

RESERVOIR SEDIMENT
DATA SUMMARY

SCS-34 Rev. 6-66

Site No. 10-A, Mukewater Creek

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

53- 44

DATA SHEET NO.

DAM	1. OWNER T. M. Hays Estate			2. STREAM Mukewater Creek			3. STATE Texas												
	4. SEC. TWP. RANGE			5. NEAREST P.O. Bangs			6. COUNTY Coleman												
	7. LAT. " ' " LONG. " ' " "			8. TOP OF DAM ELEVATION 1485			9. SPILLWAY CREST ELEV. 1480.0												
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		1480.0 1/		428.89		2651.20		3164.89		3-24-65								
	b. MULTIPLE USE																		
	c. POWER																		
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN								
	e. IRRIGATION																		
WATERSHED	f. CONSERVATION		1470.2 2/		110.32		281.67		513.69		3-24-65								
	g. Inactive		1466.7 3/		55.35		232.02		232.02										
	17. LENGTH OF RESERVOIR			1.52 MILES			AV. WIDTH OF RESERVOIR			0.44 MILES									
	18. TOTAL DRAINAGE AREA				15.26 4/ SQ. MI.				22. MEAN ANNUAL PRECIPITATION				28.30 (57) INCHES						
19. NET SEDIMENT CONTRIBUTING AREA				14.59 4/ SQ. MI.				23. MEAN ANNUAL RUNOFF				2.10 INCHES							
20. LENGTH				8.67 4/ MILES				AV. WIDTH				1.76 MILES							
21. MAX. ELEV.				MIN. ELEV.				1452.0				25. ANNUAL TEMP: MEAN RANGE				Dry 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/R RATIO, AC.-FT. PER SQ. MI.				
	3-24-65		-		-		Range-Contour (D)		35 R		428.89		3164.89		207.40				
	8-1-66		1.4		1.4						428.89		3157.99		206.94				
	3-24-65		-		-						110.32		513.69						
	8-1-66		1.4		1.4				2' CI		109.99		507.84						
	3-24-65		-		-						55.35		232.02						
	8-1-66		1.4		1.4						55.30		226.62						
	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 8-1-66		6.90		4.93		0.34		6.90		4.93		0.34						
2 8-1-66		5.85		4.18		0.29		5.85		4.18		0.29							
3 8-1-66		5.40		3.86		0.26		5.40		3.86		0.26							
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					
1 8-1-66		-		-		-		0.16		0.22		--		--					
2 8-1-66		-		-		-		0.81		1.14		--		--					
3 8-1-66		70.50		399		399		1.66		2.33		--		--					

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														
	5-10	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/ All pools (up to elev. 1480.0)

2/ Principal Spillway Crest (including sediment pool and sediment reserve to elev. 1470.2)

3/ Sediment pool (below port at elev. 1466.7)

4/ Sites No. 5 and No. 6 above Site No. 10-A not included in watershed area.
 C/I Ratio: 1/ = 1.85; 2/ = 0.30; 3/ = 0.13. (Ratios not adjusted for upstream reserv
 Estimated trap efficiency: 96% Physiographic area: Palo Pinto Section

48. AGENCY MAKING SURVEY
 49. AGENCY SUPPLYING DATA

Soil Conservation Service
 Temple, Texas

50. DATE 6-67

Site No. 10-A, Mukewater Creek

46. Elevation - Area - Capacity Data

			<u>Original</u>		
Elevation	Area	Capacity	Elevation	Area	Capacity
1452.0	1.06	0.71	1466.7	55.35	232.02
1454.0	3.42	4.96	1468.0	72.64	314.58
1456.0	6.24	14.48	1470.2	110.32	513.69
1458.0	7.60	28.30	1472.0	162.31	757.36
1460.0	10.64	46.46	1474.0	232.88	1150.63
1462.0	16.72	73.59	1476.0	303.76	1685.70
1464.0	29.56	119.20	1480.0	428.89	3164.89
			<u>1966</u>		
1452.0	0.04	0.64	1456.7	55.30	226.62
1454.0	2.78	2.20	1468.0	72.80	309.13
1456.0	5.89	10.68	1470.2	109.99	507.84
1458.0	7.52	24.06	1472.0	162.25	751.35
1460.0	10.63	42.12	1474.0	232.68	1144.16
1462.0	16.37	68.91	1476.0	303.70	1678.97
1464.0	29.34	113.89	1480.0	428.89	3157.99

RESERVOIR SEDIMENT
DATA SUMMARY

SCS-34 Rev. 6-66

Site No. 10A Mukewater Creek

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

53 - 44a

DATA SHEET NO.

DAM	1. OWNER T. M. Hayes Est.			2. STREAM Mukewater Creek			3. STATE Texas						
	4. SEC. TWP. RANGE			5. NEAREST P.O. Bangs			6. COUNTY Coleman						
	7. LAT 31° 38' 58" LONG 99° 13' 28"			8. TOP OF DAM ELEVATION 1485.0			9. SPILLWAY CREST ELEV. 1480.0						
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		1480.0 1/		428.89		2651.20		3164.89		3-24-65		
	b. MULTIPLE USE										16. DATE NORMAL OPER. BEGAN		
	c. POWER										3-24-65		
	d. WATER SUPPLY												
	e. IRRIGATION												
	f. CONSERVATION		1470.2 2/		110.32		281.67		513.69				
g. INACTIVE		1466.7 3/		55.35		232.02		232.02					
WATERSHED	17. LENGTH OF RESERVOIR 1.52 MILES				AV. WIDTH OF RESERVOIR 0.44 MILES								
	18. TOTAL DRAINAGE AREA 15.26 4/ SQ. MI.				22. MEAN ANNUAL PRECIPITATION 28.30 (57) INCHES								
	19. NET SEDIMENT CONTRIBUTING AREA 14.59 4/ SQ. MI.				23. MEAN ANNUAL RUNOFF 2.10 INCHES								
	20. LENGTH 8.67 4/ MILES		AV. WIDTH 1.76 MILES		24. MEAN ANNUAL RUNOFF 1709 AC.-F.T.								
	21. MAX. ELEV.		MIN. ELEV. 1452.0		25. ANNUAL TEMP: MEAN 65°F RANGE 47°F - 83°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/T RATIO, AC.-FT. PER AC.-FT.		
	1/ 8-1-66		1.4	1.4			428.89		3157.99		1.85		
	1/ 8-24-72		6.06	7.46	Range	35 R	428.89		3138.38		1.84		
	2/ 8-1-66		1.4	1.4	Contour		109.99		507.84		--		
	2/ 8-24-72		6.06	7.46	(D)	2' CI	110.32		489.28		--		
	3/ 8-1-66		1.4	1.4			55.30		226.62		--		
	3/ 8-24-72		6.06	7.46			55.25		211.29		--		
	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/ 8-24-72		19.61	3.24	0.22	26.51	3.55	0.24						
2/ 8-24-72		18.56	3.06	0.20	24.41	3.27	0.22						
3/ 8-24-72		15.33	2.53	0.17	20.73	2.78	0.18						
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					
1/ 8-24-72		-	-	-	0.11	0.84	-	-					
2/ 8-24-72		-	-	-	0.64	4.75	-	-					
3/ 8-24-72		-	-	-	1.20	8.93	-	-					

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							
1456.0	3.48	2.32	1470.2	110.32	489.28										
1458.0	7.64	13.17	1472.0	162.36	732.20										
1460.0	9.36	30.15	1474.0	233.50	1126.11										
1462.0	15.98	55.21	1476.0	303.68	1662.02										
1464.0	29.13	99.69	1478.0	374.11	2338.93										
1466.7	55.25	211.29	1480.0	428.89	3138.38										
1468.0	71.72	293.53													
47. REMARKS AND REFERENCES															
<p>1/ All pools (up to elevation 1480.0).</p> <p>2/ Principal spillway crest (including sediment pool and sediment reserve pool up to elevation 1470.2).</p> <p>3/ Sediment pool (below port @ elevation 1466.7).</p> <p>4/ Sites No. 5 and No. 6 above Site 10-A not included in watershed area.</p> <p>C.I. Ratio: 1/ = 1.84 2/ = 0.29 3/ = 0.12 (Ratios not adjusted for upstream reservoirs.)</p> <p>Estimated trap efficiency = 96% Physiographic area: Palo Pinto Section</p>															
48. AGENCY MAKING SURVEY Soil Conservation Service															
49. AGENCY SUPPLYING DATA Temple, Texas				50. DATE 1-73											

RESERVOIR SEDIMENT
DATA SUMMARY

CS-34 Rev. 6-66

Site No. 10-A, Mukewater Creek

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

53 - 44b

DATA SHEET NO.

DAM	1. OWNER T.M. Hayes Estate		2. STREAM Mukewater Creek		3. STATE Texas														
	4. SEC. TWP. RANGE		5. NEAREST P.O. Bangs		6. COUNTY Coleman														
	7. LAT. 31° 38' 58" LONG. 99° 13' 28"		8. TOP OF DAM ELEVATION 1485.0		9. SPILLWAY CREST ELEV. 1480.0														
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/ 1480.0		428.29		2651.20		3164.89		3-24-65								
	b. MULTIPLE USE																		
	c. POWER																		
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN								
	e. IRRIGATION																		
	f. CONSERVATION		2/ 1470.2		110.32		281.67		513.69		3-24-65								
	g. INACTIVE		3/ 1466.7		55.35		232.02		232.02										
WATERSHED	17. LENGTH OF RESERVOIR 1.52 MILES				AV. WIDTH OF RESERVOIR 0.44 MILES														
	18. TOTAL DRAINAGE AREA 5/ 15.26 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 26.82 (86) INCHES																
	19. NET SEDIMENT CONTRIBUTING AREA 14.59 SQ. MI.		23. MEAN ANNUAL RUNOFF 2.10 INCHES																
	20. LENGTH 8.67 MILES		AV. WIDTH 1.76 MILES		24. MEAN ANNUAL RUNOFF 1709.1 AC.-FT.														
	21. MAX. ELEV. 1676.0		MIN. ELEV. 1452.0		25. ANNUAL TEMP: MEAN 65° RANGE 47° - 83° 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/ 8-1-66		1.4		1.4		Range- Contour (D)		35 R 2' CI		428.89		3157.99		1.85				
	1/ 8-24-72		6.06		7.46						428.38		3138.38		1.84				
	1/ 4-17-78		5.65		13.11						428.91		3114.91		1.82				
	2/ 8-1-66		1.4		1.4						109.99		507.84						
	2/ 8-24-72		6.06		7.46						110.32		489.28						
	2/ 4-17-78		5.65		13.11						110.30		473.80						
	26. DATE OF SURVEY		PERIOD		ACCL.		TYPE OF SURVEY		NO. OF RANGES OR CONTOUR INT.		SURFACE AREA, ACRES		CAPACITY, ACRE-FEET		C/I. RATIO, AC.-FT. PER AC.-FT.				
	3/ 8-1-66		1.4		1.4						55.30		226.62						
	3/ 8-24-72		6.06		7.46						55.25		211.29						
	3/ 4-17-78		5.65		13.11						55.25		196.56						
	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/ 4-17-78		23.47			4.15			0.28			49.98			3.81			0.26		
2/ 4-17-78		15.48			2.74			0.19			39.89			3.04			0.21		
3/ 4-17-78		14.73			2.61			0.18			35.46			2.70			0.19		
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							
1/ 4-17-78		-		317		281		0.12		1.58									
4/ 4-17-78 Det		P 84 (5)		185		128													
3/ 4-17-78 Sed		P 37 (7)		132		153		1.16		15.28									

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							
1456	1.19	0.79	1470.2	110.30	473.80										
1458	7.22	8.35	1472	160.92	716.47										
1460	9.06	24.60	1474	232.00	1107.23										
1462	12.15	45.73	1476	302.91	1640.57										
1464	28.60	85.32	1478	372.22	2314.51										
1466.7	55.25	196.56	1480	428.85	3114.91										
1468	69.65	277.56													
47. REMARKS AND REFERENCES															
<u>1/</u> Total reservoir below emergency spillway crest elevation. <u>2/</u> Principal spillway crest (including sediment reserve and sediment pools). <u>3/</u> Sediment pool only. <u>4/</u> Figures represent sediment reserve and detention pools only. <u>5/</u> Site Nos. 5 and 6 above Site 10A are not included in watershed area.															
Geology: Thrifty Formation, Cisco Group, Pennsylvanian Age. Land Resource Area: Central Rolling Red Prairies. Land Use: 38% cultivated, 60% rangeland, 2% miscellaneous.															
48. AGENCY MAKING SURVEY			SCS, Temple, Texas												
49. AGENCY SUPPLYING DATA			SCS, Temple, Texas			50. DATE 2-79									