

RESERVOIR SEDIMENT DATA SUMMARY

Nantahala
NAME OF RESERVOIR

20-10b
DATA SHEET NO.

DAM	1. OWNER ALCOA			2. STREAM Nantahala			3. STATE North Carolina					
	4. SEC.		TWP.		RANGE		5. NEAREST 'POST' OFF. Aquone					
	7. LAT. 35° 11' 58" LONG. 83° 39' 05"			8. TOP OF DAM ELEVATION 3,042			9. SPILLWAY CREST ELEV. 1/3012.16					
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		3/		2/		2/		2/	1/30/42		
	b. MULTIPLE USE									16. DATE NORMAL OPER. BEGAN		
	c. POWER		3,012.16		1,575		129,233		138,083	7/6/42		
	d. WATER SUPPLY											
	e. IRRIGATION											
	f. CONSERVATION											
g. INACTIVE		2,872.2		322		8,850		8,850				
17. LENGTH OF RESERVOIR 8.4 MILES					AV. WIDTH OF RESERVOIR 0.30 MILES							
WATERSHED	18. TOTAL DRAINAGE AREA 91 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 68.1 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 88 SQ. MI.				23. MEAN ANNUAL RUNOFF 49.58 INCHES							
	20. LENGTH 27 MILES		AV. WIDTH 3 MILES		24. MEAN ANNUAL RUNOFF 240,610 AC.-FT.							
	21. MAX. ELEV. 5,500			MIN. ELEV. 2,795			25. ANNUAL TEMP.; MEAN 56° RANGE -1° to 92°					
	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.				
Sept. 3, 1950	0	0	Range	24	1,575	138,083	0.561					
July 24, 1958	7.9	7.9	Range	22	1,575	137,882	0.560					
May 22, 1969	10.8	18.7	Range	24	1,575	137,159	0.570					
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					
July 24, 1958	66.4		263,590	303,150	2,082,358	263,590	2,082,358					
May 22, 1969	69.3		270,580	341,953	2,895,210	266,180	4,977,568					
26. DATE OF SURVEY	37. PERIODIC 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						
July 24, 1958	201	25	0.284	201	25	0.284						
May 22, 1969	723	67	0.761	924	49	0.557						
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. TOTAL TO DATE	b. PERIOD	a. AV. AN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE					
July 24, 1958	55*	340	340	0.018	0.146	85	85					
May 22, 1969	55*	667	911	0.035	0.669	220	164					

*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION										
	275-200	200-180	180-160	160-140	140-120	120-100	100-80	80-60	60-40	40-20	20-Top of Gate
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
July 24, 1958 May 22, 1969	Percentages are meaningless due to small amount of sediment.										
	5	13	21	28	22	6	4	7	4	0	4/-10

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														
July 24, 1958 May 22, 1969	Percentages are meaningless due to small amount of sediment.														
	14	11	23	27	13	3	4	2	2	1					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
See Sheet 20-10c for previous data.							
1959	3005.74	2936.35	215,456				
1960	3007.92	2967.74	260,614				
1961	3007.93	2961.70	266,362				
1962	3012.23	2960.96	293,193				
1963	3009.25	2957.90	237,141				
1964	3012.23	2963.93	283,662				
1965	3009.99	2977.89	285,810				
1966	3009.95	2952.03	237,724				
1967	3011.83	2966.34	341,953				
1968	3011.07	2994.95	253,656				
1969	3011.35	2991.13	280,122				

46. ELEVATION-AREA-CAPACITY DATA 2/								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
		1950	2960	1973	69760	2860		4982
2795	0	0	2980	1249	92985	2880		10860
2820	45	366	3000	1436	119791	2900		20352
2840	120	1985	3012.16	1575	138083	2920		33104
2860	231	5471	-			2940		49239
2880	387	1193			1969	2960		68757
2900	565	21197	2795		0	2980		91949
2920	721	34018	2820		262	3000		118849
2940	891	50152	2840		1764	3012.16		137159

47. REMARKS AND REFERENCES

1/ Top of gates.

2/ From first accurate area-volume curves, September 3, 1950, data.

3/ 1936 data. To obtain ALCOA data subtract 122.16.

4/ (-) Minus indicates scour. Treated as negative sediment.