.3)	15.9 (15.9)	3.97 (3.98)
		8/ 8/68	8.7 (12.0)	1.8 (2.5)	0.4 (0.6)	85.9 (89.3)	8.8 (9.2)	2.2 (2.29)
	6/ 5/73	16.6 (27.2)	3.4 (5.6)	0.8 (1.4)	102.5 (116.5)	7.0 (8.0)	1.8 (2.00)	
	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
	8/24/63	70 Sed. P(3) 86 Det. P(3)	6052 (6070)	6052 (6070)	2.5 (.9)	12.2 (4.5)		
8/ 8/68	58 Sed. P(3) 87 Det. P(2)	563 (883)	2779 (2950)	1.4 (0.5)	13.6 (5.2)			
6/ 5/73	74 Sed. P(3) 90 Det. P(3)	2933 (4020)	2901 (3293)	1.1 (0.5)	16.2 (6.8)			

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION													
	1831-28	28-24	24-20.3	20.3-16	16-12	12-08	08-04	04-00	00-98	98-96	96-92			
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
8/24/63	0	0	0	4.4	14.8	14.4	17.3	22.5	10.3	9.6	6.7			
8/8/68	3.0	0.8	0	3.7	10.2	12.9	19.7	22.0	13.1	8.7	5.9			
6/5/73	3.4	6.7	1.8	4.1	13.0	13.6	17.9	17.8	10.4	6.8	4.5			
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						
See Attached Sheet														
47. REMARKS AND REFERENCES														
<p>1/ Sediment Pool</p> <p>Figures in parenthesis represent sediment and flood control pools</p> <p>Land Use 1968: Cropland 71%, native pasture 26%, miscellaneous 3%</p> <p>Land Use 1973: Cropland 55%, native pasture 43%, miscellaneous 2%</p> <p>Geology: 33% Rush Springs, 67% Cloud Chief Formation, Permian Age</p> <p>Land Resource Area: Central Rolling Red Plains</p>														
48. AGENCY MAKING SURVEY			Oklahoma Watershed & River Basin Planning Staff											
49. AGENCY SUPPLYING DATA			SCS U.S.D.A.											
												50. DATE 1/4/74		