

RESERVOIR SEDIMENTATION
DATA SUMMARY

Green Creek No. 1

53 - 36

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER R. E. Peck & C. R. Ward		2. RIVER Green Creek		3. STATE Texas				
	4. SEC. TWP. RANGE		5. NEAREST TOWN Dublin		6. COUNTY Erath				
	7. STREAM BED ELEV. 1405.4		8. TOP OF DAM ELEV. 1434.6		9. SPILLWAY CREST ELEV. 1429.6				
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	1429.6	124	864	1010	4-25-1955			
	b. POWER								
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN			
	d. IRRIGATION								
	e. CONSERVATION	1419.0	41.4	146	146	5-18-1955			
	f. INACTIVE								
17. LENGTH OF RESERVOIR .83 1/2		MILES		AV. WIDTH OF RESERVOIR .25		MILES			
WATERSHED	18. TOTAL DRAINAGE AREA 3.56		SQ. MI.		22. MEAN ANNUAL PRECIPITATION 30		INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA 3.37		SQ. MI.		23. MEAN ANNUAL RUNOFF 291		INCHES		
	20. LENGTH 3.0		MILES		AV. WIDTH 0.8		MILES		
	24. MEAN ANNUAL RUNOFF 155 ac. ft. / sq. mi. AG- FT.								
	21. MAX. ELEV. 1490		MIN. ELEV. 1405.4		25. CLIMATIC CLASSIFICATION Sub-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.	
	April 25, 1955	-	-	Range Detail	16	864	1010	284	
	Jan. 18, 1957	1.74	1.74	Range Detail	16	864	991.1	278	
	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		
	Jan. 18, 1957	18.9	10.86	3.22	18.9	10.86	3.22		
	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		
Jan. 18, 1957	-	-	-	1.08	1.87	-	-		

1/ South Arm .34 miles long.

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									
47. REMARKS AND REFERENCES																	
Land Use: Cultivated = 38.06%. Formerly cultivated = 7.17%. Pasture or Range = 45.24%. Woodland = 9.53%. C/I Ratio = 1.81 Estimated trap efficiency = 98%. Total Annual Load, Adjusted for Trap Efficiency = 3.29 ac.ft./sq.mi.																	
48. AGENCY SUPPLYING DATA												Soil Conservation Service		49. DATE		March 4, 1957	
												Temple, Texas					

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, 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
1404	0.09	0.06	1412	13.90	50.73	1422	60.00	369.98
1406	2.21	1.89	1414	18.40	82.92	1424	78.30	507.64
1408	6.56	10.28	1416	24.90	126.06	1426	93.90	679.61
1410	10.11	26.82	1418	34.75	185.44	1428	110.00	883.30
			1420	45.10	265.00	1430	129.00	1122.18

47. REMARKS AND REFERENCES
 Physiographic Area: West Cross Timbers
 Land Use: Cultivated 18%; Pasture 82%.
 CI Ratio: $\frac{1}{2} = 1.92$; $\frac{2}{1} = 0.40$
 Estimated trap efficiency = 98%
 Total annual sediment load adjusted for trap efficiency: $\frac{1}{2} = 0.80$
 $\frac{2}{1}$ Both pools $\frac{2}{1} = 0.47$
 $\frac{1}{2}$ Sediment pool only

48. AGENCY MAKING SURVEY Soil Conservation Service
 49. AGENCY SUPPLYING DATA Temple, Texas
 50. DATE 6-67

RESERVOIR SEDIMENT

DATA SUMMARY

SCS-34 Rev. 6-66

Site No. 1, Green Creek Watershed

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

53-36b

DATA SHEET NO.

DAM	1. OWNER Gordon			2. STREAM Green Creek			3. STATE Texas													
	4. SEC. TWP. RANGE			5. NEAREST P. O. Dublin			6. COUNTY Erath													
	7. LAT 32° 10' 00" LONG 97° 20' 28"			8. TOP OF DAM ELEVATION 1434.6			9. SPILLWAY CREST ELEV. 1429.6													
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									
	b. FLOOD CONTROL		1429.6 1/		124.0		856		1095.0		4-25-55									
	b. MULTIPLE USE																			
	c. POWER																			
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN									
	e. IRRIGATION																			
	f. CONSERVATION																			
g. INACTIVE		1419.0 2/		41.8		239.0		239.0		5-18-55										
17. LENGTH OF RESERVOIR			0.83			MILES			AV. WIDTH OF RESERVOIR			0.23			MILES					
18. TOTAL DRAINAGE AREA			3.57			SQ. MI.			22. MEAN ANNUAL PRECIPITATION			30.80 (47)			INCHES					
19. NET SEDIMENT CONTRIBUTING AREA			3.38			SQ. MI.			23. MEAN ANNUAL RUNOFF			2.9			INCHES					
20. LENGTH			3.0			MILES			AV. WIDTH			1.19			MILES					
21. MAX. ELEV.			1490			MIN. ELEV.			1404.0			25. ANNUAL TEMP: MEAN			64°F			RANGE 45°F - 83°F		
WATERSHED	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.					
	<u>1/</u> 4-25-55		--		--		Range- Contour (D)		17 R		124.0		1095.0		1.98					
	<u>1/</u> 1-18-57		1.8		1.8						124.0		1080.0		1.96					
	<u>1/</u> 4-9-62		5.2		7.0						124.0		1065.0		1.93					
	<u>1/</u> 6-9-67		5.2		12.2						124.0		1063.0		1.93					
	<u>1/</u> 5-2-72		4.9		17.1						2' CI		124.0		1054.2		1.91			
	26. DATE OF SURVEY		XXX XX XX		XX XX XX		XX XX XX		XX XX XX		XX XX XX		XX XX XX		XX XX XX					
	<u>2/</u> 4-25-55										41.8		239.0		--					
	<u>2/</u> 1-18-57										40.8		230.0		--					
	<u>2/</u> 4-9-62										39.8		222.0		--					
<u>2/</u> 6-9-67										39.7		220.0		--						
<u>2/</u> 5-2-72										39.0		213.7		--						
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							
	<u>1/</u> 5-2-72		8.8		1.80		0.53		40.8		2.39		0.71							
	<u>2/</u> 5-2-72		6.3		1.29		0.37		25.3		1.48		0.42							
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								
<u>1/</u> 5-2-72		-		-		-		0.22		3.73		-								
<u>2/</u> 5-2-72		-		-		-		0.62		10.59		-								

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, 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							
1406	0.91	0.61	1420	45.01	255.70										
1408	5.97	6.75	1422	59.08	359.52										
1410	10.01	22.10	1424	78.05	496.28										
1412	13.00	45.08	1426	92.15	668.78										
1414	18.10	76.06	1428	108.00	868.82										
1416	24.01	118.05	1430	129.00	1104.63										
1418	35.03	176.77													
47. REMARKS AND REFERENCES															
<p>Physiographic Area: West Cross Timbers Land Use: Pasture 82%; Cultivated 18%</p> <p>Estimated trap efficiency = 98%</p> <p>Total annual sediment load adjusted for trap efficiency: 0.72 ac.ft./sq.mi./yr. ^{1/} 0.45 ac.ft./sq.mi./yr. ^{2/}</p> <p><u>1/</u> Both Pools <u>2/</u> Sediment Pool only</p>															
48. AGENCY MAKING SURVEY				Soil Conservation Service											
49. AGENCY SUPPLYING DATA				Temple, Texas				50. DATE 1-31-73							