

RESERVOIR SEDIMENT
DATA SUMMARY

SCS-34 Rev. 6-66

Site No. 18, Valley Creek Watershed

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

54- 10

DATA SHEET NO.

DAM	1. OWNER Ralph Burns			2. STREAM Trib. of Valley Cr.			3. STATE Texas						
	4. SEC. TWP. RANGE			5. NEAREST P. O. Winters			6. COUNTY Runnels						
	7. LAT. 32°00' " LONG. 100°06' "			8. TOP OF DAM ELEVATION 1971.0			9. SPILLWAY CREST ELEV. 1965.9						
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		1965.9 1/		64.33		650.07		719.89		6-30-64		
	b. MULTIPLE USE												
	c. POWER												
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION												
	f. CONSERVATION												
g. INACTIVE		1944.1 2/		8.86		69.82		69.82		6-30-64			
WATERSHED	17. LENGTH OF RESERVOIR 0.82 MILES				AV. WIDTH OF RESERVOIR 0.12 MILES								
	18. TOTAL DRAINAGE AREA 4.21 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 22.63 (68) INCHES								
	19. NET SEDIMENT CONTRIBUTING AREA 4.11 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.35 INCHES								
	20. LENGTH 3.0 MILES		AV. WIDTH 1.40 MILES		24. MEAN ANNUAL RUNOFF 303 AC.-F.T.								
	21. MAX. ELEV. 2080		MIN. ELEV. 1933.5		25. ANNUAL TEMP.: MEAN 64°F RANGE 45°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/I. RATIO, AC.-FT. PER AC.-FT.				
	1/ 8-11-64		-	-	Range -		64.33	719.89	2.38				
	1/ 6-11-69		4.8	4.8	Contour	20 R	64.33	717.05	2.36				
	2/ 8-11-64		-	-	(D)	2' CI	8.86	69.82	-				
	2/ 6-11-69		4.8	4.8			8.86	68.06	-				
	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.-YR.	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR					
1/ 6-11-69		2.84	0.59	0.14	2.84	0.59	0.14						
2/ 6-11-69		1.76	0.37	0.09	1.76	0.37	0.09						
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/ 6-11-69		69	210	210	0.08	0.39	-		-				
2/ 6-11-69		60	117	117	0.53	2.52	-		-				
3/ 6-11-69		85	92	92	-	-	-		-				

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
1928.0	0.26	0.17	1942.0	7.57	50.82	1956.0	29.19	279.01
1930.0	1.35	1.64	1944.1	8.86	68.06	1958.0	33.82	341.96
1932.0	2.22	5.18	1946.0	10.79	86.71	1960.0	40.04	415.73
1934.0	2.86	10.24	1948.0	13.64	111.08	1962.0	46.60	502.29
1936.0	3.35	16.44	1950.0	17.65	142.29	1964.0	55.02	603.79
1938.0	5.16	24.89	1952.0	20.61	180.51	1965.9	64.33	717.05
1940.0	6.62	36.64	1954.0	24.41	225.48			

47. REMARKS AND REFERENCES

1/ Total reservoir below emergency spillway crest elev. (1965.9').

2/ Sediment pool only.

3/ Detention pool only.

48. AGENCY MAKING SURVEY Texas Sedimentation Survey Party
 49. AGENCY SUPPLYING DATA Soil Conservation Service
 50. DATE December 1969

RESERVOIR SEDIMENT
DATA SUMMARY

CS-34 Rev. 6-66

Site No. 18, Valley Creek Watershed

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

54 - 10a

DATA SHEET NO.

DAM	1. OWNER Burns			2. STREAM Trib. of Valley Cr.			3. STATE Texas					
	4. SEC. TWP. RANGE			5. NEAREST P.O. Winters			6. COUNTY Runnels					
	7. LAT. 31° 59' 49" LONG. 100° 06' 04"			8. TOP OF DAM ELEVATION 1917.0			9. SPILLWAY CREST ELEV. 1965.9					
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/ 1965.9		64.33		650.07		719.89		6-30-64	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION											
	g. INACTIVE		2/ 1944.1		8.86		69.82		69.82		6-30-64	
17. LENGTH OF RESERVOIR 0.82 MILES					AV. WIDTH OF RESERVOIR 0.12 MILES							
WATERSHED	18. TOTAL DRAINAGE AREA 4.21 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 22.62 (73) INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 4.11 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.35 INCHES							
	20. LENGTH 3.0 MILES		AV. WIDTH 1.4 MILES		24. MEAN ANNUAL RUNOFF 303 AC.-FT.							
	21. MAX. ELEV. 2080.0		MIN. ELEV. 1928.0		25. ANNUAL TEMP.: MEAN 64° F RANGE 45° - 83° F							
	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.			
8-11-64		-	-	Range-	20 R	64.33	719.89	2.38				
6-11-69		4.8	4.8	Contour	2' CI	64.33	717.05	2.36				
7-18-77		8.1	12.9	(D)		64.33	707.90	2.34				
8-11-64		-	-			8.86	69.82					
6-11-69		4.8	4.8			8.86	68.06					
7-18-77		8.1	12.9			8.86	64.53					
SURVEY DATA	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				
	7-18-77		9.15	1.13	0.27	11.99	0.93	0.23				
	7-18-77		3.53	0.44	0.11	5.29	0.41	0.10				
	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			
	7-18-77		-	378.0	350.4	0.13	1.67					
7-18-77		53 Sed	P 114.3	115.4	0.59	7.58						
7-18-77		83 Det	P 263.7	235.0								

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. 1977 ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1928.0	0.11	0.07	1942.0	7.42	47.46	1956.0	29.09	273.32
1930.0	1.14	1.14	1944.1	8.86	64.53	1958.0	33.73	336.02
1932.0	1.89	4.14	1946.0	10.68	83.06	1960.0	39.25	408.86
1934.0	2.58	8.59	1948.0	13.59	107.25	1962.0	46.21	494.14
1936.0	3.24	14.39	1950.0	17.09	137.83	1964.0	54.79	594.92
1938.0	5.03	22.59	1952.0	20.50	175.33	1965.9	64.33	707.90
1940.0	6.24	33.83	1954.0	24.31	220.04			

47. REMARKS AND REFERENCES

1/ Total reservoir below emergency spillway crest elevation (1965.9).
 2/ Sediment pool only.
 3/ Detention pool only.

Land Resource Area: Central Rolling Red Plains.
 Geology: Clear Fork Group of Upper Permian Age.

48. AGENCY MAKING SURVEY SCS, Temple, Texas
 49. AGENCY SUPPLYING DATA SCS, Temple, Texas
 50. DATE 2-78

25. 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. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

The largest flood flows into the reservoir occurred on June 15, 1965, and again on June 17, 1965, when water ponded in the reservoir up to about one foot above the flow line in the riser. All flows during the period 1971 through 1980 ponded below the riser elevation.

48. AGENCY MAKING SURVEY Soil Conservation Service
 49. AGENCY SUPPLYING DATA Soil Conservation Service
 50. DATE December 1980