

U.S. DEPARTMENT OF AGRICULTURE
**RESERVOIR SEDIMENTATION
DATA SUMMARY**

Sandstone Creek No. 3
NAME OF RESERVOIR

SOIL CONSERVATION SERVICE
50-28a
DATA SHEET NO.

DAM	1. OWNER I. C. Thurmon				2. RIVER Trib. of Sandstone Creek			3. STATE Oklahoma			
	4. SEC. 15 TWP. 12N RANGE 22W				5. NEAREST TOWN Elk City			6. COUNTY Roger Mills			
	7. STREAM BED ELEV. 62.0				8. TOP OF DAM ELEV. 96.0			9. SPILLWAY CREST ELEV. 82.0			
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. SURFACE AREA ACRES	13. STORAGE ACRE- FEET	14. ACCUMULATED ACRE- FEET	15. DATE STORAGE BEGAN					
	a. FLOOD CONTROL	92.0	(12.95)		(157.68)	4-9-51					
	b. POWER										
	c. WATER SUPPLY										
	d. IRRIGATION					16. DATE NORMAL OPER. BEGAN					
	e. CONSERVATION										
	f. INACTIVE	82.0	(6.26)		66.13	4-9-51					
17. LENGTH OF RESERVOIR 0.41 MILES				AV. WIDTH OF RESERVOIR 0.03 MILES							
WATERSHED	18. TOTAL DRAINAGE AREA 0.62 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 25.00 INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA 0.61 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.10 INCHES						
	20. LENGTH 1.3 MILES		AV. WIDTH 0.48 MILES		24. MEAN ANNUAL RUNOFF 58.60 AC.-FT.						
	21. MAX. ELEV.				MIN. ELEV. 62.0			25. CLIMATIC CLASSIFICATION Sub-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.			
	4-9-51	-	-	-	10	6.26	1/ 66.13	1/ 106.66			
	10-1-56	5.47	5.47	Range & Topog.		6.26	1/ (157.68)	1/ (254.32)			
	10-1-61	5.00	10.47			(12.95)	56.85	91.69			
						6.26	(148.40)	(239.35)			
						(12.95)	48.43	78.11			
						(12.95)	(139.98)	(225.77)			
	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				
10-1-56	9.28 (9.28)	1.70 (1.70)	2.79 (2.79)		9.28 (9.28)	1.70 (1.70)	2.79 (2.79)				
10-1-61	8.42 (8.42)	1.68 (1.68)	2.75 (2.75)		17.70 (17.70)	1.69 (1.69)	2.77 (2.77)				
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			
10-1-56	70.20	4266 (4266)	4266 (4266)		2.57 (1.08)	14.03 (5.89)					
10-1-61	77.87	4664 (4664)	4700 (4700)		2.56 (1.07)	26.77 (11.23)					

() Includes both sed. and flood pool.

1/ Original capacity.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	92-90	90-86	86-82	82-78	78-74	74-70	70-66	66-62	70-69			
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
1956	0	0	0	11	10	14	37	28				
Oct. 1, 1961	0	0	0	7.9	18.1	26.7			47.3			

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
92.0	12.95	157.68	66.0	1.39	2.62			
90.0	11.06	133.57	62.0	0.14	0			
86.0	8.30	95.08						
82.0	6.26	66.13						
78.0	5.34	42.48						
74.0	3.90	24.11						
70.0	2.80	10.81						

47. REMARKS AND REFERENCES

Land use: Native pasture 97%, miscellaneous 3%.

Geology: Doxey member of the Quartermaster formation - 100%.

Soil Conservation Service
Stillwater, Okla.

48. AGENCY SUPPLYING DATA

49. DATE March 26, 1961

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26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
					90-92	86-90	82-86	78-82	74-78	70-74	66-70	62-66
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
10-1-61 7-12-66					0	0	0	7.9	18.1	26.7	47.3	-
					0	0	9	14	17	27	25	8

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 <u>2/</u>								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES
1/ Sed. Pool was dry when samples were taken.
2/ Elevation - Area - Capacity Data on separate sheet.
 Land Use: 98% Native Pasture, 2% Miscellaneous
 Geology: 100% Doxey Member Quartermaster Formation, Permian Age.

48. AGENCY MAKING SURVEY
 49. AGENCY SUPPLYING DATA SCS - Stillwater, Oklahoma 50. DATE _____

Continuation

U. S. Department of Agriculture

Soil Conservation Service

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Data Sheet No.

Sandstone Creek No. 3

46. ELEVATION - AREA - CAPACITY DATA

1956 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
92.0	12.95	148.40
90.0	11.06	124.29
86.0	8.30	85.80
82.0	6.26	56.85
78.0	5.07	34.29
74.0	3.74	16.77
70.0	2.52	4.76
66.0	0.26	0

1961 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
92.0	12.95	139.98
90.0	11.06	115.87
86.0	8.30	77.38
82.0	6.26	48.43
78.0	4.75	26.54
74.0	3.31	10.54
70.0	1.68	0.78
69.0	0.16	0

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ELEVATION - AREA - CAPACITY DATA

Sandstone Site Number 3

Data Sheet No. 50-

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	:	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
<u>Original Capacity</u>				<u>1961 Capacity</u>		
92.0	12.95	157.68		92.0	12.95	139.98
90.0	11.06	133.57		90.0	11.06	115.87
86.0	8.30	95.08		86.0	8.30	77.38
82.0	6.26	66.13		82.0	6.26	48.43
78.0	5.34	42.48		78.0	4.75	26.54
74.0	3.90	24.11		74.0	3.31	10.54
70.0	2.80	10.81		70.0	1.68	0.78
66.0	1.39	2.62		69.0	0.16	0
62.0	0.14	0				
<u>1956 Capacity</u>				<u>1966 Capacity</u>		
92.0	12.95	148.40		92.0	12.95	125.60
90.0	11.06	124.29		90.0	11.06	101.60
86.0	8.30	85.80		86.0	8.30	63.02
82.0	6.26	56.85		84.0	6.15	48.62
78.0	5.07	34.29		82.0	5.61	36.86
74.0	3.74	16.77		80.0	4.74	26.51
70.0	2.52	4.76		78.0	4.09	17.70
66.0	0.26	0		76.0	3.26	10.37
				74.0	2.42	4.71
				72.0	1.33	1.01
				70.0	0.02	0.01
				68.0	0	0

RESERVOIR SEDIMENT

DATA SUMMARY

SCS-34 Rev. 6-66

Sandstone Site No. 3

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50-28c

DATA SHEET NO.

DAM	1. OWNER Walter Merrick			2. STREAM Trib. of Sandstone			3. STATE Oklahoma								
	4. SEC. 15 TWP. 12N RANGE 22W			5. NEAREST P. O. Elk City			6. COUNTY Roger Mills								
	7. LAT 35° 31' 08" LONG 99° 31' 10"			8. TOP OF DAM ELEVATION 1924.4			9. SPILLWAY CREST ELEV. 1920.4								
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		1920.4		12.95		91.55		157.68		4-9-51				
	b. MULTIPLE USE														
	c. POWER														
	d. WATER SUPPLY														
	e. IRRIGATION										16. DATE NORMAL OPER. BEGAN				
	f. CONSERVATION														
	g. INACTIVE 1/		1910.4		6.26		66.13		66.13		4-9-51				
17. LENGTH OF RESERVOIR 0.41 MILES			AV. WIDTH OF RESERVOIR 0.05 MILES												
WATERSHED	18. TOTAL DRAINAGE AREA 0.62 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 25.00 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 0.60 SQ. MI.			23. MEAN ANNUAL RUNOFF 1.10 INCHES											
	20. LENGTH 1.3 MILES		AV. WIDTH 0.48 MILES		24. MEAN ANNUAL RUNOFF 36 AC.-FT.										
	21. MAX. ELEV. 2050.0		MIN. ELEV. 1891.0		25. ANNUAL TEMP.: MEAN 60.2 RANGE -11° to 113°										
	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.
4-9-51		-		-		Detail Topo		10 Ranges		6.26(12.95)		66.1(157.7)		1.84(4.34)	
10-1-56		5.47		5.47		Detail Topo		10 Ranges		6.26(12.95)		56.9(148.4)		1.58(4.08)	
10-1-61		5.00		10.47		Detail Topo		10 Ranges		6.26(12.95)		48.5(140.0)		1.35(3.85)	
7-12-66		4.80		15.27		Range									
8-27-71		5.13		20.40		Contour (D)		10R 2'C.I.		5.61(12.95)		36.9(125.6)		1.03(3.45)	
						Range		10R 2'C.I.		5.47(12.72)		35.0(123.2)		0.97(3.39)	
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			
SURVEY DATA	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					
	10-1-56		9.2(9.3)		1.68(1.70)	2.80(2.83)	9.2(9.3)		1.68(1.70)	2.80(2.83)					
	10-1-61		8.4(8.4)		1.68(1.68)	2.80(2.80)	17.6(17.7)		1.68(1.69)	2.80(2.82)					
	7-12-66		11.5(14.4)		2.40(3.00)	3.99(5.00)	29.2(32.1)		1.91(2.10)	3.18(3.50)					
8-27-71		1.9(2.4)		0.37(0.47)	0.62(0.78)	31.1(34.5)		1.52(1.69)	2.54(2.83)						
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	
10-1-56		70		4269(4314)		4269(4314)		2.54(1.08)		13.92(5.90)					
10-1-61		78		4836(4841)		4756(4789)		2.54(1.07)		26.63(11.23)					
7-12-66		75 Sed. P. (2)		6180(7919)		5194(5765)		2.89(1.33)		44.18(20.36)					
8-27-71		82 Det. P. (2)		1228(1710)		4204(4772)		2.30(1.1)		47.02(21.88)					

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	20.4-18	18-16	16-14	14-12	12-10.4	10.4-8	8-6	6-4	4-2	2-0	98-94	94-90.4
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
10-1-56	0	0	0	0	1	5	6	4	5	14	37	28
10-1-61	0	0	0	0	0	4	4	9	9	27	47	0
7-12-66	0	0	0	0	9	7	7	9	8	27	25	8
8-27-71	0	0	0	5	5	4	6	9	11	28	24	8

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. 2/ ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
<u>Original Survey</u>			1894.4	1.39	2.62	1910.4	5.47	35.04
1920.4	12.95	157.68	1890.4	0.14	0	1908.0	4.48	23.10
1918.4	11.06	133.57	<u>1971 Survey</u>			1906.0	3.61	15.01
1914.4	8.30	95.08	1920.4	12.72	123.17	1904.0	2.81	8.59
1910.4	6.26	66.13	1918.0	10.66	95.11	1902.0	2.13	3.65
1906.4	5.34	42.48	1916.0	9.02	75.43	1900.0	1.01	0.51
1902.4	3.90	24.11	1914.0	7.71	58.70	1899.0	0	0
1898.4	2.80	10.81	1912.0	6.43	44.56			

47. REMARKS AND REFERENCES
 1/ Sediment pool
 2/ See attached sheets for other Elevation-Area-Capacity Data
 Land Use: 98% Grassland; 2% Miscellaneous - 1971
 98% Grassland; 2% Miscellaneous - 1951
 Geology: 100% Doxey Shale Member Quartermaster Formation Permian Age.
 Land Resource Area: Central Rolling Red Plains
 (): Figures in parenthesis include sediment and flood pools.

48. AGENCY MAKING SURVEY Oklahoma Watershed Planning Staff
 49. AGENCY SUPPLYING DATA S.C.S. U.S.D.A.
 50. DATE March 7, 1972