

TENNESSEE VALLEY AUTHORITY
 RESERVOIR SEDIMENTATION
 DATA SUMMARY

South Holston
 NAME OF RESERVOIR

HYDRAULIC DATA BRANCH
 20-1a
 DATA SHEET NO.

DAM	1. OWNER TVA		2. RIVER South Fork Holston		3. STATE Tennessee			
	4. SEC. TWP. RANGE		5. NEAREST TOWN Bristol, Tenn.		6. COUNTY Sullivan			
	7. STREAM BED ELEV. 1485		8. TOP OF DAM ELEV. 1765		9. SPILLWAY CREST ELEV. 1/1742			
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	1742	8,750	2/106,126	2/ 765,814	11/20/50		
	b. POWER							
	c. MULTIPLE USE	1729	7,590	2/658,988	2/ 659,688	16. DATE NORMAL OPER. BEGAN		
	d. INACTIVE	1501.7	80	700	700			
						2/14/51		
WATERSHED	17. LENGTH OF RESERVOIR 23.7 MILES		AV. WIDTH OF RESERVOIR 0.5 MILES					
	18. TOTAL DRAINAGE AREA 703 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 45.9(9) INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 691 SQ. MI.		23. MEAN ANNUAL RUNOFF 19.7(43) INCHES					
	20. LENGTH 79 MILES; AV. WIDTH 9 MILES		24. MEAN ANNUAL RUNOFF 738,500 AC.-FT.					
	21. MAX. ELEV. 5720		MIN. ELEV. 1485		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.
	Nov. 20, 1950	0	0	Range	46	7590	659,688	938
	Jun. 10, 1958	7.6	7.6	Range (D)	40	7590	658,404	937
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AG.-FT.		
			a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE	
	Nov. 20, 1950							
	Jun. 10, 1958		672,622	942,819	5,111,930	672,662	5,111,930	
	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	
	Nov. 20, 1950							
Jun. 10, 1958	1284	169	0.245	1284	169	0.245		
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. TOT. TO DATE	c. PERIOD	d. TOT. TO DATE	
Nov. 20, 1950								
Jun. 10, 1958	55*	293.5	293.5	0.026	0.194	221	221	

1/ Crest of spillway. Normal operating level is elevation 1729. All items after item 16 are based on elevation 1729.

2/ Revised.
 * Assumed.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											Spillway
	25-200	200-180	180-160	160-140	140-120	120-100	100-80	80-60	60-40	40-20	20-Crest	Crest
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
Nov. 20, 1950 Jun. 10, 1958	0	4	2	1	10	15	28	15	13	8	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														
Nov. 20, 1950 Jun. 10, 1958	16	9	2	1	15	25	15	12	4	1					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1951	1704.08	3/1488.80	588,602				
1952	1721.40	1675.67	532,096				
1953	1719.80	1655.08	595,076				
1954	1692.44	1625.90	464,105				
1955	1709.51	1615.47	688,479				
1956	1713.61	1614.15	593,691				
1957	1725.07	1661.68	942,819				
1958	1727.42	1676.64	856,033				

46. ELEVATION-AREA-CAPACITY DATA 2/ (1950)								
ELEVATION	AREA (acres)	CAPACITY (ac-ft)	ELEVATION	AREA (acres)	CAPACITY (ac-ft)	ELEVATION	AREA (acres)	CAPACITY (ac-ft)
1504	0	0	1580	1,471	51,420	1660	4,101	260,001
1510	14	41	1590	1,731	67,432	1670	4,626	303,618
1520	296	1,589	1600	1,993	86,018	1680	5,125	352,360
1530	446	5,295	1610	2,257	107,262	1690	5,554	405,751
1540	598	10,461	1620	2,538	131,225	1700	6,000	463,517
1550	797	17,427	1630	2,820	157,994	1710	6,497	525,986
1560	1,021	26,511	1640	3,156	187,863	1720	7,060	593,764
1570	1,245	37,840	1650	3,587	221,569	1730	7,659	667,364
						1742	8,750	765,814

47. REMARKS AND REFERENCES
 3/ Elevation at Date of Closure (Nov. 20, 1950).

48. AGENCY SUPPLYING DATA
 TENNESSEE VALLEY AUTHORITY
 HYDRAULIC DATA BRANCH

49. DATE Oct. 1, 1961

TENNESSEE VALLEY AUTHORITY
 RESERVOIR SEDIMENTATION
 DATA SUMMARY

South Holston

NAME OF RESERVOIR

HYDRAULIC DATA BRANCH
 20-1b
 DATA SHEET NO.

DAM	1. OWNER TVA		2. RIVER South Fork Holston		3. STATE Tennessee				
	4. SEC. TWP. RANGE		5. NEAREST TOWN Bristol, Tenn.		6. COUNTY Sullivan				
	7. STREAM BED ELEV. 1485		8. TOP OF DAM ELEV. 1765		9. SPILLWAY CREST ELEV. 1/ 1742				
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. SURFACE AREA ACRES	13. STORAGE ACRE- FEET 2/	14. ACCUMULATED ACRE- FEET 2/	15. DATE STORAGE BEGAN			
	a. FLOOD CONTROL	1742	8,750	106,079	767,967	11/20/50			
	b. POWER								
	c. MULTIPLE USE	1729	7,597	661,386	661,888	16. DATE NORMAL OPER. BEGAN			
	d. INACTIVE 3/	1501.7	71	502	502				
					2/14/51				
WATERSHED	17. LENGTH OF RESERVOIR 23.7 MILES		AV. WIDTH OF RESERVOIR 0.5 MILES						
	18. TOTAL DRAINAGE AREA 703 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 44.9(22) INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA 691 SQ. MI.		23. MEAN ANNUAL RUNOFF 19.5(49.2) INCHES						
	20. LENGTH 79 MILES		AV. WIDTH 9 MILES		24. MEAN ANNUAL RUNOFF 731,100 AC.-FT.				
	21. MAX. ELEV. 5720		MIN. ELEV. 1485		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.	
	Nov. 20, 1950	0	0	Range	46	7,597	661,888	942	
	Jun 10, 1958	7.6	7.6	Range	40	7,597	660,581	940	
	Aug. 21, 1964	6.2	13.8	Range	35	7,597	657,963	936	
				(D)					
	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	
	Jun. 10, 1958	44.8		672,622	942,819	5,111,930	672,622	5,111,930	
	Aug. 21, 1964	43.7		676,526	886,388	4,194,462	674,574	9,309,121	
	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		
	Jun. 10, 1958	1,307	172	0.249	2/ 1,307	172	0.249		
	Aug. 21, 1964	2,618	422	0.611	3,925	284	0.411		
	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. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
Jun. 10, 1958	55*	298	298	0.026	0.197	225	225		
Aug. 21, 1964	55*	732	492	0.043	0.593	550	372		

*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	224-	225-	205-	185-	165-	145-	125-	105-	85-65	65-45	45-25	25-0
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
Jun. 10, 1958	2	3	2	1	0	8	14	25	16	15	8	6
Aug. 21, 1964	7	18	6	8	5	10	10	12	15	10	0	4/-1

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														
Jun. 10, 1958	17	8	2	1	15	25	15	12	4	1					
Aug. 21, 1964	35	13	8	5	11	10	9	8	1	0					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1951	1704.08	5/ 1488.80	588,602	1959	1698.06	1632.51	526,828
1952	1721.40	1675.67	532,096	1960	1723.89	1670.50	741,131
1953	1719.80	1655.08	595,026	1961	1719.45	1656.81	670,540
1954	1692.44	1625.90	464,105	1962	1723.21	1672.92	886,388
1955	1709.51	1615.47	688,479	1963	1723.06	1667.97	772,768
1956	1713.61	1614.15	593,691	1964	1717.12	1662.75	514,304
1957	1725.07	1661.68	942,819				
1958	1727.42	1676.64	856,033				

46. ELEVATION-AREA-CAPACITY DATA 2/ (1950)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1485	0	0	1970	1245	39,992	1660	4101	262,154
1490	12	30	1580	1471	53,573	1670	4626	305,770
1500	60	390	1590	1731	69,585	1680	5125	354,513
1510	144	1393	1600	1993	88,170	1690	5554	407,903
1520	311	3666	1610	2257	109,414	1700	6000	465,669
1530	446	7447	1620	2538	133,377	1710	6497	528,138
1540	598	12613	1630	2820	160,146	1720	7060	595,916
1550	797	19579	1640	3156	190,015	1730	7659	669,516
1560	1021	28664	1650	3587	223,722	1742	8750	767,967

47. REMARKS AND REFERENCES
 1/ Crest of spillway. Normal operating level is elevation 1729. All items after item 16 are based on elevation 1729.
 2/ Revised.
 3/ Centerline of sluiceway valves.
 4/ (-) Minus indicates scour. Considered as negative sediment.
 5/ Elevation at date of closure (Nov. 20, 1950).