

RESERVOIR SEDIMENT  
DATA SUMMARY

SCS-34 Rev. 6-66

Site No. 7, Third Creek

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

7- 16

DATA SHEET NO.

DAM	1. OWNER <b>C. A. Lackey</b>			2. STREAM <b>Third Creek</b>			3. STATE <b>North Carolina</b>						
	4. SEC. TWP. RANGE			5. NEAREST P. O. <b>Statesville</b>			6. COUNTY <b>Alexander</b>						
	7. LAT. ° ' " LONG. ° ' "			8. TOP OF DAM ELEVATION <b>1010</b>			9. SPILLWAY CREST ELEV. <b>1003</b>						
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		<b>1003</b>		<b>72.0</b>		<b>914.0</b>		<b>961.4</b>		<b>12-22-55</b>		
	b. MULTIPLE USE												
	c. POWER										16. DATE NORMAL OPER. BEGAN		
	d. WATER SUPPLY												
	e. IRRIGATION												
	f. CONSERVATION										<b>12-22-55</b>		
	g. INACTIVE		<b>977</b>		<b>10.6</b>		<b>47.4</b>		<b>47.4</b>				
WATERSHED	17. LENGTH OF RESERVOIR <b>0.93</b> MILES				AV. WIDTH OF RESERVOIR <b>0.121</b> MILES								
	18. TOTAL DRAINAGE AREA <b>4.84</b> SQ. MI.				22. MEAN ANNUAL PRECIPITATION <b>1/46.5 (63 yrs)</b> INCHES								
	19. NET SEDIMENT CONTRIBUTING AREA <b>4.74</b> SQ. MI.				23. MEAN ANNUAL RUNOFF <b>20</b> INCHES								
	20. LENGTH <b>4.18</b> MILES		AV. WIDTH <b>1.16</b> MILES		24. MEAN ANNUAL RUNOFF <b>5162</b> AC.-FT.								
	21. MAX. ELEV. <b>1200</b>		MIN. ELEV. <b>962</b>		25. ANNUAL TEMP: MEAN RANGE <b>Humid</b>								
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.				
	Sept. 1957		-	-	Range	17 Ranges	72.0 (10.6)	961.4 (47.4)	198.6				
	March 1962		4.5	4.5	Range	27 Ranges	72.0 (10.0)	948.5 (35.8)	196.0				
	March 1965		3.0	7.5	Range	28 Ranges	72.0 (9.9)	945.9 (33.6)	195.4				
	April 1969		4.1	11.6	Range	28 Ranges	72.0 (9.8)	943.1 (31.6)					
	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					
March 1962		12.9 (11.6)	2.87 (2.58)	.61 (.54)	12.9 (11.6)	2.87 (2.58)	.61 (.54)						
March 1965		2.6 (2.2)	.87 (.73)	.18 (.15)	15.5 (13.8)	2.07 (1.84)	.44 (.39)						
April 1969		2.8 (2.0)	.68 (.49)	.14 (.10)	18.3 (15.8)	1.58 (1.36)	.33 (.29)						
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					
March 1962		62.2 <u>2/</u>	826 (732)	826 (732)	.30 (5.44)	1.34 (24.47)							
March 1965		62.2 <u>2/</u>	244 (203)	596 (528)	.22 (3.88)	1.61 (29.11)							
April 1969		62.2 <u>2/</u>	190 (135)	447 (393)	.16 (2.87)	1.90 (33.33)							

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION													
	37-34	34-30	30-26	26-20	20-Crest	3/								
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
1962	16.1	35.7	38.8	9.2	0.2									
1965	15.9	35.2	38.4	10.4	0.1									
1969	7.1	28.4	35.1	28.0	1.4									

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  
 Note: Numbers in parentheses pertain to conservation pool only.  
 1/ Precipitation gage at Statesville, N. C.  
 2/ Average of 39 samples collected in 1962.  
 3/ Original survey was not detailed enough to determine sediment deposition above elevation 983. It was assumed that none occurred.

48. AGENCY MAKING SURVEY      SCS and ARS  
 49. AGENCY SUPPLYING DATA      SCS

50. DATE      Dec. 1969

STAGE-AREA-CAPACITY  
Reservoir # 7-A  
Third Creek, N. C.

June 1969

Elevation	1957		1962		1965		1969	
	Area (acres)	Capacity (acre ft.)	Area (acres)	Capacity (acre ft.)	Area (acres)	Capacity (acre ft.)	Area (acres)	Capacity (acre ft.)
		965.06 <sup>1/</sup>		965.5 <sup>1/</sup>		966.3 <sup>1/</sup>		967 <sup>1/</sup>
966	.40	.13	.03	.005	0	0	0	0
969	1.70	3.05	.78	.965	.66	.59	.58	.39
971	2.98	7.67	1.97	3.625	1.74	2.91	1.60	2.48
973	5.24	15.78	3.57	9.085	3.31	7.87	2.85	6.87
975	8.01	28.93	6.67	19.165	6.41	17.43	6.24	15.74
977 <sup>2/</sup>	10.56	47.45	10.04	35.765	9.88	33.59	9.75	31.60
978	11.86	58.65	11.48	46.515	11.38	44.21	11.28	42.11
980.5	14.05	91.01	13.94	78.235	13.88	75.73	13.68	73.26
983	17.07	129.81	17.07	116.935	17.07	114.35	17.03	111.57
985.5	22.90	179.58	22.90	166.705	22.90	164.12	22.90	161.30
988.5	27.67	255.33	27.67	242.455	27.67	239.87	27.67	237.05
990.5	33.97	316.87	33.97	303.995	33.97	301.41	33.97	298.59
993	39.60	408.74	39.60	395.865	39.60	393.28	39.60	390.46
995.5	47.51	517.48	47.51	504.585	47.51	502.00	47.51	499.18
998	54.86	645.33	54.86	632.435	54.86	629.85	54.86	627.03
1000.5	63.08	792.63	63.08	779.735	63.08	777.15	63.08	774.33
1003 <sup>3/</sup>	72.03	961.40	72.03	948.505	72.03	945.92	72.03	943.10

Notes: Capacity computations by modified prismoidal formula.

Dates of surveys: September, 1957; March, 1962; March 1965; April 1969.

<sup>1/</sup> Denotes mean low point in reservoir.

<sup>2/</sup> Elevation of normal pool - Principal Spillway.

<sup>3/</sup> Elevation of flood pool - Emergency Spillway.