

RESERVOIR SEDIMENTATION
DATA SUMMARY

Sandstone Creek No. 14

50-33

NAME OF RESERVOIR
Trib. of

DATA SHEET NO.

DAM	1. OWNER			2. RIVER Sandstone Cr.			3. STATE Oklahoma			
	4. SEC. 35 TWP. 12N RANGE 23W			5. NEAREST TOWN Elk City			6. COUNTY Roger Mills			
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV.			9. SPILLWAY CREST ELEV.			
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	1/ 1994.32	(24.17)		315.15	9-1-51				
	b. POWER									
	c. WATER SUPPLY									
	d. IRRIGATION									
	e. CONSERVATION									
	f. INACTIVE	1/ 1984.32	13.02		128.42	9-1-51				
17. LENGTH OF RESERVOIR 0.46 MILES			AV. WIDTH OF RESERVOIR 0.08 MILES							
WATERSHED	18. TOTAL DRAINAGE AREA 1.02 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 25.00 INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA 1.00 SQ. MI.			23. MEAN ANNUAL RUNOFF 1.20 INCHES						
	20. LENGTH 1.40 MILES		AV. WIDTH 0.73 MILES		24. MEAN ANNUAL RUNOFF 64.00 AC.-FT.					
	21. MAX. ELEV.		MIN. ELEV. 66.0		25. CLIMATIC CLASSIFICATION 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/W RATIO AC.-FT. PER SQ. MI.		
	9-1-51			Detail Range & Contour	9	13.02	128.42	125.90		
	5-1-56	4.67	4.67			13.02	115.67	113.40		
	5-3-60	4.01	(8.68)			13.02	101.36	99.37		
						(24.17)	(315.15)	(308.97)		
						(24.17)	(302.40)	(296.47)		
						(24.17)	(288.09)	(282.44)		
	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				
5-1-56	12.75 (12.75)	2.73 (2.73)	2.73 (2.73)	12.75 (12.75)	2.73 (2.73)	2.73 (2.73)				
5-3-60	14.31 (14.31)	3.57 (3.57)	3.57 (3.57)	27.06 (27.06)	3.12 (3.12)	3.12 (3.12)				
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			
5-1-56	66.33	3944 (3944)	3944 (3944)	2.13 (.87)	9.93 (4.05)					
5-3-60	93.08	9087 (9087)	6325 (6325)	2.43 (.99)	21.07 (8.59)					

1. Local elev. 98.00 = 1994.32 M.S.L.
2. Includes Detention Pool but excludes sediment pool area. () Includes both pools.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	98-93	93-88	88-84	84-80	80-76	76-72	72-68	68-64				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
5-1-56	0	0	5	16	15	8	40	16				
5-3-60	0	0	0	3	11	17	27	34	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. Original Capacity			ELEVATION-AREA-CAPACITY DATA					
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
98.0	24.17	315.15	68.0	2.02	2.08			
93.0	18.82	207.74	66.0	.30	.10			
88.0	13.02	128.42						
84.0	10.40	81.79						
80.0	6.79	47.76						
76.0	4.29	25.84						
72.0	2.70	12.02						

47. REMARKS AND REFERENCES
 Land Use: Native pasture 64%; Cultivation 33%; miscellaneous 3%.
 Geology formation 59% Elk City member of the Quartermaster formation; 41% Doxey formation.

48. AGENCY SUPPLYING DATA
 Soil Conservation Service
 Stillwater, Okla.

49. DATE: March 26, 1962

Continuation

U. S. Department of Agriculture

Soil Conservation Service

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Data Sheet No.

Sandstone Creek No. 14

46. ELEVATION - AREA - CAPACITY DATA

1956 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
98.0	24.17	302.40	69.0	0	0
93.0	18.82	194.99			
88.0	13.02	115.67			
84.0	10.10	69.67			
80.0	6.13	37.62			
76.0	3.99	17.58			
72.0	2.48	4.80			
70.0	1.71	0.62			

1960 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
98.0	24.17	288.09	72.0	.57	.64
93.0	18.82	180.68			
88.0	13.02	101.36			
84.0	9.98	55.61			
80.0	5.84	24.41			
76.0	2.99	7.12			

RESERVOIR SEDIMENT
DATA SUMMARY

Sandstone Site No. 14

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50-33b

DATA SHEET NO.

DAM	1. OWNER R. H. Goodwin			2. STREAM Washita			3. STATE Oklahoma									
	4. SEC. 35 TWP. 12N RANGE 33W			5. NEAREST P.O. Elk City			6. COUNTY Roger Mills									
	7. LAT. 35° 28' 20" LONG. 99° 36' 3"			8. TOP OF DAM ELEVATION 1998.72			9. SPILLWAY CREST ELEV. 1994.32									
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		1994.32		24.17		186.73		315.15		9-1-51					
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION										9-1-51					
g. INACTIVE		1/		1984.32		13.02		128.42		128.42						
WATERSHED	17. LENGTH OF RESERVOIR				0.46 MILES				AV. WIDTH OF RESERVOIR				0.08 MILES			
	18. TOTAL DRAINAGE AREA				1.02 SQ. MI.				22. MEAN ANNUAL PRECIPITATION				25.00 INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA				1.00 SQ. MI.				23. MEAN ANNUAL RUNOFF				1.20 INCHES			
	20. LENGTH				1.40 MILES				AV. WIDTH				0.73 MILES			
	24. MEAN ANNUAL RUNOFF				65 AC.-F.T.				25. ANNUAL TEMP.: MEAN				59.6° RANGE 24° - 96°			
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.		
5-3-60		8.68		8.68		Detail Topog		9 Ranges		13.02		101.36		1.56		
8-3-65		5.25		13.93		Range Contour (D)		9R		13.02		100.06		1.54		
7-25-70		4.98		18.91		Range Contour (D)		9R		12.97		95.52		1.47		
								2' C.I.		(24.17)		(286.79)		(4.40)		
								2' C.I.		(23.95)		(275.82)		(4.24)		
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				
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			
	5-3-60		27.06		3.12		3.12		27.06		3.12		3.12			
	8-3-65		1.30		0.25		0.25		28.36		2.04		2.04			
7-25-70		4.54		0.91		0.91		32.90		1.74		1.74				
		(27.06)		(3.12)		(3.12)		(27.06)		(3.12)		(3.12)				
		(1.30)		(0.25)		(0.25)		(28.36)		(2.04)		(2.04)				
		(10.97)		(2.20)		(2.20)		(39.33)		(2.08)		(2.08)				
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		
5-3-60		93.08		6320		6320		2.43		21.07						
8-3-65		68.1 (3)		371		3026		1.59		22.08						
7-25-70		56 Sed P(3)		1110		2122		1.35		25.62						
				(3611)		(2781)		(0.66)		(12.48)						

75 lbs / cu ft

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION												
	98-93	93-88	88-84	84-80	80-76	76-72	72-68	68-66					
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
8-3-65	0	0	2	9	16	24	42	7					
7-27-70	7	10	2	9	16	22	27	7					

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. 1965 Capacity 2/ ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
98	24.17	286.79	74	1.32	0.84	86	11.55	71.01
93	18.82	179.37	73	0.46	0.0	84	9.58	49.91
88	13.02	100.06	1970 Capacity			82	7.23	33.16
86	11.58	75.35	98	23.95	275.82	80	5.52	20.44
84	9.87	53.82	96	21.16	230.74	78	4.08	10.88
80	7.76	36.15	94	18.96	190.64	76	2.57	4.28
80	6.10	22.25	92	16.82	154.88	74	1.37	0.41
78	4.28	11.87	90	14.81	123.28	73	0.00	0.00
76	2.76	4.85	88	12.97	95.52			

47. REMARKS AND REFERENCES
 1/ Sediment pool
 2/ Original and 1960 capacity not available. Storage figured by End Area Method
 Land Use: Cropland 33%, Pasture 64%, Misc. 3% - 1965
 Cropland 42%, Pasture-Rangeland 55%, Misc. 3% - 1970
 Geology: Elk City Sandstone 59% Doxey Shale 41% Permian Age
 Land Resource Area: Central Rolling Red Plains
 () Figures enclosed in parentheses include sediment and flood pool.

48. AGENCY MAKING SURVEY Oklahoma Watershed Planning Staff
 49. AGENCY SUPPLYING DATA S.C.S. U.S.D.A.
 50. DATE Nov. 19, 1970