

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

Sugar Creek Site #13
NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50-49
DATA SHEET NO.

DAM	1. OWNER N.E. Hawkins			2. STREAM Sugar Creek			3. STATE Oklahoma			
	4. SEC. 20 TWP. 11-N RANGE 11-W			5. NEAREST TOWN Hinton			6. COUNTY Caddo			
	7. STREAM BED ELEVATION 1396.0			8. TOP OF DAM ELEVATION 1427.2			9. SPILLWAY CREST ELEV. 1423.2			
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									
	b. FLOOD CONTROL	1423.2	43.44	408.93	532.17	2-13-64				
	c. POWER									
	d. WATER SUPPLY						16. DATE NORMAL OPER. BEGAN			
	e. IRRIGATION									
	f. CONSERVATION									
	g. SEDIMENT	1410.2	20.29	123.24	123.24	2-13-64				
h. INACTIVE										
WATERSHED	17. LENGTH OF RESERVOIR 0.38 MILES			AV. WIDTH OF RESERVOIR 0.11 MILES						
	18. TOTAL DRAINAGE AREA 1.99 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 28.45 INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA 1.93 SQ. MI.			23. MEAN ANNUAL RUNOFF 2.35 INCHES						
	20. LENGTH 2.3 MILES			AV. WIDTH 0.87 MILES			24. MEAN ANNUAL RUNOFF 249 AC.-FT.			
	21. MAX. ELEV.			MIN. ELEV. 1396.0			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.		
	2-13-64	0	0	Range Detail 2' Contour	11 Ranges	20.29 (43.44)	123.24 (532.17)	61.93 (267.42) 1/		
	10-26-65	1.70	1.70			19.52 (43.44)	102.57 (503.79)	51.54 (253.16)		
	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			
	10-26-65	20.67 (28.38)	12.16 (16.69)	6.30 (8.65)	20.67 (28.38)	12.16 (16.69)	6.30 (8.65)			
	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. AN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE			
10-26-65	82.27 (4)	11,289 (15,499)	11,289 (15,499)	9.87 (3.14)	16.77 (5.33)					

18 16 14 12 10.2 08 06 04 02 00

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
			16	14	12	102	08	06	04	02	00	98
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
			0	9	11	7	11	13	14	16	12	7

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. Original Capacity			ELEVATION-AREA-CAPACITY DATA					
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1423.2	43.44	532.17	1406.0	13.40	52.35	1420.0	37.58	374.39
1422.0	41.10	481.46	1404.0	9.84	29.19	1418.0	33.61	303.21
1420.0	37.58	402.77	1402.0	6.48	12.98	1416.0	28.85	239.80
1418.0	33.61	331.59	1400.0	2.72	4.04	1414.0	24.80	186.18
1416.0	29.80	268.18	1398.0	0.89	0.59	1412.0	21.72	139.67
1414.0	26.36	212.03	1396.0	-	-	1410.2	19.52	102.57
1412.0	23.27	162.41	1965 Capacity			1408.0	14.92	64.81
1410.2	20.29	123.24	1423.2	43.44	503.79	1406.0	11.74	38.21
1408.0	16.81	82.51	1422.0	41.10	453.03	1404.0	7.66	18.95

47. REMARKS AND REFERENCES (see next page)

48. AGENCY MAKING SURVEY
 49. AGENCY SUPPLYING DATA
 50. DATE _____

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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
1402.0	4.32	7.13						
1400.0	1.62	1.40						
1398.0	0.07	0.05						
1396.0	0	0						

47. REMARKS AND REFERENCES **Geology - Rush Springs Sandstone (permian age)**
Land Use - 35% Cultivated; 29% Formerly Cultivated, Idle, and Pasture; Woody Pasture 36%.
Soils - Sandy, shallow to deep, permeable to freely permeable.
Unusual Rainfall - 4.0" May 10, 1964; 8.0" in 6 hrs. on Sept. 20, 1965 (ARS rain gages).
1/(Includes both sediment and flood pools.)
 Based on stage-inflow measurements, it is estimated that the 1964 storm accounts for 1/3 of the sediment and the September 1965 storm accounts for the remaining 2/3.
 48. AGENCY MAKING SURVEY **Watershed Planning Staff, Soil Conservation Service, Chickasha, Okla.**
 49. AGENCY SUPPLYING DATA **SCS, Stillwater, Oklahoma** 50. DATE **11/1/65**