

RESERVOIR SEDIMENT  
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Caston Mountain No. 1

SCS-34 Rev. 6-66

NAME OF RESERVOIR

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DATA SHEET NO.

LAW	1. OWNER R.D. Mitchell		2. STREAM Trib of Caston Mtn		3. STATE Oklahoma			
	4. SEC. 22 TWP. 6N RANGE 23E		5. NEAREST P.O. Wister		6. COUNTY LeFlore			
	7. LAT. 34° 58' 50" LONG 95° 51' 30"		8. TOP OF DAM ELEVATION 701.6		9. SPILLWAY CREST ELEV. 693.8			
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	693.8	115.55	2337.79	2480.79	10-20-71		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY							
	e. IRRIGATION					16. DATE NORMAL OPER. BEGAN		
	f. CONSERVATION							
	g. INACTIVE 1/	646.6	11.85	143.00	143.00	10-20-71		
17. LENGTH OF RESERVOIR	2.27 MILES		AV. WIDTH OF RESERVOIR		0.08 MILES			
18. TOTAL DRAINAGE AREA	6.23 SQ. MI.		22. MEAN ANNUAL PRECIPITATION		45.00 INCHES			
19. NET SEDIMENT CONTRIBUTING AREA	6.05 SQ. MI.		23. MEAN ANNUAL RUNOFF		12.00 INCHES			
20. LENGTH	4.2 MILES	AV. WIDTH	1.48 MILES	24. MEAN ANNUAL RUNOFF		3987 AC.-FT.		
21. MAX. ELEV. 982.0	MIN. ELEV. 618.0		25. ANNUAL TEMP: MEAN 63° F RANGE -5° to 106° F					
WATERSHED	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.
	10-20-71	-	-	Range-Contour (D)	33 R 2' CI	11.85 (115.55)	143.00 (2480.79)	0.04 (0.62)
	5-19-78	6.59	6.59	Range-Contour (D)	33 R 2' CI	11.52 (115.55)	133.75 (2453.95)	0.03 (0.62)
	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		
SURVEY DATA	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	
	5-19-78	9.25 (26.84)	1.40 (4.07)	0.23 (0.67)	9.25 (26.84)	1.40 (4.07)	0.23 (0.67)	
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	
5-19-78	46 Sed. P (1) 71 Det. P (3)	230 (895)	230 (895)	0.98 (0.16)	6.47 (1.08)			

CREST 8.8 16.8 24.8 32.8 40.8 50.8 56.8 62.8 68.8

26. DATE OF SURVEY	43. TO DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION TO														
	8.8	16.8	24.8	32.8	40.8		50.8	56.8	62.8	68.8	74.1				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
5-19-78	0	0	0	2	22	41	5	9	12	6	3				
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							
47. REMARKS AND REFERENCES															
<p><u>1/</u> Sediment pool.          Land Use: 2% grassland, 97% woodland, 1% miscellaneous (1971).                    4% range, 7% pasture, 88% forest, 1% miscellaneous (1978).          Geology: Boggy Formation Pennsylvanian Age.          Land Resource Area: Ouachita Mountains.          Figures in parentheses include both sediment and flood pools.</p>															
48. AGENCY MAKING SURVEY Oklahoma Watershed Planning Staff															
49. AGENCY SUPPLYING DATA SCS, USDA															
50. DATE October 3, 1978															

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## ELEVATION-AREA-CAPACITY DATA

<u>Original Survey 1971</u>			<u>1978 Survey</u>		
Elevation	Area	Capacity	Elevation	Area	Capacity
618	0	0	619.7	0	0
621	0.45	0.68	621.0	0.22	0.10
623	0.82	1.95	623.0	0.88	1.13
625	1.50	4.27	625.0	1.52	3.51
627	2.83	8.60	627.0	2.35	7.35
629	3.46	14.89	629.0	3.22	12.90
631	4.20	22.55	631.0	4.07	20.18
633	5.12	31.87	633.0	4.47	28.72
635	5.92	42.91	635.0	5.41	38.59
637	7.19	56.02	637.0	6.56	50.55
639	7.76	70.97	639.0	7.52	64.62
641	8.76	87.49	641.0	8.29	80.43
643	9.92	106.17	643.0	9.47	98.19
645	10.95	127.04	645.0	10.60	118.26
<u>2/ 646.6</u>	<u>11.85</u>	<u>143.00</u>	<u>2/ 646.6</u>	<u>11.52</u>	<u>133.75</u>
649	14.28	176.97	649.0	12.67	165.20
653	18.42	242.03	653.0	15.80	221.74
657	24.09	328.36	657.0	24.09	302.14
661	28.12	432.87	661.0	28.12	406.67
665	33.20	555.21	665.0	33.20	528.32
669	39.85	701.58	669.0	39.84	674.71
673	47.07	874.86	673.0	47.07	848.02
677	55.01	1078.30	677.0	55.01	1051.51
681	67.67	1321.56	681.0	67.67	1294.78
685	88.10	1618.48	685.0	81.05	1591.76
689	104.42	1972.06	689.0	96.07	1945.41
<u>3/ 693.8</u>	<u>115.55</u>	<u>2480.79</u>	<u>3/ 693.8</u>	<u>115.55</u>	<u>2453.95</u>

2/ Riser.3/ Emergency spillway.