

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

Cobb Creek No. 3

SOIL CONSERVATION SERVICE
50-26
DATA SHEET NO.

NAME OF RESERVOIR

DAM	1. OWNER H. W. Richmond			2. RIVER Cobb Creek		3. STATE Oklahoma		
	4. SEC. 34 TWP. 11N RANGE 14W			5. NEAREST TOWN Colony		6. COUNTY Washita		
	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		(192.05)		(2401.08)	1-24-57		
	b. POWER							
	c. WATER SUPPLY							
	d. IRRIGATION					16. DATE NORMAL OPER. BEGAN		
	e. CONSERVATION							
	f. INACTIVE			65.18		597.93	1-24-57	
17. LENGTH OF RESERVOIR 2.52 MILES			AV. WIDTH OF RESERVOIR 0.12 MILES					
WATERSHED	18. TOTAL DRAINAGE AREA 8.28 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 29.00 INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA 8.18 SQ. MI.			23. MEAN ANNUAL RUNOFF 2.00 INCHES				
	20. LENGTH 5.30 MILES		AV. WIDTH 1.56 MILES		24. MEAN ANNUAL RUNOFF 106.60 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.
	1-24-57	-	-	-	-	65.18	597.93	72.21
	8-24-60	3.58	3.58	Contour & Range	17	65.18	500.14	60.40
						(192.05)	(2303.29)	278.18
	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	
	1-24-57							
8-24-60	97.79	27.32	3.34	97.79	27.32	3.34		
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	c. AV. ANNUAL	d. TOT. TO DATE	e. PERIOD	f. TQT. TO DATE	
8-24-60	89.66	6522	6522	(1.14)	(4.07)			
				4.57	16.35			

(-) includes both pools.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW RES. ELEVATION												
	43.8-40.8	40.8-36.8	36.8-32.8	32.8-29.3	29.3-28.8	28.8-24.8	24.8-20.8	20.8-16.8	16.8-12.8	12.8-8.8	8.8-4.8	4.8-0.8	
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
8-24-60	0	0	0	0	1	18	21	18	15	17	8	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. Original Capacity			ELEVATION-AREA-CAPACITY DATA					
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1543.8	192.05	2401.08	1516.8	18.39	88.28			
40.8	165.64	1865.05	12.8	9.37	32.90			
36.8	127.71	1281.46	08.8	3.09	9.17			
32.8	87.67	858.35	04.8	0.86	1.70			
29.3	65.18	597.93	00.8	0	0			
28.8	64.30	564.92						
24.8	47.03	343.71						
20.8	31.86	187.30						

47. REMARKS AND REFERENCES
Est. Approx. 75% in cultivation.
Est. Approx. 25% in pasture.
Geology Formation: Rush Springs
Soil: Reddish Prairie.

Soil Conservation Service
Stillwater, Oklahoma

48. AGENCY SUPPLYING DATA _____ 49. DATE _____

Continuation

U. S. Department of Agriculture

Soil Conservation Service
Data Sheet 50-26

Cobb Creek No. 3

46. ELEVATION - AREA - CAPACITY DATA

1960 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
1543.8	192.05	2401.08	16.8	15.48	47.47
40.8	165.64	1865.05	12.8	5.58	7.10
36.8	127.71	1281.46	10.8	0	0
32.8	87.67	858.35			
29.3	64.30	500.14			
28.8	59.54	468.57			
24.8	42.76	265.40			
20.8	25.97	129.27			

RESERVOIR SEDIMENT

DATA SUMMARY

SCS-34 Rev. 6-66

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Cobb-Creek No. 3

NAME OF RESERVOIR

50- 26a

DATA SHEET NO.

DAM	1. OWNER H. W. Richmond			2. STREAM Washita			3. STATE Oklahoma									
	4. SEC. 34 TWP. 11N RANGE 14W			5. NEAREST P. O. Weatherford			6. COUNTY Washita									
	7. LAT. 98° 39' 40" LONG 35° 23' 50"			8. TOP OF DAM ELEVATION 1550.3			9. SPILLWAY CREST ELEV. 1543.8									
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		1543.8		192.05		1803.15		2401.08		1-24-57					
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION															
WATERSHED	g. INACTIVE 1/		1529.3		65.18		597.93		597.93		1-24-57					
	17. LENGTH OF RESERVOIR 2.52 MILES				AV. WIDTH OF RESERVOIR 0.12 MILES											
	18. TOTAL DRAINAGE AREA 8.28 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 29.00 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 8.18 SQ. MI.				23. MEAN ANNUAL RUNOFF 2.00 INCHES											
	20. LENGTH 5.30 MILES		AV. WIDTH 1.56 MILES		24. MEAN ANNUAL RUNOFF 883 AC.-FT.		25. ANNUAL TEMP: MEAN 61.0 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.	
	1-24-57		-		-		Detail Topog		17 Ranges		65.2(192.1)		597.9(2401.1)		0.68(2.72)	
	8-24-60		3.58		3.58		Range		17 R		65.2(192.1)		500.1(2303.3)		0.57(2.61)	
	10-14-64		4.14		7.72		Contour (D)		2' C.I.		61.0(192.1)		499.8(2277.3)		0.57(2.58)	
	8-4-70		5.81		13.53		Range		17R		58.8(185.0)		495.2(2218.1)		0.56(2.51)	
	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			
8-24-60		97.79(97.79)		27.32(27.32)		3.34(3.34)		97.79(97.79)		27.32(27.32)		3.34(3.34)				
10-4-64		0.37(25.99)		0.09(6.28)		0.01(0.77)		98.16(123.8)		12.72(16.03)		1.56(1.96)				
8-4-70		4.6(59.16)		0.79(10.18)		0.10(1.24)		102.8(182.9)		7.59(13.52)		0.93(1.65)				
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		
8-24-60		90		6547(6547)		6547(6547)		4.6(1.1)		16.35(3.26)						
10-4-64		90		20(1509)		3058(3842)		2.1(.67)		16.42(5.16)						
8-4-70		71 Sed P(5) 97 Det P(3)		155(2563)		1438(2959)		1.3(.56)		17.19(7.62)						

avg. = 91 lbs/cu. ft. approx.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	43.8	40.8	36.8	32.8	29.3	26.8	24.8	20.8	16.8	12.8	8.8	4.8			
	40.8	36.8	32.8	29.3	28.8	24.8	20.8	16.8	12.8	8.8	4.8	0.8			
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION															
1960	0	0	0	0	1	18	21	18	15	17	8	2			
1964	0	0	10	11	3	23	20	14	8	4	6	1			
1970	2	9	12	18	1	23	20	1	4	3	6	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. ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
47. REMARKS AND REFERENCES															
<p>1/ Sediment Pool</p> <p>2/ Original elevation, area, capacity data not available. Storage figured by end area method.</p> <p>Land Use: Cropland 48%, Pasture-Rangeland 50%, Woodland 1%, Misc. 1% - 1970 Cropland 73%, Pasture-Rangeland 25%, Woodland 1%, Misc. 1% - 1964</p> <p>Geology: Rush Spring FM, 70% Cloud Chief FM, 30% Permian Age</p> <p>Land Resource Area: Central Rolling Red Plains</p> <p>() Figures enclosed in parentheses include sediment and flood pool</p>															
48. AGENCY MAKING SURVEY Oklahoma Watershed Planning Staff															
49. AGENCY SUPPLYING DATA S.C.S. U.S.D.A.															
50. DATE December 11, 1970															

COBB CREEK SITE NO. 3

1960			1964			1970		
Elevation	Area	Capacity	Elevation	Area	Capacity	Elevation	Area	Capacity
1543.8	192.05	2303.29	1543.8	192.05	2277.30	1543.8	184.96	2218.14
1540.8	165.64	1767.26	1540.8	165.64	1741.25	1541.0	161.91	1732.91
1536.8	127.71	1183.67	1536.8	127.71	1157.66	1539.0	145.69	1425.46
1532.8	87.67	760.56	1532.8	80.13	746.69	1537.0	124.16	1155.89
<u>1529.3</u>	<u>64.30</u>	<u>500.14</u>	<u>1529.3</u>	<u>61.00</u>	<u>499.77</u>	1535.0	98.27	933.97
1528.8	59.54	468.57	1528.8	55.75	470.59	1533.0	81.70	754.25
1524.8	42.76	265.40	1526.8	47.56	366.87	1531.0	69.03	603.70
1520.8	25.97	129.27	1524.8	39.74	279.25	<u>1529.3</u>	<u>58.79</u>	<u>495.16</u>
1516.8	15.48	47.47	1522.8	33.12	206.13	1527.0	48.76	371.67
1512.8	5.58	7.10	1520.8	26.04	146.81	1525.0	41.03	281.99
1510.8	0	0	1518.8	20.42	100.23	1523.0	31.34	209.83
			1516.8	15.87	63.86	1521.0	24.93	153.69
			1514.8	10.95	37.06	1519.0	20.71	108.11
			1512.8	8.17	17.91	1517.0	15.65	71.87
			1510.8	4.78	5.05	1515.0	11.96	44.34
						1513.0	8.83	23.63
						1511.0	6.03	8.86
						1509.0	2.24	0.90
						1507.0	0	0

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION												
	CR-03	03-07	07-11	11-15	15-19	19-23	23-27	27-31	31-35	35-39	39-43		
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
2/ 1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	0	0	0	0	1	18	21	18	15	17	8	2	
1964	0	0	10	11	3	23	20	14	8	4	6	1	
1970	2	9	12	18	1	23	20	1	4	3	6	1	
1977	1	10	13	20	2	16	20	8	4	3	2	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. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
See attached sheet.								

47. REMARKS AND REFERENCES

1/ Sediment pool.

2/ Original elevation, area, capacity data not available.
 Figures in parentheses include sediment and flood pools.

Land Use: 1977 - cropland 48%, pasture-rangeland 49%, woodland 1%, misc. 2%.
 1970 - cropland 48%, pasture-rangeland 50%, woodland 1%, misc. 1%.
 1964 - cropland 73%, pasture-rangeland 25%, woodland 1%, misc. 1%.

Geology: Rush Springs FM 70%, Cloud Chief FM 30%, Permian Age.

Land Resource Area: Central Rolling Red Plains.

48. AGENCY MAKING SURVEY Oklahoma Watershed & River Basin Planning Staff

49. AGENCY SUPPLYING DATA SCS, USDA

50. DATE February 17, 1978

Cobb Creek Site No. 3

ELEVATION-AREA-CAPACITY DATA

2/ Original elevation, area, capacity data not available.

Elevation	Area	Capacity	Elevation	Area	Capacity
<u>1960 Survey</u>			<u>1964 Survey</u>		
1543.8	192.05	2303.29	1543.8	192.05	2277.30
1540.8	165.64	1767.26	1540.8	165.64	1741.25
1536.8	127.71	1183.67	1536.8	127.71	1157.66
1532.8	87.67	760.56	1532.8	80.13	746.69
<u>1529.3</u>	<u>64.30</u>	<u>500.14</u>	<u>1529.3</u>	<u>61.00</u>	<u>499.77</u>
1528.8	59.54	468.57	1528.8	55.75	470.59
1524.8	42.76	265.40	1526.8	47.56	366.87
1520.8	25.97	129.27	1524.8	39.74	279.25
1516.8	15.48	47.47	1522.8	33.12	206.13
1512.8	5.58	7.10	1520.8	26.04	146.81
1510.8	0	0	1518.8	20.42	100.23
			1516.8	15.87	63.86
			1514.8	10.95	37.06
			1512.8	8.17	17.91
			1510.8	4.78	5.05
<u>1970 Survey</u>			<u>1977 Survey</u>		
1543.8	184.96	2218.14	1543.8	184.74	2200.22
1541.0	161.91	1732.91	1541.0	160.90	1716.32
1539.0	145.69	1425.46	1539.0	144.72	1410.70
1537.0	124.16	1155.89	1537.0	121.62	1144.36
1535.0	98.27	933.97	1535.0	96.97	927.77
1533.0	81.70	754.25	1533.0	81.33	747.47
1531.0	69.03	603.70	1531.0	68.82	597.32
<u>1529.3</u>	<u>58.79</u>	<u>495.16</u>	<u>1529.3</u>	<u>58.51</u>	<u>489.09</u>
1527.0	48.76	371.67	1527.0	48.39	366.15
1525.0	41.03	281.99	1525.0	40.70	277.06
1523.0	31.34	209.83	1523.0	31.10	205.26
1521.0	24.93	153.69	1521.0	24.75	149.41
1519.0	20.71	108.11	1519.0	20.40	104.26
1517.0	15.65	71.87	1517.0	15.65	68.21
1515.0	11.96	44.34	1515.0	11.90	40.66
1513.0	8.83	23.63	1513.0	8.66	20.10
1511.0	6.03	8.86	1511.0	4.69	6.75
1509.0	2.24	0.90	1509.0	1.03	1.03
1507.0	0	0			