

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

Mill Creek No. 17

SOIL CONSERVATION SERVICE  
50 - 24  
NAME OF RESERVOIR  
DATA SHEET NO.

DAM	1. OWNER <b>J. M. Lester</b>			2. RIVER <b>Trib. of Mill Cr.</b>			3. STATE <b>Okla.</b>									
	4. SEC. <b>1</b> TWP. <b>28</b> RANGE <b>4E</b>			5. NEAREST TOWN <b>Mill Creek</b>			6. COUNTY <b>Johnston</b>									
	7. STREAM BED ELEV. <b>88.7 1/</b>			8. TOP OF DAM ELEV. <b>116.0 1/</b>			9. SPILLWAY CREST ELEV. <b>112.0 1/</b>									
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		<b>112.0 1/</b>		<b>66.25 2/</b>				<b>509.32</b>		<b>12-3-48</b>					
	b. POWER															
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	d. IRRIGATION															
	e. CONSERVATION		<b>101.0</b>		<b>16.18 2/</b>		<b>-</b>		<b>78.69</b>		<b>12-3-48</b>					
	f. INACTIVE															
WATERSHED	17. LENGTH OF RESERVOIR <b>0.53</b> MILES				AV. WIDTH OF RESERVOIR <b>0.20</b> MILES											
	18. TOTAL DRAINAGE AREA <b>1.61</b> SQ. MI.				22. MEAN ANNUAL PRECIPITATION <b>38.00</b> INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA <b>1.58</b> SQ. MI.				23. MEAN ANNUAL RUNOFF <b>5.5</b> INCHES											
	20. LENGTH <b>2.80</b> MILES		AV. WIDTH <b>0.58</b> MILES		24. MEAN ANNUAL RUNOFF <b>293.32</b> AC.-FT.											
	21. MAX. ELEV. <b>-</b>		MIN. ELEV. <b>88.7 1/</b>		25. CLIMATIC CLASSIFICATION <b>Humid</b>											
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 <sub>w</sub> RATIO AC.-FT. PER SQ. MI.	
	<b>12-3-48</b>		<b>-</b>		<b>-</b>		<b>-</b>		<b>-</b>		<b>66.25</b>		<b>509.32</b>		<b>316.35</b>	
	<b>7-20-59</b>		<b>10.63</b>		<b>10.63</b>		<b>Det. Range</b>		<b>6</b>		<b>66.25</b>		<b>502.58</b>		<b>312.16</b>	
	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			
	<b>-</b>		<b>-</b>		<b>-</b>		<b>-</b>		<b>-</b>		<b>-</b>		<b>-</b>			
	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			
	<b>7-20-59</b>		<b>6.74 3/</b>		<b>0.63</b>		<b>0.40</b>		<b>6.74</b>		<b>0.63</b>		<b>0.40</b>			
	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. TOT. TO DATE				
<b>7-20-59</b>		<b>69.78</b>		<b>607.92</b>		<b>607.92</b>		<b>00.80 (00.12)</b>		<b>08.57 (01.32)</b>						

1/ Assumed.

2/ As determined from resurvey of July 1959.

3/ No sediment in 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. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
112.0	66.25	509.32	88.7	-	-			
108.0	43.64	291.08						
104.0	29.36	146.03						
101.0	16.18	78.69						
96.0	6.80	22.89						
92.0	2.63	4.68						

47. REMARKS AND REFERENCES  
 Land Use: All pasture and formerly cultivated drainage area.  
 C/I Ratio = (48.88 = 0.17); (316.35 = 1.08).  
 Estimated trap efficiency = 97%.

Soil Conservation Service  
 Stillwater, Okla.

48. AGENCY SUPPLYING DATA \_\_\_\_\_ 49. DATE 10-29-59

RESERVOIR SEDIMENT  
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Mill Creek Site 17

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50- 24a

DATA SHEET NO.

DAM	1. OWNER <b>J. M. Lester</b>			2. STREAM <b>Washita</b>			3. STATE <b>Okla.</b>					
	4. SEC. <b>1</b> TWP. <b>2-S</b> RANGE <b>4-E</b>			5. NEAREST P.O. <b>Mill Creek</b>			6. COUNTY <b>Johnston</b>					
	7. LAT. ° ' " LONG. ° ' "			8. TOP OF DAM ELEVATION <b>116.0</b>			9. SPILLWAY CREST ELEV. <b>112.0</b>					
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		<b>112.0</b>		<b>66.25</b>				<b>498.45</b>		<b>12-3-48</b>	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION											
g. INACTIVE		<b>101.0</b>		<b>17.20</b>				<b>82.47</b>		<b>12-3-48</b>		
17. LENGTH OF RESERVOIR <b>0.53</b> MILES				AV. WIDTH OF RESERVOIR <b>0.20</b> MILES								
18. TOTAL DRAINAGE AREA <b>1.61</b> SQ. MI.				22. MEAN ANNUAL PRECIPITATION <b>38.00</b> INCHES								
19. NET SEDIMENT CONTRIBUTING AREA <b>1.58</b> SQ. MI.				23. MEAN ANNUAL RUNOFF <b>5.5</b> INCHES								
20. LENGTH <b>2.80</b> MILES		AV. WIDTH		MILES		24. MEAN ANNUAL RUNOFF <b>472</b> AC.-FT.						
21. MAX. ELEV.			MIN. ELEV. <b>88.0</b>			25. ANNUAL TEMP.: MEAN RANGE <b>Humid</b>						
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 <del>ACRES</del> SQ. MI.		
12-3-48		-	-	-		2 C. I.	17.20 (66.25)	82.47 (498.45)		309.6		
7-20-59		10.63	10.63	Detail Topo		"	17.20 (66.25)	76.15 (492.13)		305.7		
8-10-66		7.06	17.69	Range Contour (D)		6 (R) 2 C.I.	16.93 (66.25)	72.91 (487.11)		302.6		
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					
7-20-59		6.32 (6.32)	.59 (.59)	.37 (.37)	6.32 (6.32)	.59 (.59)	.37 (.37)					
8-10-66		3.24 (5.02)	.46 (.71)	.29 (.45)	9.56 (11.34)	.54 (.64)	.34 (.41)					
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			
7-20-59		70	564	564	.72 (.12)	7.66 (1.27)						
8-10-66		24 Sed P(2) 90 Det P(2)	---	500 804	.65 (.13)	11.60 (2.28)						

( ) Includes Both Pools.

Weighted Avg. = approx. 75 lbs/ft.3

112 110 110 108 108 106 106 104 104 101 101 98 98- 96 96- 94 94- 92 92- 90 90- 88

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION												
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
7-20-59	-	-	-	-	-	-	24	22	15	20	14	5	
8-10-66	-	-	3	5	7	25	16	10	19	12	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. 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: 97% Native Pasture, 3% Miscellaneous

Geology: 100% Simpson Ord Age

48. AGENCY MAKING SURVEY

49. AGENCY SUPPLYING DATA SCS - Stillwater, Oklahoma

50. DATE \_\_\_\_\_

ELEVATION - AREA - CAPACITY DATA

Mill Creek Site 17

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 - 12-3-48</u>				<u>1959 Capacity</u>		
112.0	66.25	498.45		112.0	66.25	492.13
110.0	54.65	377.68		110.0	54.65	371.36
108.0	43.64	279.55		108.0	43.64	273.23
106.0	33.12	203.11		106.0	33.12	196.79
104.0	24.93	145.31		104.0	24.93	138.99
101.0	17.20	82.47		101.0	17.20	76.15
98.0	11.55	39.63		98.0	10.58	34.88
96.0	6.76	21.52		96.0	6.34	18.15
94.0	4.54	10.30		94.0	4.05	7.85
92.0	2.46	3.41		92.0	1.62	2.25
90.0	0.64	0.51		90.0	0.52	0.21
88.0	0.02	0		89.0	0.02	0

1966 Capacity

112.0	66.25	487.12
110.0	54.65	366.34
108.0	43.64	268.20
106.0	32.67	192.11
104.0	24.66	134.93
101.0	16.93	72.91
98.0	10.06	32.87
96.0	6.44	16.52
94.0	3.73	6.48
92.0	1.20	1.78
90.0	0.45	0.19
89.0	.02	.00

RESERVOIR SEDIMENT  
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

Mill Creek Site #17  
NAME OF RESERVOIR

50-24b  
DATA SHEET NO.

DAM	1. OWNER <b>J. M. Leater</b>			2. STREAM <b>Mill Creek</b>			3. STATE <b>Oklahoma</b>				
	4. SEC. <b>1</b> TWP. <b>2S</b> RANGE <b>4E</b>			5. NEAREST P. O. <b>Sulphur</b>			6. COUNTY <b>Johnston</b>				
7. LAT <b>34° 24' 10"</b> LONG <b>96° 51' 20"</b>			8. TOP OF DAM ELEVATION <b>116.0</b>			9. SPILLWAY CREST ELEV. <b>112.0</b>					
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		<b>112.0</b>		<b>66.25</b>		<b>415.98</b>		<b>498.45</b>		<b>12-3-48</b>
	b. MULTIPLE USE										
	c. POWER										
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN
	e. IRRIGATION										
	f. CONSERVATION										
	g. INACTIVE <b>1/</b>		<b>101.0</b>		<b>17.20</b>		<b>82.47</b>		<b>82.47</b>		<b>12-3-48</b>
WATERSHED	17. LENGTH OF RESERVOIR <b>0.53</b> MILES				AV. WIDTH OF RESERVOIR <b>0.20</b> MILES						
	18. TOTAL DRAINAGE AREA <b>1.61</b> SQ. MI.				22. MEAN ANNUAL PRECIPITATION <b>38.00</b> INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA <b>1.51</b> SQ. MI.				23. MEAN ANNUAL RUNOFF <b>5.5</b> INCHES						
	20. LENGTH <b>2.80</b> MILES		AV. WIDTH <b>0.57</b> MILES		24. MEAN ANNUAL RUNOFF <b>472</b> AC.-F T.						
	21. MAX. ELEV. <b>Est. 256</b>		MIN. ELEV. <b>88.0</b>		25. ANNUAL TEMP.: MEAN <b>63°</b> RANGE <b>-15° to +114°</b>						
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.		
	<b>12-3-48</b>		<b>-</b>	<b>-</b>	<b>Detail Topog.</b>	<b>2' C.I.</b>	<b>17.2(66.3)</b>	<b>82.5(498.4)</b>	<b>.17 (1.06)</b>		
	<b>7-20-59</b>		<b>10.63</b>	<b>10.63</b>	<b>"</b>	<b>2' C.I.</b>	<b>17.2(66.3)</b>	<b>76.2(492.1)</b>	<b>.16 (1.04)</b>		
	<b>8-10-66</b>		<b>7.06</b>	<b>17.69</b>	<b>Range Contour (D)</b>	<b>6(R) 2' C.I.</b>	<b>16.9(66.3)</b>	<b>72.97(487.1)</b>	<b>.15 (1.03)</b>		
	<b>5-20-72</b>		<b>5.78</b>	<b>23.47</b>	<b>"</b>	<b>6(R) 2' C.I.</b>	<b>14.3(63.9)</b>	<b>68.4(470.4)</b>	<b>.14 (1.00)</b>		
	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			
<b>7-20-59</b>		<b>6.3 (6.3)</b>	<b>0.6 (0.6)</b>	<b>0.4 (0.4)</b>	<b>6.3 (6.3)</b>	<b>0.6 (0.6)</b>	<b>0.4 (0.4)</b>				
<b>8-10-66</b>		<b>3.2 (5.0)</b>	<b>0.5 (0.7)</b>	<b>0.3 (0.5)</b>	<b>9.5 (11.3)</b>	<b>0.5 (0.6)</b>	<b>0.3 (0.4)</b>				
<b>5-20-72</b>		<b>4.6 (16.7)</b>	<b>0.8 (2.9)</b>	<b>0.5 (1.9)</b>	<b>14.1 (28.0)</b>	<b>0.6 (1.2)</b>	<b>0.4 (0.8)</b>				
26. DATE OF SURVEY		39. AV. DRY WGT., LBS. PER CU. FT.	40. SED. DEP., TONS PERSQ. 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			
<b>7-20-59</b>		<b>70 lbs ave.</b>	<b>610 (610)</b>	<b>610 (610)</b>	<b>0.7(0.1)</b>	<b>7.7 (1.3)</b>					
<b>8-10-66</b>		<b>24 SedP(2)</b>	<b>156 (487)</b>	<b>157 (353)</b>	<b>0.7(0.1)</b>	<b>11.5 (2.3)</b>					
<b>5-20-72</b>		<b>90 DetP(2)</b>	<b>1050(3351)</b>	<b>401 (1081)</b>	<b>0.7(0.2)</b>	<b>17.1 (5.6)</b>					
		<b>46 SedP(3)</b>									
		<b>78 DetP(3)</b>									

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	112	110	108	106	104	101	98-96	96-94	94-92	92-90	90-88	
	110	108	106	104	101	98	98-96	96-94	94-92	92-90	90-88	
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
7-20-59	-	-	-	-	-	24	22	15	20	14	5	
8-10-66	-	-	3	5	7	25	16	10	19	12	3	
5-20-72	12	7	3	5	22	9	15	8	6	11	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 2/								
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: 97% native pasture, 3% miscellaneous 1959-1966-1972 Surveys

Geology: Simpson Group-Ordovician Age

Land Resource Area: Grand Prairie

( ) 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 August 11, 1972