

RESERVOIR SEDIMENT
DATA SUMMARY

Site No. 17, Denton Creek Watershed

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

51-40

DATA SHEET NO.

DAM	1. OWNER A. L. Sauder			2. STREAM Trinity River			3. STATE Texas									
	4. SEC. TWP. RANGE			5. NEAREST P. O. Decatur			6. COUNTY Wise									
	7. LAT. " LONG. "			8. TOP OF DAM ELEVATION 931.0			9. SPILLWAY CREST ELEV. 925.5									
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										5-3-62					
	b. MULTIPLE USE		925.5 1/		91.0		1211.16		1621.33							
	c. POWER										16. DATE NORMAL OPER. BEGAN					
	d. WATER SUPPLY															
	e. IRRIGATION										5-3-62					
	f. CONSERVATION															
	g. INACTIVE		906.3 2/		35.7		410.17		410.17							
17. LENGTH OF RESERVOIR 1.06 MILES				AV. WIDTH OF RESERVOIR 0.15 MILES												
18. TOTAL DRAINAGE AREA 4.10 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 29.32 (30) INCHES												
19. NET SEDIMENT CONTRIBUTING AREA 3.94 SQ. MI.				23. MEAN ANNUAL RUNOFF 2.75 INCHES												
20. LENGTH 3.55 MILES				AV. WIDTH 1.15 MILES				24. MEAN ANNUAL RUNOFF 601.30 AC. FT.								
21. MAX. ELEV. 1115.0				MIN. ELEV. 870.2				25. ANNUAL TEMP. MEAN 63°F RANGE 41°F- 84°F								
WATERSHED	26. DATE OF SURVEY		27. PERIOD YEARS		28. ACC. YEARS		29. TYPE OF SURVEY		30. NO. OF RANGES OR CONTOUR INT.		31. SURFACE AREA, ACRES		32. CAPACITY, ACRE-FEET		33. CH. RATIO, AC. FT. PER AC. FT.	
	1/ 10-14-63		-		-		Range-Contour (D)		31 R		91.01		1621.33		2.70	
	1/ 10-14-68		5.0		5.0						90.82		1557.16		2.60	
	2/ 10-14-63		-		-		2' CI		2' CI		35.66		410.17		-	
	2/ 10-14-68		5.0		5.0						34.09		371.76		-	
	34. 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			
	37. 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			
1/ 10-14-68		64.17		12.83		3.26		64.17		12.83		3.26				
2/ 10-14-68		38.41		7.68		1.95		38.41		7.68		1.95				
39. 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				
1/ 10-14-68		-		-		-		0.79		3.96		-				
2/ 10-14-68		31.6		1342		1342		1.87		9.36		-				

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. 1968 ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
878.0	0.29	0.19	906.3	34.09	371.77										
882.0	2.00	4.13	910.0	44.97	518.23										
886.0	4.44	17.25	914.0	57.15	722.29										
890.0	8.93	43.65	918.0	67.18	971.37										
894.0	13.22	87.53	922.0	78.61	1262.52										
898.0	19.19	151.89	925.5	90.82	1557.16										
902.0	26.15	242.44													
47. REMARKS AND REFERENCES															
1/ Total reservoir below emergency spillway crest elevation (925.5').															
2/ Sediment pool only.															
48. AGENCY MAKING SURVEY				Soil Conservation Service				50. DATE 2/69							
49. AGENCY SUPPLYING DATA															

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DATA SUMMARY

Site No. 17, Denton Creek Watershed

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

51 - 40a

DATA SHEET NO.

DAM	1. OWNER A. L. Sauder		2. STREAM Trinity River		3. STATE Texas				
	4. SEC. TWP. RANGE		5. NEAREST P. O. Decatur		6. COUNTY Wise				
	7. LAT 33° 24' 04" LONG 97° 28' 23"		8. TOP OF DAM ELEVATION 931.0		9. SPILLWAY CREST ELEV. 925.5				
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	925.5 1/	91.0	1211.16	1621.33	5-3-62			
	b. MULTIPLE USE								
	c. POWER								
	d. WATER SUPPLY								
	e. IRRIGATION					16. DATE NORMAL OPER. BEGAN			
	f. CONSERVATION								
	g. INACTIVE	906.3 2/	35.7	410.17	410.17				
17. LENGTH OF RESERVOIR	1.06	MILES	AV. WIDTH OF RESERVOIR	0.13	MILES				
WATERSHED	18. TOTAL DRAINAGE AREA	4.10	SQ. MI.	22. MEAN ANNUAL PRECIPITATION	29.32 (35)	INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA	3.96	SQ. MI.	23. MEAN ANNUAL RUNOFF	2.75	INCHES			
	20. LENGTH	3.55	MILES	AV. WIDTH	1.15	MILES			
	24. MEAN ANNUAL RUNOFF	601.30	AC. F. T.	25. ANNUAL TEMP: MEAN	63°F	RANGE 41°F - 84°F			
	21. MAX. ELEV.	1115.0	MIN. ELEV.	870.2					
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/ 10-14-63	-	-	Range-Contour (D)	31 R	91.01	1621.33	2.70	
	1/ 10-14-68	5.0	5.0			90.82	1557.16	2.60	
	1/ 6-28-73	4.7	9.7			88.74	1524.37	2.54	
	2/ 10-14-63	-	-			35.66	410.17	--	
	2/ 10-14-68	5.0	5.0			34.09	371.76	--	
	2/ 6-28-73	4.7	9.7			33.30	360.21	--	
	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
1/ 6-28-73	32.79	6.98	1.76	96.96	10.0	2.53			
2/ 6-28-73	11.55	2.46	0.64	49.96	5.15	1.30			
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. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
1/ 6-28-73	-	3210.19	3732.39	0.62	5.98	-	-	-	
2/ 6-28-73	38.8 (7)	852.94	1107.03	1.26	12.18	-	-	-	
3/ 6-28-73	98.0 (2)	2357.25	2625.36	-	-	-	-	-	

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							
880.0	0.78	0.52	904.0	28.95	288.65	925.5	88.74	1524.37							
884.0	3.01	7.29	906.3	33.30	360.21										
888.0	6.37	25.43	910.0	43.97	501.22										
892.0	10.85	60.37	914.0	56.34	702.42										
896.0	15.38	112.32	918.0	66.06	947.32										
900.0	21.85	186.85	922.0	77.69	1234.27										
47. REMARKS AND REFERENCES															
<u>1/</u> Total Reservoir below emergency spillway crest elevation (925.5') <u>2/</u> Sediment Pool only <u>3/</u> Detention Pool only Land Resource Area - Grand Prairie Geology - Goodland limestone - Walnut clay formation (undivided) of Lower Cretaceous Age.															
48. AGENCY MAKING SURVEY				Soil Conservation Service				50. DATE				1 - 74			
49. AGENCY SUPPLYING DATA				Temple, Texas											

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Site No. 17, Denton Creek Watershed
NAME OF RESERVOIR

IS-34 Rev. 6-66

51 - 40b

DATA SHEET NO.

DAM	1. OWNER A.L. Sauder		2. STREAM Trinity River		3. STATE Texas								
	4. SEC. TWP. RANGE		5. NEAREST P.O. Decatur		6. COUNTY Wise								
	7. LAT. 33° 24' 04" LONG. 97° 28' 23"		8. TOP OF DAM ELEVATION 931.0		9. SPILLWAY CREST ELEV. 925.5								
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		1/ 925.5		91.0		1211.16		1621.33		5- 3-62		
	b. MULTIPLE USE												
	c. POWER												
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION										5- 3-62		
	f. CONSERVATION												
	g. INACTIVE		2/ 906.3		35.7		410.17		410.17				
WATERSHED	17. LENGTH OF RESERVOIR				1.06 MILES		AV. WIDTH OF RESERVOIR				0.13 MILES		
	18. TOTAL DRAINAGE AREA				4.10 SQ. MI.		22. MEAN ANNUAL PRECIPITATION				29.32 (35) INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA				3.96 SQ. MI.		23. MEAN ANNUAL RUNOFF				2.75 INCHES		
	20. LENGTH		3.55 MILES		AV. WIDTH 1.15 MILES		24. MEAN ANNUAL RUNOFF				601.30 AC.-FT.		
	21. MAX. ELEV.		1115.0		MIN. ELEV. 870.2		25. ANNUAL TEMP.: MEAN 63°F RANGE 41° - 84° F						
SURVEY DATA	1	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.				
		10-14-63	-	-	Range- Contour (D)	31 R 2' CI	91.01	1621.33	2.70				
		10-14-68	5.0	5.0			90.82	1557.16	2.60				
		6-28-73	4.7	9.7			88.74	1524.37	2.54				
		4-02-79	5.8	4/ 16.9			88.74	1506.99	2.51				
	26. DATE OF SURVEY		27. PERIOD YEARS				28. ACCL. YEARS		31. SURFACE AREA, ACRES		32. CAPACITY, ACRE-FEET		33. C/I. RATIO, AC.-FT. PER AC.-FT.
	2	10-14-63	-	-			35.66	410.17					
		10-14-68	5.0	5.0			34.09	371.76					
		6-28-73	4.7	9.7			33.30	360.21					
		4-02-79	5.8	4/ 16.9			33.31	346.37					
		26. DATE OF SURVEY		37. PERIOD CAPACITY LOSS, ACRE-FEET			38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET						
	1	a. PERIOD TOTAL		b. AV. ANNUAL		c. PER SQ. MI.-YEAR		a. TOTAL TO DATE		b. AV. ANNUAL		c. PER SQ. MI.-YEAR	
		4-02-79	17.38		3.00		0.76		114.34		6.77		1.71
2	a. PERIOD TOTAL		b. AV. ANNUAL		c. PER SQ. MI.-YEAR		a. TOTAL TO DATE		b. AV. ANNUAL		c. PER SQ. MI.-YEAR		
	4-02-79	13.84		2.39		0.60		63.80		3.78		0.95	
13	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		
	4-02-79	-		1026.82		2489.95		0.42		7.05			
4-02-79	39.7 (7)		563.67		821.43		0.92		15.55				
4-02-79	100.8 (5)		463.15		1668.52								

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
	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. 1979 ELEVATION-AREA-CAPACITY DATA														
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY						
882	0.80	0.53	898	18.18	134.95	914	56.25	686.96						
884	2.41	3.60	900	21.58	174.66	916	61.15	804.33						
886	3.72	9.68	902	25.10	221.32	918	66.00	931.45						
888	5.66	18.99	904	28.71	275.11	920	71.40	1068.81						
890	8.42	32.98	906.3	33.31	346.37	922	77.43	1217.60						
892	10.25	51.62	908	37.00	406.11	924	83.12	1378.12						
894	12.41	74.25	910	43.75	486.77	925.5	88.74	1506.99						
896	15.10	101.72	912	50.16	580.61									
47. REMARKS AND REFERENCES														
<u>1/</u> Total reservoir below emergency spillway crest elevation (925.5). <u>2/</u> Sediment pool only. <u>3/</u> Detention pool only. <u>4/</u> Accl. years computed from 5-3-62.														
Land Resource Area: Grand Prairie. Geology: Goodland limestone - Walnut clay formation (undivided) of Lower Cretaceous Age. Land Use: 97% rangeland, 3% cultivated.														
48. AGENCY MAKING SURVEY SCS, Temple, Texas														
49. AGENCY SUPPLYING DATA SCS, Temple, Texas														
50. DATE 1-80														