

RESERVOIR SEDIMENTATION
DATA SUMMARY

Sandstone Creek No. 16

NAME OF RESERVOIR
Trib. of

50-34

DATA SHEET NO.

DAM	1. OWNER		2. RIVER Sandstone Cr.		3. STATE Oklahoma			
	4. SEC. 27 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	81.70	259.50		(4463.43)	8-2-52		
	b. POWER							
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION							
	e. CONSERVATION					8-2-52		
	f. INACTIVE	65.59	119.20		1423.42			
WATERSHED	17. LENGTH OF RESERVOIR 2.23 MILES		AV. WIDTH OF RESERVOIR 0.18 MILES					
	18. TOTAL DRAINAGE AREA 11.47 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 25.00 INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 11.28 SQ. MI.		23. MEAN ANNUAL RUNOFF 1.00 INCHES					
	20. LENGTH 3.48 MILES; AV. WIDTH 3.30 MILES		24. MEAN ANNUAL RUNOFF 53.33 AC.-FT.					
	21. MAX. ELEV.		MIN. ELEV.		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.
	8-2-52	-	-	Det. Rnge & Contour	1/ 15 rngs.	119.20 (259.50)	1423.42 (4463.43)	1/ 124.10 (389.14)
	7-2-57	4.92	4.92	"	"	116.20 (259.50)	1261.46 (4294.49)	1/ 109.98 (374.41)
	9-20-61	4.21	9.13	-	-	112.06 (259.50)	1141.48 (4164.87)	1/ 99.52 (363.11)
	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	
	7-2-57	1/ 161.96 (168.94)	1/ 32.92 (34.34)	1/ 2.92 (3.04)	1/ 161.96 (168.94)	1/ 32.92 (34.34)	1/ 2.92 (3.04)	
	9-20-61	1/ 119.98 (129.62)	1/ 28.50 (30.79)	1/ 2.53 (2.73)	1/ 281.94 (298.56)	1/ 30.88 (32.70)	1/ 2.74 (2.90)	
	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. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE
7-2-57	77.95	1/ 4957 (5161)	1/ 4957 (5161)	1/ 2.31 (0.77)	1/ 11.38 (3.78)			
9-20-61	74.85	1/ 3888 (4209)	1/ 3888 (4200)	1/ 2.17 (0.73)	1/ 19.81 (6.69)			

() includes both pools.
1/ Sediment pool only.

81.7-78

78-74

74-70

70-65.6

65.6-62

62-58

58-54

54-50

50-46

46-42

42-38

46-43

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION														
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
7-2-57	0	0	0	4.1	5.3	4.4	4.4	8.8	19.9	31.6	21.4				
9-20-61	0	0	0	7.4	23.0	24.5	16.9	12.1	7.5			8.6			
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							
81.7	259.50	4463.53	46.0	33.71	135.92										
78.0	229.71	3561.40	42.0	17.18	36.22										
74.0	191.78	2721.66	38.0	2.94	0										
70.0	156.15	2028.76													
65.59	119.20	1423.42													
62.0	92.94	1042.55													
58.0	66.53	725.88													
54.0	55.49	482.78													
50.0	42.56	287.74													
47. REMARKS AND REFERENCES															
Land Use: Native pasture 72%; Cultivation 25%; Miscellaneous 3%.															
Geology: 30% Ogallala, 57% Doxey Quartermaster formation; 13% in Elk City member Quartermaster formation.															
48. AGENCY SUPPLYING DATA				Soil Conservation Service Stillwater, Oklahoma			49. DATE		March 26, 1962						

Continuation

U. S. Department of Agriculture

Soil Conservation Service

50-34

Data Sheet No.

Sandstone Creek No. 16

46. ELEVATION - AREA - CAPACITY DATA

1957 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
81.7	259.50	4294.49	54.0	53.53	394.70
78.0	229.71	3392.46	50.0	37.33	164.60
74.0	191.78	2552.72	46.0	22.53	46.42
70.0	156.15	1859.82	42.0	3.52	0
65.59	116.20	1261.46			
62.0	90.86	889.69			
58.0	64.89	580.36			

1961 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
81.7	259.50	4164.87	50.0	35.25	143.84
78.0	229.71	3262.84	46.0	19.87	35.31
74.0	191.78	2423.10	43.0	5.24	0
70.0	156.15	1730.20			
65.59	112.06	1141.48			
62.0	79.58	799.47			
58.0	59.98	521.97			
54.0	47.43	308.19			

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

Sandstone Creek No. 16

SOIL CONSERVATION SERVICE

50-34a

NAME OF RESERVOIR
Trib. of

DATA SHEET NO.

DAM	1. OWNER			2. RIVER Sandstone Cr.			3. STATE Oklahoma		
	4. SEC. 27 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	81.70	259.50		(4463.43)	8-2-52			
	b. POWER								
	c. WATER SUPPLY						16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION								
	e. CONSERVATION						8-2-52		
	f. INACTIVE	65.59	119.20		1423.42				
WATERSHED	17. LENGTH OF RESERVOIR 2.23 MILES			AV. WIDTH OF RESERVOIR 0.18 MILES					
	18. TOTAL DRAINAGE AREA 11.47 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 25.00 INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 11.28 SQ. MI.			23. MEAN ANNUAL RUNOFF 1.00 INCHES					
	20. LENGTH 3.48 MILES AV. WIDTH 3.30 MILES			24. MEAN ANNUAL RUNOFF 53.33 AG.-FT.					
	21. MAX. ELEV.		MIN. ELEV.		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.	
	8-2-52	-	-	Det. Rnge. & Contour	1/ 15 rngs.	119.20 (259.50)	1/ 1423.42 (4463.43)	1/ 124.10 (389.14)	
	7-2-57	4.92	4.92	"	"	1/ 116.20 (259.50)	1/ 1261.46 (4294.49)	1/ 109.98 (374.41)	
	9-20-61	4.21	9.13	-	-	1/ 112.06 (259.50)	1/ 1141.48 (4164.87)	1/ 99.52 (363.11)	
	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	d. MEAN ANNUAL	e. 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	d. TOTAL TO DATE	e. AV. ANNUAL	f. PER SQ. MI.-YEAR		
	7-2-57	1/ 161.96 (168.94)	1/ 32.92 (34.34)	1/ 2.92 (3.04)	1/ 161.96 (168.94)	1/ 32.92 (34.34)	1/ 2.92 (3.04)		
	9-20-61	1/ 119.98 (129.62)	1/ 28.50 (30.79)	1/ 2.53 (2.73)	1/ 281.94 (298.56)	1/ 30.88 (32.70)	1/ 2.74 (2.90)		
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. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE		
7-2-57	77.95	1/ 4957 (5161)	1/ 4957 (5161)	1/ 2.31 (0.77)	1/ 11.38 (3.78)				
9-20-61	74.85	1/ 4124 (4450)	1/ 4466 (4727)	1/ 2.17 (0.73)	1/ 19.81 (6.69)				

() includes both pools.
1/ Sediment pool only.

81.7-78
78-74
74-70
70-65.6
65.6-62
62-58
58-54
54-50
50-46
46-42
42-38
46-43

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
7-2-57	0	0	0	4.1	5.3	4.4	4.4	8.8	19.9	31.6	21.4	
9-20-61	0	0	0	7.4	23.0	24.5	16.9	12.1	7.5			8.6

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
81.7	259.50	4463.53	46.0	33.71	135.92			
78.0	229.71	3561.40	42.0	17.18	36.22			
74.0	191.78	2721.66	38.0	2.94	0			
70.0	156.15	2028.76						
65.59	119.20	1423.42						
62.0	92.94	1042.55						
58.0	66.53	725.88						
54.0	55.49	482.78						
50.0	42.56	287.74						

47. REMARKS AND REFERENCES

Land Use: Native pasture 72%; Cultivation 25%; Miscellaneous 3%.

Geology: 30% Ogallala, 57% Doxey Quartermaster formation; 13% in Elk City member Quartermaster formation.

Soil Conservation Service
Stillwater, Oklahoma

48. AGENCY SUPPLYING DATA

49. DATE March 26, 1962

Continuation

U. S. Department of Agriculture

Soil Conservation Service

50-34

Data Sheet No.

Sandstone Creek No. 16

46. ELEVATION - AREA - CAPACITY DATA

1957 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
81.7	259.50	4294.49	54.0	53.53	394.70
78.0	229.71	3392.46	50.0	37.33	164.60
74.0	191.78	2552.72	46.0	22.53	46.42
70.0	156.15	1859.82	42.0	3.52	0
65.59	116.20	1261.46			
62.0	90.86	889.69			
58.0	64.89	580.36			

1961 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
81.7	259.50	4164.87	50.0	35.25	143.84
78.0	229.71	3262.84	46.0	19.87	35.31
74.0	191.78	2423.10	43.0	5.24	0
70.0	156.15	1730.20			
65.59	112.06	1141.48			
62.0	79.58	799.47			
58.0	59.98	521.97			
54.0	47.43	308.19			

RESERVOIR SEDIMENT
DATA SUMMARY

SCS-34 Rev. 6-66

Sandstone Site No. 16

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50-34b

DATA SHEET NO.

DAM	1. OWNER			2. STREAM Washita			3. STATE Oklahoma					
	4. SEC. TWP. 12-N RANGE 23-W			5. NEAREST P. O. Elk City			6. COUNTY Roger Mills					
	7. LAT. " LONG. "			8. TOP OF DAM ELEVATION			9. SPILLWAY CREST ELEV.					
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		81.70		259.50				(4463.43)		8-2-52	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION											
g. INACTIVE		65.59		119.20				1423.42		8-2-52		
WATERSHED	17. LENGTH OF RESERVOIR 2.23 MILES				AV. WIDTH OF RESERVOIR 0.18 MILES							
	18. TOTAL DRAINAGE AREA 11.47 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 25.00 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 11.28 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.00 INCHES							
	20. LENGTH 3.48 MILES		AV. WIDTH 3.30 MILES		24. MEAN ANNUAL RUNOFF 612 AC.-F.T.							
	21. MAX. ELEV. 2324		MIN. ELEV. 2000		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/P RATIO, AC.-FT. PER ACRES SQ. MI.	
	8-2-52		-	-	Det. Range & Contour	15 Ranges	119.20 (259.50)		1423.42 (4463.43)		389.14	
	7-2-57		4.92	4.92	"	"	116.20 (259.50)		1261.46 (4294.49)		374.41	
	9-20-61		4.21	9.13	-	-	112.06 (259.50)		1141.48 (4164.87)		363.11	
	8-2-66		4.86	14.00	Range Contour (D)	18 (R) 2 C.I.	109.57 (259.50)		1057.13 (4038.34)		352.08	
	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				
7-2-57		161.96 (168.94)	32.92 (34.34)	2.92 (3.04)	161.96 (168.94)	32.92 (34.34)	2.92 (3.04)					
9-20-61		119.98 (129.62)	28.50 (30.62)	2.53 (2.73)	281.94 (298.56)	30.88 (32.70)	2.74 (2.90)					
8-2-66		84.35 (126.53)	17.36 (26.03)	1.54 (2.31)	366.29 (425.09)	26.16 (30.36)	2.32 (2.69)					
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				
7-2-57		77.94	4957 (5161)	4957 (5161)	2.31 (0.77)	11.38 (3.78)						
9-20-61		74.85	3888 (4209)	4466 (4727)	2.17 (0.73)	19.81 (6.69)						
8-2-66		67lbs SP (2) 97lbs DP (2)	2247 (3874)	3386 (4171)	1.84 (.68)	25.73 (9.52)						

() Includes Both Pools *weighed Av. 76 lbs*

81.7-78 78-74 74-70 70-65.6 65.6-62 62-58 58-54 54-50 50-46 46-42 42-38

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
7-2-57	0	0	0	4	5	4	5	9	20	32	21	
9-20-61	0	0	0	7	23	25	17	12	7	9		
8-2-66	0	0	20	13	7	11	6	4	21	18		

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>1/</u>								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

1/ Elevation-Area-Capacity Data on separate sheet.

Land Use: 24% Cultivation, 74% Native Pasture, 2% Miscellaneous

Geology: 30% Ogalalla Formation, Tertiary Age, 57% Doxey and 13% Elk City Quartermaster Formation, Permian Age

48. AGENCY MAKING SURVEY

49. AGENCY SUPPLYING DATA SCS - Stillwater, Oklahoma

50. DATE October 17, 1966

ELEVATION-AREA-CAPACITY DATA

Sandstone Site #16

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>		
81.7	259.50	4463.43		81.7	259.50	4664.87
78.0	229.71	3561.40		78.0	229.71	3262.84
74.0	191.78	2721.66		74.0	191.78	2423.10
70.0	156.15	2028.76		70.0	156.15	1730.20
65.59	119.20	1423.42		65.59	112.06	1141.48
62.0	92.94	1042.55		62.0	79.58	799.47
58.0	66.53	725.88		58.0	59.98	521.97
54.0	55.49	482.78		54.0	47.43	308.19
50.0	42.56	287.74		50.0	35.25	143.84
46.0	33.17	135.92		46.0	19.87	35.31
42.0	17.18	36.22		43.0	5.24	0
38.0	2.94	0				
 <u>1957 Capacity</u>				 <u>1966 Capacity</u>		
81.7	259.50	4294.49		81.7	259.50	4038.34
78.0	229.71	3392.46		78.0	229.71	3136.31
74.0	191.78	2552.72		74.0	191.78	2296.57
70.0	156.15	1859.82		72.0	163.30	1941.70
65.59	116.20	1261.46		70.0	148.83	1629.53
62.0	90.86	889.69		68.0	132.48	1348.24
58.0	64.89	580.36		65.50	109.57	1057.13
54.0	53.42	344.70		64.0	94.30	895.20
50.0	37.33	164.60		62.0	77.56	723.53
46.0	22.53	46.42		60.0	64.17	581.95
42.0	3.52	0		58.0	57.34	460.44
				56.0	51.47	351.63
				54.0	46.28	253.88
				52.0	40.30	167.33
				50.0	32.57	94.56
				48.0	21.21	41.16
				46.0	8.80	12.03
				44.0	3.59	0

RESERVOIR SEDIMENT

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

DATA SUMMARY

Sandstone Site 16

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50-34c

DATA SHEET NO.

DAM	1. OWNER Baker			2. STREAM Trib. of Sandstone			3. STATE Oklahoma					
	4. SEC. 27 TWP. 12N RANGE 23W			5. NEAREST P. O. Elk City			6. COUNTY Roger Mills					
	7. LAT 35° 30' 50" LONG 99° 37' 12"			8. TOP OF DAM ELEVATION 1988.1			9. SPILLWAY CREST ELEV. 1981.7					
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		1981.7		259.50		3040.01		4463.43		8-2-52	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY											
	e. IRRIGATION										16. DATE NORMAL OPER. BEGAN	
	f. CONSERVATION											
g. INACTIVE 1/		1965.6		119.20		1423.42		1423.42		8-2-52		
17. LENGTH OF RESERVOIR 2.23 MILES				AV. WIDTH OF RESERVOIR 0.18 MILES								
WATERSHED	18. TOTAL DRAINAGE AREA 11.07 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 25.00 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 11.28 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.00 INCHES							
	20. LENGTH 3.48 MILES		AV. WIDTH 3.30 MILES		24. MEAN ANNUAL RUNOFF 612 AC.-FT.							
	21. MAX. ELEV. 2300.0		MIN. ELEV. 1938.0		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.			
8-2-52		-	-	Detail Topo	15 Ranges	119.2 (259.5)	1423.4 (4463.4)	2.33 (7.29)				
7-2-57		4.92	4.92	Detail Topo	15 Ranges	116.2 (259.5)	1261.5 (4294.5)	2.06 (7.02)				
9-20-61		4.21	9.13	Detail Topo	15 Ranges	112.1 (259.5)	1141.5 (4164.9)	1.87 (6.81)				
8-2-66		4.86	14.00	Range								
7-7-71		4.93	18.93	Contour (D)	18R 2'C.I.	109.6 (259.5)	1057.1 (4038.3)	1.73 (6.60)				
7-7-71		4.93	18.93	Range								
7-7-71		4.93	18.93	Contour (D)	18R 2'C.I.	114.6 (266.1)	1053.0 (4011.3)	1.72 (6.56)				
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					
7-2-57		161.9 (168.9)	32.9 (34.3)	2.97 (3.10)	162.0 (168.9)	32.9 (34.3)	2.97 (3.10)					
9-20-61		120.0 (129.6)	28.5 (30.8)	2.57 (2.78)	281.9 (298.5)	30.9 (32.7)	2.79 (2.95)					
8-2-66		84.4 (126.5)	17.4 (26.0)	1.57 (2.35)	366.3 (425.0)	26.2 (30.4)	2.36 (2.75)					
7-7-71		4.1 (27.0)	0.83 (5.48)	0.07 (0.49)	370.4 (452.0)	19.6 (23.9)	1.77 (2.16)					
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. ANN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE			
7-2-57		78		5046 (5267)	5046 (5267)	2.31 (.77)	11.38 (3.78)					
9-20-61		75		3975 (4305)	4557 (4818)	2.17 (.73)	19.80 (6.69)					
8-2-66		67 Sed.P. (2)										
8-2-66		97 Det.P. (2)		1376 (2464)	3443 (4267)	1.84 (.58)	25.73 (9.52)					
7-7-71		64 Sed.P. (2)										
7-7-71		95 Det.P. (2)		105 (926)	2467 (3274)	1.38 (.54)	26.02 (10.13)					

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE, IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	81-78	78-74	74-70	70-65.6	65.6-62	62-58	58-54	54-50	50-46	46-42	42-38				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
7-2-57	0	0	0	4	5	4	5	8	20	32	21				
9-20-61	0	0	0	7	23	25	17	12	7	9	0				
8-2-66	0	0	20	13	7	11	6	4	21	18	0				
7-7-71	0	0	2	17	8	10	20	1	14	20	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							
47. REMARKS AND REFERENCES															
1/ Sediment Pool															
2/ See attached sheet for Elevation-Area-Capacity Data															
Land Use: 24% Cropland, 74% Grassland, 2% Miscellaneous - 1971															
25% Cropland, 73% Grassland, 2% Miscellaneous - 1961															
Geology: 30% Ogallala Tertiary Age; 57% Doxey; 13% Elk City 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 10, 1972															

RESERVOIR SEDIMENT
DATA SUMMARY

CS-34 Rev. 6-66

Sandstone Site 16

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50 - 34 d

DATA SHEET NO.

DAM	1. OWNER Baker		2. STREAM Trib of Sandstone		3. STATE Oklahoma			
	4. SEC. 27 TWP. 12N RANGE 23W		5. NEAREST P.O. Elk City		6. COUNTY Roger Mills			
	7. LAT. 35° 30' 50" LONG. 99° 37' 12"		8. TOP OF DAM ELEVATION 1988.1		9. SPILLWAY CREST ELEV. 1981.7			
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	1981.7	259.50	3040.01	4463.43	8-2-52		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION							
	f. CONSERVATION					8-2-52		
	g. INACTIVE	1965.6	119.20	1423.42	1423.42			
WATERSHED	17. LENGTH OF RESERVOIR		2.23 MILES		AV. WIDTH OF RESERVOIR 0.18 MILES			
	18. TOTAL DRAINAGE AREA		11.47 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 25.00 INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA		11.28 SQ. MI.		23. MEAN ANNUAL RUNOFF 1.00 INCHES			
	20. LENGTH	3.48 MILES	AV. WIDTH	3.30 MILES	24. MEAN ANNUAL RUNOFF 612 AC.-FT.			
	21. MAX. ELEV.	2300.0	MIN. ELEV.	1938.0	25. ANNUAL TEMP: MEAN 60.2° F RANGE -11° to 113° 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.
	8-2-52	-	-	Det. Topo.	15 Ranges	119.2(259.5)	1423.4(4463.4)	2.33(7.30)
	7-2-57	4.92	4.92	"	"	116.2(259.5)	1261.5(4294.5)	2.06(7.02)
	9-20-61	4.21	9.13	"	"	112.1(259.5)	1141.5(4164.9)	1.87(6.81)
	8-2-66	4.86	14.00	Range-Contour (D)	18 R 2' CI	109.6(259.5)	1057.1(4038.3)	1.73(6.60)
	7-7-71	4.93	18.93	"	"	114.6(266.1)	1053.0(4011.3)	1.72(6.56)
	6-18-79	7.93	26.86	"	"	110.3(266.0)	1015.0(3952.4)	1.66(6.46)
	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	
	7-2-57	161.9(168.9)	32.9(34.3)	2.92(3.04)	161.9(168.9)	32.9(34.3)	2.92(3.04)	
	9-20-61	120.0(129.6)	28.5(30.8)	2.53(2.73)	281.9(298.5)	30.9(32.7)	2.74(2.90)	
	8-2-66	84.4(126.6)	17.4(26.0)	1.54(2.31)	366.3(425.1)	26.2(30.4)	2.32(2.70)	
	7-7-71	4.1(27.0)	0.83(5.48)	0.07(0.49)	370.4(452.1)	19.6(23.9)	1.74(2.12)	
6-18-79	38.0(58.9)	4.79(7.43)	0.42(0.66)	408.4(511.0)	15.2(19.0)	1.35(1.68)		
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	
7-2-57	78	4961(5164)	4961(5164)	2.31(.77)	11.38(3.78)			
9-20-61	75	4476(4737)	4476(4737)	2.17(.73)	19.80(6.69)			
8-2-66	67 SedP (2) 97 DetP (2)	3385(4188)	3385(4188)	1.84(.68)	25.73(9.52)			
7-7-71	64 SedP (2) 95 DetP (2)	2425(3211)	2425(3211)	1.38(.54)	26.02(10.13)			
6-18-79	67 SedP (6) 97 DetP (3)	1970(2667)	1970(2667)	1.07(.43)	28.69(11.45)			

26. DATE OF SURVEY	43.81.7- DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	78	78-74	74-70	65.6	62	62-58	58-54	54-50	50-46	46-42	42-38				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
7-2-57	0	0	0	4	5	4	5	8	20	32	21				
9-20-61	0	0	0	7	23	25	17	12	7	9	0				
8-2-66	0	0	20	13	7	11	6	4	21	18	0				
7-7-71	0	0	2	17	8	10	20	1	14	20	8				
6-18-79	0	0	4	16	16	9	10	10	18	19	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. 2/ ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
47. REMARKS AND REFERENCES															
1/ Sediment Pool															
2/ See attached sheet for other surveys data															
Geology: 30% Ogallala Tertiary Age, 57% Doxey, 13% Elk City Members Quartermaster Formation Permian Age.															
Land Resource Area: Central Rolling Red Plains															
Land Use-1979: 18% Cropland, 77% Range, 2% Pasture, 2% Forest, 1% Miscellaneous															
1971: 24% Cropland, 74% Pasture-Range, 2% Miscellaneous															
1961: 25% Cropland, 73% Pasture-Range, 2% Miscellaneous															
() 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 1-30-80															

Elevation-Area-Capacity Data

Elevation	Area	Capacity	Elevation	Area	Capacity
<u>Original Capacity (1952)</u>			<u>1957 Capacity</u>		
1981.7	259.50	4463.43	1981.7	259.50	4294.49
1978.0	229.71	3561.40	1978.0	229.71	3392.46
1974.0	191.78	2721.66	1974.0	191.78	2552.72
1970.0	156.15	2028.76	1970.0	156.15	1859.82
1965.59	119.20	1423.42	1965.59	116.20	1261.46
1962.0	92.94	1042.55	1962.0	90.86	889.69
1958.0	66.53	725.88	1958.0	64.89	580.36
1954.0	55.49	482.78	1954.0	53.42	344.70
1950.0	42.56	287.74	1950.0	37.33	164.60
1946.0	33.17	135.92	1946.0	22.53	46.42
1942.0	17.18	36.22	1942.0	3.52	0
1938.0	2.94	0			
<u>1961 Capacity</u>			<u>1966 Capacity</u>		
1981.7	259.50	4164.87	1981.7	259.50	4038.34
1978.0	229.71	3262.84	1978.0	229.71	3136.31
1974.0	191.78	2423.10	1974.0	191.78	2296.57
1970.0	156.15	1730.20	1972.0	163.30	1941.70
1965.59	112.06	1141.48	1970.0	148.83	1629.53
1962.0	79.58	799.47	1968.0	132.48	1348.24
1958.0	59.98	521.97	1965.59	109.57	1057.13
1954.0	47.43	308.19	1964.0	94.30	895.20
1950.0	35.25	143.84	1962.0	77.56	723.53
1946.0	19.87	35.31	1960.0	64.17	581.95
1943.0	5.24	0	1958.0	57.34	460.44
			1956.0	51.47	351.63
			1954.0	46.28	253.88
			1952.0	40.30	167.33
			1950.0	32.57	94.56
			1948.0	21.21	41.16
			1946.0	8.80	12.03
			1944.0	3.59	0