

TENNESSEE VALLEY AUTHORITY
RESERVOIR SEDIMENTATION
DATA SUMMARY

Fort Patrick Henry
NAME OF RESERVOIR

HYDRAULIC DATA BRANCH
20-4b
DATA SHEET NO.

DAM	1. OWNER TVA		2. RIVER South Fork Holston		3. STATE Tennessee			
	4. SEC. TWP. RANGE		5. NEAREST TOWN Kingsport		6. COUNTY Sullivan			
	7. STREAM BED ELEV. 2/ 1173		8. TOP OF DAM ELEV. 1270		9. SPILLWAY CREST ELEV. 1/1263			
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		2/	2/	2/	10/27/53		
	b. POWER	1263	893	26,985	27,110			
	c. MULTIPLE USE							
	d. INACTIVE	1193.42	21	125	125	16. DATE NORMAL OPER. BEGAN		
						12/5/53		
17. LENGTH OF RESERVOIR 10.3 MILES			AV. WIDTH OF RESERVOIR 0.14 MILES					
WATERSHED	18. TOTAL DRAINAGE AREA 1903 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 45.4(22) INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 62 SQ. MI.		23. MEAN ANNUAL RUNOFF 18.2(32.5) INCHES					
	20. LENGTH 121 MILES	AV. WIDTH 16 MILES	24. MEAN ANNUAL RUNOFF 1,877,500 AC.-FT.					
	21. MAX. ELEV. 5964		MIN. ELEV. 1173		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.
	Oct. 27, 1953	0	0	Range	18	893	27,110	-
	Jun. 2, 1959	5.6	5.6	"	16	893	26,945	-
	Nov. 19, 1964	5.5	11.1	"	16	893	26,941	-
				(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. 2, 1959	46.0	1,737,750	2,246,070	9,731,400	1,737,750	9,731,400	
	Nov. 19, 1964	45.2	1,699,612	2,228,315	9,347,867	1,718,853	19,079,267	
	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. 2, 1959	165	29	0.468	165	29	0.468		
Nov. 19, 1964	4	0.73	0.012	169	1.52	0.025		
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. 2, 1959	55*	561	561	0.107	0.609	15	15	
Nov. 19, 1964	55*	14.4	29.9	0.006	0.623	0.38	7.8	

- 1/ Top of Gates.
2/ Revised.
* Assumed.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	90-80	80-70	70-60	60-50	50-40	40-30	30-20	20-10	10-Top of Gates		
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
Jun. 2, 1959	0	2	16	27	9	18	23	9	3/-4		
Nov. 19, 1964	0	2	15	39	24	10	12	2	3/-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														
Jun. 2, 1959	18	29	15	11	12	12	7	2	3/-4	3/-2					
Nov. 19, 1964	15	19	12	13	16	13	6	2	2	2					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1954	1263.80	^{4/} 1195.85	1,250,018	1963	1263.00	1258.00	1,835,097
1955	1262.94	1257.67	1,630,526	1964	1263.00	1258.05	1,340,382
1956	1262.88	1258.05	1,293,298				
1957	1263.00	1257.80	2,246,070				
1958	1262.91	1258.09	2,109,430				
1959	1262.95	1258.08	1,546,382				
1960	1262.89	1258.02	1,867,110				
1961	1263.00	1258.05	1,499,939				
1962	1263.12	1258.02	2,228,315				

46. ELEVATION-AREA-CAPACITY DATA ^{2/} (1953)								
ELEVATION	AREA (acres)	CAPACITY (ac-ft)	ELEVATION	AREA (acres)	CAPACITY (ac-ft)	ELEVATION	AREA	CAPACITY
1173	0	0	1230	377	6,818			
1180	1	2	1240	511	11,252			
1190	9	34	1250	628	16,940			
1200	49	301	1263	893	27,110			
1210	160	1,325						
1220	288	3,538						

47. REMARKS AND REFERENCES

^{3/} (-) Minus indicates scour. Considered as negative sediment.

^{4/} Elevation at Date of Closure, Oct. 27, 1953.

48. AGENCY SUPPLYING DATA
 TENNESSEE VALLEY AUTHORITY
 HYDRAULIC DATA BRANCH

49. DATE September 1, 1964