

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

Site No. 9 Mukewater Creek
NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

53-40

DATA SHEET NO.

DAM	1. OWNER Strange Estate No. 1		2. STREAM Mid. Colorado R.		3. STATE Texas			
	4. SEC. TWP. RANGE		5. NEAREST TOWN Bangs		6. COUNTY Coleman			
	7. STREAM BED ELEVATION 1502.0		8. TOP OF DAM ELEVATION 1531.7		9. SPILLWAY CREST ELEV. 1527.1			
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					1-2-61		
	b. FLOOD CONTROL	1527.1	129.40	612.23	732.94			
	c. POWER							
	d. WATER SUPPLY							
	e. IRRIGATION					16. DATE NOR-MAL OPER. BEGAN		
	f. CONSERVATION							
	g. SEDIMENT	1518.2	28.30	120.71	120.71	1-2-61		
h. INACTIVE								
WATERSHED	17. LENGTH OF RESERVOIR 1.52 MILES		AV. WIDTH OF RESERVOIR 0.13 MILES					
	18. TOTAL DRAINAGE AREA 4.75 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 28.30 (57) INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 4.55 SQ. MI.		23. MEAN ANNUAL RUNOFF 2.1 INCHES					
	20. LENGTH 3.75 MILES		AV. WIDTH 1.27 MILES		24. MEAN ANNUAL RUNOFF 532 AC.-FT.			
	21. MAX. ELEV.		MIN. ELEV. 1502.0		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/ 1-2-61	-	-	Range-Contour (D)	23 Ranges	129.40	732.94	154
	1/ 6-2-65	4.42	4.42		25 Ranges	129.62	708.42	149
	2/ 1-2-61	-	-	2' Contour Interval	2' Contour	28.30	120.71	25
	2/ 6-2-65	4.42	4.42		Interval	26.05	110.13	23
	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	
1/ 6-2-65	24.52	5.55	1.22	24.52	5.55	1.22		
2/ 6-2-65	10.58	2.39	0.53	10.58	2.39	0.53		
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		
1/ 6-2-65	-		-		0.76	3.35		
2/ 6-2-65	70.5		813		1.98	8.76		

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
Elevation-Area-Capacity Data on attached sheet.								

47. REMARKS AND REFERENCES

1/ Both pools
 2/ Sediment pool only
 3/ 2 ranges added during 1965 survey
 Land Use: Cultivated 30%; formerly cultivated 10%; rangeland 60%.
 Geology: Thrifty fm., Cisco Group, Pennsylvanian Age
 Physiographic Area: Palo Pinto Section

48. AGENCY MAKING SURVEY Soil Conservation Service
 49. AGENCY SUPPLYING DATA

50. DATE 6-66

Reservoir Sediment
Data Summary Contd.

Site No. 9 Mukowater Creek

46. Elevation - Area - Capacity Data
1961 Survey

Elevation	Area	Capacity
1502.0	0.12	0.08
1504.0	0.87	0.74
1506.0	1.99	3.59
1508.0	3.51	9.02
1510.0	4.66	17.14
1512.0	6.27	28.02
1514.0	10.40	44.51
1516.0	16.90	71.56
1518.2	28.30	120.71
1520.0	39.10	181.11
1522.0	57.60	277.26
1524.0	78.70	413.07
1526.0	110.20	601.18
1527.1	129.40	732.94

1965 Survey

1502.0	0.01	0.01
1504.0	0.42	0.30
1506.0	1.18	1.37
1508.0	2.86	5.22
1510.0	3.87	11.92
1512.0	5.74	21.46
1514.0	9.82	36.83
1516.0	16.91+	63.25
1518.2	26.05	110.13
1520.0	38.00	167.44
1522.0	55.96	260.86
1524.0	76.68	393.02
1526.0	108.59	577.46
1527.1	129.62+	708.42

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

Site No. 9, Mukewater Creek

NAME OF RESERVOIR

53- 40a

DATA SHEET NO.

DAM	1. OWNER Strange Estate No. 1		2. STREAM Mid, Colorado R.		3. STATE Texas			
	4. SEC. -- TWP. -- RANGE --		5. NEAREST P. O. Bangs		6. COUNTY Coleman			
	7. LAT. 31° 41' 35" LONG. 99° 12' 15"		8. TOP OF DAM ELEVATION 1531.7		9. SPILLWAY CREST ELEV. 1527.1			
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	1527.1 1/	129.40	612.23	732.94	1-2-61		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY							
	e. IRRIGATION					16. DATE NORMAL OPER. BEGAN		
	f. CONSERVATION							
	g. INACTIVE	1518.2 2/	28.30	120.71	120.71	1-2-61		
17. LENGTH OF RESERVOIR		1.52	MILES	AV. WIDTH OF RESERVOIR		0.13 MILES		
WATERSHED	18. TOTAL DRAINAGE AREA		4.75	SQ. MI.	22. MEAN ANNUAL PRECIPITATION		26.82 INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA		4.55	SQ. MI.	23. MEAN ANNUAL RUNOFF		2.10 INCHES	
	20. LENGTH		3.75	MILES	AV. WIDTH		1.27 MILES	
	21. MAX. ELEV.		1630		MIN. ELEV.		1502	
					25. ANNUAL TEMP.: MEAN		66°F RANGE 47°F - 84°F	
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.
	1-2-61	-	-	Range-	25 R	129.40	732.94	1.38
	6-2-65	4.4	4.4			129.623/	708.42	1.33
	7-2-70	5.1	9.5			129.44	703.41	1.32
	1-2-61	-	-	Contour	2' CI	28.30	120.71	--
	6-2-65	4.4	4.4			26.05	110.13	--
	7-2-70	5.1	9.5			26.05	105.54	--
	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	
7-2-70	5.01	0.98	0.22	29.53	3.11	0.68		
7-2-70	4.59	0.90	0.20	15.17	1.60	0.35		
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	
7-2-70	-	-	-	0.42	4.03	--	--	
7-2-70	52.5	228	400	1.32	12.57	--	--	

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
See attached sheet								

47. REMARKS AND REFERENCES

1/ Emergency Spillway Crest (all pools up to elev. 1527.1)
2/ Sediment Pool only
3/ Increase in area due to additional ranges established during 1965 survey

48. AGENCY MAKING SURVEY **Sedimentation Survey Party**
 49. AGENCY SUPPLYING DATA **Soil Conservation Service, Texas** 50. DATE 9-71

46. Elevation-Area-Capacity Data

1961 Survey

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
1502.0	0.12	0.08
1504.0	0.87	0.74
1506.0	1.99	3.59
1508.0	3.51	9.02
1510.0	4.66	17.14
1512.0	6.27	28.02
1514.0	10.40	44.51
1516.0	16.90	71.56
1518.2	28.30	120.71
1520.0	39.10	181.11
1522.0	57.60	277.26
1524.0	78.70	413.07
1526.0	110.20	601.18
1527.1	129.40	732.94

1965 Survey

1502.0	0.01	0.01
1504.0	0.42	0.30
1506.0	1.18	1.37
1508.0	2.86	5.22
1510.0	3.87	11.92
1512.0	5.74	21.46
1514.0	9.82	36.83
1516.0	16.91	63.25
1518.2	26.05	110.13
1520.0	38.00	167.44
1522.0	55.96	260.86
1524.0	76.68	393.02
1526.0	108.59	577.46
1527.1	129.62	708.42

1970 Survey

1504.0	0.53	0.35
1506.0	1.07	1.92
1508.0	2.58	5.46
1510.0	3.44	11.46
1512.0	4.49	19.37
1514.0	9.46	33.01
1516.0	16.73	58.86
1518.2	26.05	105.54
1520.0	38.00	162.85
1522.0	55.96	256.23
1524.0	76.68	388.33
1526.0	108.59	572.68
1527.1	129.44	703.41

**RESERVOIR SEDIMENT
DATA SUMMARY**

CS-34 Rev. 6-66

Site No. 9, Mukewater Creek

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

53 - 40b

DATA SHEET NO.

DAM	1. OWNER <u>Strange Estate No. 1</u>				2. STREAM <u>Middle Colorado</u>				3. STATE <u>Texas</u>					
	4. SEC. <u>TWP.</u> RANGE			5. NEAREST P.O. <u>Bangs, TX</u>				6. COUNTY <u>Coleman</u>						
	7. LAT. <u>31° 41' 35" LONG. 99° 12' 15"</u>				8. TOP OF DAM ELEVATION <u>1531.7</u>				9. SPILLWAY CREST ELEV. <u>1527.1</u>					
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/ 1527.1		129.40		612.23		732.94		1- 2-61			
	b. MULTIPLE USE													
	c. POWER													
	d. WATER SUPPLY													
	e. IRRIGATION										16. DATE NORMAL OPER. BEGAN			
	f. CONSERVATION													
	g. INACTIVE		2/ 1518.2		28.30		120.71		120.71		1- 2-61			
17. LENGTH OF RESERVOIR					1.52 MILES			AV. WIDTH OF RESERVOIR					0.13 MILES	
18. TOTAL DRAINAGE AREA					4.75 SQ. MI.			22. MEAN ANNUAL PRECIPITATION					26.82 INCHES	
19. NET SEDIMENT CONTRIBUTING AREA					4.55 SQ. MI.			23. MEAN ANNUAL RUNOFF					2.10 INCHES	
20. LENGTH		3.75 MILES		AV. WIDTH		1.27 MILES		24. MEAN ANNUAL RUNOFF					531.97 AC.-FT.	
21. MAX. ELEV.		1630		MIN. ELEV.		1502		25. ANNUAL TEMP.: MEAN <u>66° F</u> RANGE <u>47° - 84° F</u>						
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/ 1- 2-61		-	-	Range- Contour (D)		25 R 2' CI		129.40		732.94		1.38	
	1/ 6- 2-65		4.4	4.4					129.62		708.42		1.33	
	1/ 7- 2-70		5.1	9.5					129.44		703.41		1.32	
	1/ 4-14-78		7.8	17.3					129.40		685.68		1.29	
	26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INF. LOW	36. PERIOD WATER INF. HIGH	37. PERIOD CAPACITY LOSS, ACRE-FEET	38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET	39. AV. DRY WGT., LBS. PER CU. FT.	40. SED. DEP., TONS PERSQ. MI.-YR.	41. STORAGE LOSS, PCT.	42. SED. INFLOW, PPM			
	2/ 1- 2-61		-	-										
	2/ 6- 2-65		4.4	4.4										
	2/ 7- 2-70		5.1	9.5										
	2/ 4-14-78		7.8	17.3										
	1/ 4-14-78		17.73	.2.27	0.50	47.26	2.73	0.60						
	2/ 4-14-78		6.82	0.87	0.19	21.99	1.27	0.28						
4/ 4-14-78 Dec		P 84.4	565.09	588.23	1.05	18.22								
2/ 4-14-78 Sed		P 48.0	159.00	292.72	0.37	6.45								
1/ 4-14-78		-	724.09	880.95										

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. 1978 ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
1506	0.62	0.41	1522	55.09	244.92										
1508	1.94	2.85	1524	76.08	375.53										
1510	3.20	7.94	1526	105.76	556.56										
1512	4.31	15.42	1527.1	129.40	685.68										
1514	8.79	28.26													
1516	16.27	52.94													
1518.2	25.71	98.72													
1520	36.26	154.22													
47. REMARKS AND REFERENCES															
<u>1/</u> Emergency spillway crest (all pools up to elevation 1527.1). <u>2/</u> Sediment pool only. <u>3/</u> Increase in area due to additional ranges established during 1965 survey. <u>4/</u> Detention pool only.															
Land Use: cropland 16%, grassland 80%, woodland 2%, miscellaneous 2%. Geology: Thrifty Formation, Cisco Group, Pennsylvanian Age. Land Resource Area: Central Rolling Red Prairies.															
48. AGENCY MAKING SURVEY Sedimentation Survey Party, SCS															
49. AGENCY SUPPLYING DATA SCS															
50. DATE 1-14-79															