

RESERVOIR SEDIMENTATION
DATA SUMMARY

John H. Kerr

6-11

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER Dept. of Army, Corps of Engs		RIVER Roanoke		3. STATE Virginia			
	4. SEC. - TWP. - RANGE -		5. NEAREST TOWN South Hill		6. COUNTY Mecklenburg			
	7. STREAM BED ELEV. 193		8. TOP OF DAM ELEV. 332		9. SPILLWAY CREST ELEV. 320 1/2			
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. SURFACE AREA ACRES	13. STORAGE ACRE-Feet	14. ACCUMULATED ACRE-Feet	15. DATE STORAGE BEGAN		
	a. FLOOD CONTROL	320	83,200	1,278,400	2,808,400	1 Jul 52 2/		
	b. POWER	300	48,900	1,045,900	1,530,000			
	c. WATER SUPPLY	-	-	-	-	16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION	-	-	-	-			
	e. CONSERVATION	-	-	-	-			
	f. INACTIVE	268	19,700	484,100	484,100	18 Nov 52		
17. LENGTH OF RESERVOIR 53.53 1/2		MILES		AV. WIDTH OF RESERVOIR 1.7		MILES		
WATERSHED	18. TOTAL DRAINAGE AREA 7,800		SQ. MI.		22. MEAN ANNUAL PRECIPITATION 42.7(69)		INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA 7,391		SQ. MI.		23. MEAN ANNUAL RUNOFF 13.7(47)		INCHES	
	20. LENGTH 231.3		MILES		AV. WIDTH 33.7		MILES	
	24. MEAN ANNUAL RUNOFF 5,679,603(47)						AC.-FT.	
	21. MAX. ELEV. 3,960		MIN. ELEV. 193		25. CLIMATIC CLASSIFICATION humid			
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.
	1 Jul 52	0	0	Range (D)	120	83,200	2,808,400	360.0
	4 Dec 59	7.4	7.4	Range (D)	120	-	2,750,349	352.6
	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	
	4 Dec 59	42.8	4,740,100	6,367,700	35,076,400	4,740,100	35,076,400	
	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.-YR.	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YR.	
	4 Dec 59	58,051	7,845	1.06	58,051	7,845	1.06	
	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. ANNUAL	b. TO DATE	a. PERIOD	b. TO DATE	
4 Dec 59	32.6(19)	754	754	0.279	2.07	865	865	

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION														
	crest	310-	300-	290-	280-	270-	260-	250-	240-	230-	220-	210-190			
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION															
4 Dec 59	-	1	5	10	12	13	12	12	12	13	6	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															
4 Dec 59	40	17	15	10	7	8	3	0	0	0					
45. RANGE IN RESERVOIR OPERATION															
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.								
1952	269.5	205.0	6,295,000												
1953	300.8	266.0	4,978,800												
1954	299.7	288.0	3,290,500												
1955	304.8	288.1	5,410,300												
1956	301.5	280.2	2,978,500												
1957	305.3	288.9	4,960,700												
1958	309.0	292.3	7,125,400												
1959	304.0	285.7	3,787,100												
46. ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
193	4/	0	280	718,436											
200		143	290	1,041,471											
210		2,576	300	1,472,289											
220		13,655	310	2,026,163											
230		43,601	320	2,750,349											
240		100,792													
250		186,812													
260		309,788													
270		482,337													
47. REMARKS AND REFERENCES															
1/ Top of gates in closed position. Spillway crest elev. is 288.0.															
2/ Closure occurred 1 July 1952. Construction had advanced sufficiently to cause some trapping of sediment by the fall of 1950.															
3/ Reservoir extends 22 miles up Dan River.															
4/ Not determined.															
48. AGENCY SUPPLYING DATA						49. DATE									
Department of the Army, U. S. Army Engr Dist, Norfolk.						6 Mar 61									

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