

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

Chigley Sandy Site #4
NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50-46
DATA SHEET NO.

DAM	1. OWNER Tate - Golden				2. STREAM Washita				3. STATE Oklahoma							
	4. SEC.1 & 12 TWP. 2N RANGE 2E				5. NEAREST TOWN Wynnewood				6. COUNTY Garvin							
	7. STREAM BED ELEVATION 1008.5				8. TOP OF DAM ELEVATION 1041.0				9. SPILLWAY CREST ELEV. 1025.86							
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															
	b. FLOOD CONTROL		1036.00		120.07		824.17		1075.32		8-12-55					
	c. POWER															
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION															
	g. SEDIMENT		1025.86		43.04		251.15		251.15		8-12-55					
h. INACTIVE																
WATERSHED	17. LENGTH OF RESERVOIR 1.14 1/ MILES				AV. WIDTH OF RESERVOIR 0.21 MILES											
	18. TOTAL DRAINAGE AREA 3.80 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 37.00 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 3.73 SQ. MI.				23. MEAN ANNUAL RUNOFF 4.29 INCHES											
	20. LENGTH 2.95 MILES		AV. WIDTH 1.29 MILES		24. MEAN ANNUAL RUNOFF 869 AC.-FT.											
	21. MAX. ELEV. -		MIN. ELEV. 1008.5		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.	
	8-12-55		-		-		Range (D)		9		43.04		251.15		66.09	
	3-25-58		2.62		2.62		"		9		(120.07) 43.04		(1075.32) 240.25		(282.98) 63.22	
	10-3-63		5.52		8.14		"		9		(120.07) 43.04		(1054.81) 212.87		(277.58) 56.02	
											(120.07) 43.04		(1018.01) 212.87		(267.90) 56.02	
	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				
3-25-58		10.90 (20.51)		4.16 (7.83)		1.12 (2.10)		10.90 (20.51)		4.16 (7.83)		1.12 (2.10)				
10-3-63		27.38 (36.80)		4.96 (6.67)		1.33 (1.79)		38.28 (57.31)		4.70 (7.04)		1.26 (1.89)				
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				
3-25-58		51.61 (8)		1258 (2360)		1258 (2360)		1.66 (0.73)		4.34 (1.91)						
10-3-63		"		1495 (2012)		1416 (2124)		1.87 (0.65)		15.24 (5.33)						

1/ Includes .24 mile in one side arm.
() Both sediment and flood pool.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											

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
1036.0	120.07	1075.32						
1032.0	93.01	650.25						
1028.0	56.16	355.00	No 1963 capacity because it was worked by End Area Method.					
1025.9	43.04	251.15						
1024.0	31.43	181.47						
1020.0	18.40	82.97						
1016.0	7.48	32.82						
1012.0	3.62	11.09						
1008.0	1.84	0.37						

47. REMARKS AND REFERENCES

48. AGENCY MAKING SURVEY Soil Conservation Service

49. AGENCY SUPPLYING DATA Stillwater, Oklahoma

50. DATE 9-25-64

RESERVOIR SEDIMENT

DATA SUMMARY

SCS-34 Rev. 6-66

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Chigley Sandy Site No. 4

NAME OF RESERVOIR

50-45a

DATA SHEET NO.

DAM	1. OWNER Tate-Golden			2. STREAM Washita			3. STATE Oklahoma			
	4. SEC 1 & 12 TWP. 2N RANGE 2E			5. NEAREST P.O. Wynnewood			6. COUNTY Garvin			
	7. LAT. " " " " " " " " " " " "			8. TOP OF DAM ELEVATION 1041.0			9. SPILLWAY CREST ELEV 1025.86			
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		1036.00		120.07		824.17		1075.32	8-12-55
	b. MULTIPLE USE									
	c. POWER									
	d. WATER SUPPLY									16. DATE NORMAL OPER. BEGAN
	e. IRRIGATION									
	f. CONSERVATION									
g. INACTIVE		1025.86		43.04		251.15		251.15	8-12-55	
WATERSHED	17. LENGTH OF RESERVOIR .90 MILES				AV. WIDTH OF RESERVOIR .06 MILES					
	18. TOTAL DRAINAGE AREA 3.80 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 37.00 INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 3.73 SQ. MI.				23. MEAN ANNUAL RUNOFF 4.29 INCHES					
	20. LENGTH 2.95 MILES		AV. WIDTH 1.29 MILES		24. MEAN ANNUAL RUNOFF 869.4 AC.-FT.					
	21. MAX. ELEV. 1165'		MIN. ELEV. 1008.5		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.		
	8-12-55	-	-	Range (D)	9	43.0 (120.1)	251.2 (1075.3)	.29 (1.24)		
	3-25-58	2.62	2.62	Range (D)	9	43.0 (120.1)	240.3 (1054.8)	.28 (1.21)		
	10-3-63	5.52	8.14	Range (D)	9	43.0 (120.1)	212.9 (1018.0)	.25 (1.17)		
	7-8-69	5.76	13.90	Range Contour (D)	9 (R)	40.2 (120.1)	194.3 (966.7)	.22 (1.11)		
	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 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			
3-25-58	10.90	4.16	1.12	10.90	4.16	1.12				
	(20.51)	(7.83)	(2.10)	(20.51)	(7.83)	(2.10)				
10-3-63	27.38	4.96	1.33	38.28	4.70	1.26				
	(36.80)	(6.67)	(1.79)	(57.31)	(7.04)	(1.89)				
7-8-69	18.60	3.23	0.87	56.85	4.09	1.10				
	(51.30)	(8.91)	(2.39)	(108.62)	(7.81)	(2.09)				
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				
3-25-58	51.61 (8)	1259	1259	1.66	4.34					
		(2361)	(2361)	(0.73)	(1.91)					
10-3-63	51.61 (8)	1495	1416	1.87	15.24					
		(2012)	(2124)	(0.65)	(5.33)					
7-8-69	39 Sed P (3)	739	934	1.63	22.64					
	82 Det P (3)	(3454)	(2702)	(0.73)	(10.10)					

NOTE: Figures in parentheses represent sediment and flood control pools.
 weighted Av. 59 lbs

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
				1036	1032	1028		1025.9	1024	1020	1016	1012
				32	28	25.9		24	20	16	12	08
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
7-8-69				19.3	24.0	4.2		4.6	12.8	16.9	9.0	9.2

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. ELEVATION-AREA-CAPACITY DATA 1/								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
	<u>Original</u>	<u>Capacity</u>	1008.0	1.84	0.37	1022.0	21.0	79.3
1036.0	120.07	1075.32	<u>1969 Capacity</u>			1020.0	13.7	44.9
1032.0	93.01	650.25	1036.0	120.1	966.7	1018.0	7.2	24.3
1028.0	56.16	355.00	1034.0	101.0	746.0	1016.0	4.3	13.0
1025.9	43.04	251.15	1032.0	82.6	562.7	1014.0	3.1	5.8
1024.0	31.43	181.47	1030.0	67.2	413.2	1012.0	1.7	1.1
1020.0	18.40	82.97	1028.0	52.8	293.5			
1016.0	7.48	32.82	1025.86	40.2	194.3			
1012.0	3.62	11.09	1024.0	29.6	129.6			

47. REMARKS AND REFERENCES

Geology: Garber-Wellington Formation, Permian Age
 Land Use: Cultivation 1%, Pasture-Range 60%, Woodland 37%, Miscellaneous 2%
 (1969 Survey)
 Land Resource Area: Cross Timbers
 1/ 1958 or 1963 Elevation-Area-Capacity Data not available.

Oklahoma Watershed Planning Staff
 S.C.S. U.S.D.A.

48. AGENCY MAKING SURVEY
 49. AGENCY SUPPLYING DATA

50. DATE 12-10-69

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Chigley Sandy Site #4

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50-45b

DATA SHEET NO.

DAM	1. OWNER Tate-Golden		2. STREAM Washita		3. STATE Oklahoma			
	4. SEC. 1&12 TWP. 2N RANGE 2E		5. NEAREST P.O. Wynnewood		6. COUNTY Garvin			
	7. LAT. 34° 50' 08" LONG. 97° 4' 20"		8. TOP OF DAM ELEVATION 1041.0		9. SPILLWAY CREST ELEV. 1025.86			
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	1036.00	120.07	824.17	1075.32	3-12-55		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION							
	f. CONSERVATION							
g. INACTIVE 1/	1025.86	43.04	251.15	251.15	3-12-55			
WATERSHED	17. LENGTH OF RESERVOIR .90 MILES		AV. WIDTH OF RESERVOIR .21 MILES					
	18. TOTAL DRAINAGE AREA 3.80 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 37.00 INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 3.61 SQ. MI.		23. MEAN ANNUAL RUNOFF 4.29 INCHES					
	20. LENGTH 2.95 MILES	AV. WIDTH 1.29 MILES	24. MEAN ANNUAL RUNOFF 869.4 AC.-F.T.					
	21. MAX. ELEV. 1165.0	MIN. ELEV. 1008.5	25. ANNUAL TEMP. MEAN 62° RANGE -15° to 114°					
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.
	8-12-55	-	-	Range (D)	9(R)	43.0(120.1)	251.2(1075.3)	0.29(1.24)
	3-25-58	2.62	2.62	"	9(R)	43.0(120.1)	240.3(1054.8)	0.28(1.21)
	10-3-63	5.52	8.14	"	9(R)	43.0(120.1)	212.8(1018.0)	0.25(1.17)
	7-8-69	5.76	13.90	Range	9(R)	40.2(120.1)	194.3(966.7)	0.22(1.11)
	5-20-74	4.87	18.77	Contour (D)	2'C.I.	35.3(119.7)	178.3(948.4)	0.21(1.09)
	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	
	8-12-55	-	-	-	-	-	-	
	3-25-58	10.9(20.5)	4.16(7.83)	1.75(2.17)	10.9(20.5)	4.16(7.83)	1.75(2.17)	
	10-3-63	27.4(36.8)	4.96(6.67)	1.37(1.85)	38.3(57.3)	4.70(7.04)	1.30(1.95)	
	7-8-69	18.6(51.3)	3.23(8.91)	0.89(2.47)	56.9(108.6)	4.09(7.81)	1.13(2.16)	
5-20-74	16.0(18.3)	3.29(3.76)	0.91(1.04)	72.9(126.9)	3.88(6.76)	1.08(1.87)		
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	
8-12-55	-	-	-	-	-	-	-	
3-25-58	51.61(8)	1293(2439)	1293(2439)	1.7(0.7)	4.34(1.91)	-	-	
10-3-63	51.61(8)	1546(2076)	1461(2191)	1.9(0.7)	15.2(5.3)	-	-	
7-8-69	39 Sed. P. (3)	254(3667)	959(2798)	1.6(0.7)	22.6(10.1)	-	-	
5-20-74	82 Det. P. (3) 26 Sed. P. (3) 77 Det. P. (3)	515(734)	612(1937)	1.5(0.6)	29.0(11.8)	-	-	

1/ Sediment Pool

(Note) Figures in parentheses include both sediment and flood pool.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION													
	1036-32	1032-28	1028-25.9		1025.9-24	1024-20	1020-16	1016-12	1012-08					
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
7-8-69	19.3	24.0	4.2		4.6	12.8	16.9	9.0	9.2					
5-20-74	16.9	16.9	8.7		9.1	13.9	13.4	13.2	7.9					
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
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 2/														
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY						
See attached sheet														
47. REMARKS AND REFERENCES														
Geology: Garber-Wellington Formation, Permian Age Land Use: Cropland 1%, Pasture-Range 61%, Timber 35%, Miscellaneous 3% (1974 survey) Cropland 1%, Pasture-Range 60%, Timber 37%, Miscellaneous 2% (1969 survey) Land Resource Area: Cross Timbers 2/ 1958 and 1963 Elevation-Area-Capacity Data not available.														
48. AGENCY MAKING SURVEY Oklahoma Watershed & River Basin Planning Staff														
49. AGENCY SUPPLYING DATA SCS USDA						50. DATE December 20, 1974								