

TENNESSEE VALLEY AUTHORITY  
RESERVOIR SEDIMENTATION  
DATA SUMMARY

Chatuge  
NAME OF RESERVOIR

HYDRAULIC DATA BRANCH  
20-16  
DATE SHEET NO.

213

DAM	1. OWNER TVA			2. RIVER Hiwassee			3. STATE North Carolina									
	4. SEC. TWP. RANGE			5. NEAREST TOWN Hayesville			6. COUNTY Clay									
	7. STREAM BED ELEV. 1804			8. TOP OF DAM ELEV. 1940			9. SPILLWAY CREST ELEV. 1/1928									
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										2/12/42					
	b. POWER															
	c. MULTIPLE USE		1928		7.150		247.800		247.800		16. DATE NORMAL OPER. BEGAN					
	d. INACTIVE		1804.2		0		0		0		6/25/43					
WATERSHED	17. LENGTH OF RESERVOIR 13 MILES						AV. WIDTH OF RESERVOIR 0.86 MILES									
	18. TOTAL DRAINAGE AREA 189 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 61.4(15) INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 178 SQ. MI.				23. MEAN ANNUAL RUNOFF 34.1(46) INCHES											
	20. LENGTH 26 MILES		AV. WIDTH 7 MILES		24. MEAN ANNUAL RUNOFF 343.900 AC.-FT.											
	21. MAX. ELEV. 4784		MIN. ELEV. 1804		25. CLIMATIC CLASSIFICATION Perhumid											
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 <sub>w</sub> RATIO AC.-FT. PER SQ. MI.	
	Feb. 12, 1942		0		0		Range		19		7,150		247,800		1,311	
	Aug. 11, 1949		7.5		7.5		Range (D)		19		7,150		247,381		1,309	
	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		d. MEAN ANNUAL		e. TOTAL TO DATE			
	Feb. 12, 1942															
	Aug. 11, 1949		63.6		322,744		414,831		2,420,582		322,744		2,420,582			
	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		d. TOTAL TO DATE		e. AV. ANNUAL		f. PER SQ. MI.-YEAR			
	Feb. 12, 1942		0		0		0		0		0		0			
Aug. 11, 1949		419		56		0.315		419		56		0.315				
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		c. AV. ANNUAL		d. TOT. TO DATE		e. PERIOD		f. TOT. TO DATE		
Aug. 11, 1949		55*		377.3		377.3		0.023		0.169		153		153		

1/ Top of flashboards.

\* Assumed.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION													
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
Not Available														

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														
Feb. 12, 1942	0	0	0	0	0	0	0	0	0	0					
Aug. 11, 1949	24 2/	6	9	5	12	13	15	12	3	1					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1943	1927.80	1901.94	377,883	1949	1926.61	1892.63	460,777
1944	1927.55	1897.25	289,458	1950	1921.45	1905.38	371,391
1945	1920.72	1888.24	223,181	1951	1907.32	1887.05	276,857
1946	1925.95	1893.47	414,831				
1947	1918.36	1860.11	253,408				
1948	1917.88	1860.67	276,064				

46. ELEVATION-AREA-CAPACITY DATA (1942)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1810	0	0	1890	2,680	70,100			
1820	104	500	1900	3,580	101,200			
1840	410	5,430	1910	4,680	142,400			
1860	970	18,500	1920	5,960	195,400			
1880	1,970	46,900	1928	7,150	247,800			

47. REMARKS AND REFERENCES  
2/ Includes Shooting Creek tributary.

48. AGENCY SUPPLYING DATA  
 TENNESSEE VALLEY AUTHORITY  
 HYDRAULIC DATA BRANCH

49. DATE March 1, 1952

TENNESSEE VALLEY AUTHORITY  
 RESERVOIR SEDIMENTATION  
 DATA SUMMARY

HYDRAULIC DATA BRANCH

Chatuge

20-16a

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER TVA			2. RIVER Hiwassee			3. STATE North Carolina					
	4. SEC. TWP. RANGE			5. NEAREST TOWN Hayesville			6. COUNTY Clay					
	7. STREAM BED ELEV. 1804			8. TOP OF DAM ELEV. 1940			9. SPILLWAY CREST ELEV. 1/ 1928					
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				4/		4/		4/			
	b. POWER										2-12-42	
	c. MULTIPLE USE		1928		7151		242, 325		242, 325			
	d. INACTIVE		1804.2		0		0		0		16. DATE NORMAL OPER. BEGAN	
											6-25-43	
WATERSHED	17. LENGTH OF RESERVOIR 13 MILES				AV. WIDTH OF RESERVOIR 0.86 MILES							
	18. TOTAL DRAINAGE AREA 189 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 61.3(24) INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 178 SQ. MI.				23. MEAN ANNUAL RUNOFF 34.1(16) INCHES							
	20. LENGTH 26 MILES		AV. WIDTH 7 MILES		24. MEAN ANNUAL RUNOFF 343,900 AC.-FT.							
	21. MAX. ELEV. 4784		MIN. ELEV. 1804		25. CLIMATIC CLASSIFICATION Per 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 <sub>w</sub> RATIO AC.-FT. PER SQ. MI.			
	Feb. 12, 1942		0	0	Range	19	7, 151	242, 325	1, 282			
	Aug. 11, 1949		7.5	7.5	Range	19	7, 151	242, 032	1, 281			
	Aug. 25, 1954		5.0	12.5	Range	21	7, 151	241, 502	1, 278			
	Sep. 8, 1960		6.0	18.5	Range	19	7, 151	240, 999	1, 275			
					(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		
	Aug. 11, 1949		63.6		322, 744		414, 831	2, 420, 582		322, 744		
	Aug. 25, 1954		62.6		317, 034		371, 391	1, 585, 170		320, 460		
Sep. 8, 1960		62.1		277, 907		346, 746	1, 667, 439		306, 659			
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					
Aug. 11, 1949		292	39	0. 219	292	39	0. 219					
Aug. 25, 1954		531	106	0. 595	823	66	0. 371					
Sep. 8, 1960		503	84	0. 472	1, 326	72	0. 404					
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			
Aug. 11, 1949		55*		262. 3		262. 3	0. 016	0. 120	106			
Aug. 25, 1954		55*		712. 8		444. 4	0. 027	0. 340	295			
Sep. 8, 1960		55*		565. 4		484. 0	0. 030	0. 547	266			

1/ Top of flashboards.  
 \* Assumed.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION													Top of flash boards
	123-8-115	115-105	105-95	95-85	85-75	75-65	65-55	55-45	45-35	35-25	25-15	15-		
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
Aug. 11, 1949	0	2/ -4	2/ -11	0	15	31	41	33	18	13	2/ -8	2/ -28		
Aug. 25, 1954	1	0		1 6	13	26	28	30	8	7	2/ -4	2/ -16		
Sep. 8, 1960	4	6		4 6	8	18	25	24	5	2	0	2/ -2		

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															
Aug. 11, 1949	3/ 18	7	2/ -21	7	32	12	19	17	7	2					
Aug. 25, 1954	3/ 56	2	13	8	8	5	11	5	2/ -5	2/ -3					
Sep. 8, 1960	3/ 53	2	2/ -5	8	14	9	13	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.
1943	1927.80	1901.94	377,883	1952	1921.58	1860.32	334,478
1944	1927.55	1897.25	289,458	1953	1912.88	1860.38	263,766
1945	1920.72	1888.24	223,181	1954	1927.65	1889.55	293,865
1946	1925.95	1893.47	414,831	1955	1923.39	1879.29	261,903
1947	1918.36	1860.11	253,408	1956	1911.55	1860.13	249,965
1948	1917.88	1860.67	276,064	1957	1922.76	1893.72	302,906
1949	1926.61	1892.63	460,777	1958	1918.93	1893.94	346,746
1950	1921.45	1905.38	371,391	1959	1907.18	1885.28	216,342
1951	1907.32	1887.05	276,857	1960	1920.23	1889.07	296,144

46. ELEVATION-AREA-CAPACITY DATA 4/ (1942)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1804.2	0	0	1870	1,387	30,787			
1810	24	69	1880	1,966	47,530			
1820	91	631	1890	2,646	70,574			
1830	205	2,075	1900	3,446	101,007			
1840	414	5,151	1910	4,438	140,414			
1850	678	10,606	1920	5,680	191,001			
1860	989	18,928	1928	7,151	242,325			

47. REMARKS AND REFERENCES

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

3/ Includes Shooting Creek tributary.

4/ Revised.

48. AGENCY SUPPLYING DATA  
 TENNESSEE VALLEY AUTHORITY  
 HYDRAULIC DATA BRANCH

49. DATE September 1, 1960

TENNESSEE VALLEY AUTHORITY  
RESERVOIR SEDIMENTATION  
DATA SUMMARY

Chatuge

NAME OF RESERVOIR

HYDRAULIC DATA BRANCH  
20-16b  
DATA SHEET NO.

DAM	1. OWNER <b>TVA</b>			2. RIVER <b>Hiwassee</b>			3. STATE <b>North Carolina</b>								
	4. SEC. <b>TWP.</b>		RANGE		5. NEAREST TOWN <b>Hayesville</b>			6. COUNTY <b>Clay</b>							
	7. STREAM BED ELEV. <b>1804</b>			8. TOP OF DAM ELEV. <b>1940</b>			9. SPILLWAY CREST ELEV. <b>1/ 1928</b>								
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										2-12-42				
	b. POWER														
	c. MULTIPLE USE		<b>1928</b>		<b>7151</b>		<b>242, 325</b>		<b>242, 325</b>		16. DATE NORMAL OPER. BEGAN				
	d. INACTIVE		<b>1804. 2</b>		<b>0</b>		<b>0</b>		<b>0</b>		6-25-43				
WATERSHED	17. LENGTH OF RESERVOIR <b>13</b> MILES						AV. WIDTH OF RESERVOIR <b>0. 86</b> MILES								
	18. TOTAL DRAINAGE AREA <b>189</b> SQ. MI.						22. MEAN ANNUAL PRECIPITATION <b>61. 8(28)</b> INCHES								
	19. NET SEDIMENT CONTRIBUTING AREA <b>178</b> SQ. MI.						23. MEAN ANNUAL RUNOFF <b>33. 9(20. 6)</b> INCHES								
	20. LENGTH <b>26</b> MILES			AV. WIDTH <b>7</b> MILES			24. MEAN ANNUAL RUNOFF <b>341, 700</b> AC.- FT.								
	21. MAX. ELEV. <b>4784</b>			MIN. ELEV. <b>1804</b>			25. CLIMATIC CLASSIFICATION <b>Per Humid</b>								
	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.
Feb. 12, 1942		0		0		Range		19		7, 151		242, 325		1, 282	
Apr. 28, 1965		4. 6		23. 2		Range		21		7, 151		240, 516		1, 273	
SURVEY DATA	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		d. MEAN ANNUAL		e. TOTAL TO DATE		
	Apr. 28, 1965		63. 1		336, 916		357, 679		1, 549, 816		311, 336		7, 223, 007		
	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		d. TOTAL TO DATE		e. AV. ANNUAL		f. PER SQ. MI.- YEAR		
	Apr. 28, 1965		483		105		0. 590		1, 809		78		0. 438		
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	
Apr. 28, 1965		55*		707		525		0. 032		0. 746		275		221	

\*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION <span style="float: right;">Top of</span>											
	124-115	115-105	105-95	95-85	85-75	75-65	65-55	55-45	45-35	35-25	25-15	15-flash-boards
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
Apr. 28, 1965	3	5	3	5	6	14	22	28	14	8	2	2/ -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														
Apr. 28, 1965	3/ 52	6	4	6	15	8	6	4	0	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.
1961	1921.61	1896.49	291,971				
1962	1923.29	1898.06	348,067				
1963	1923.52	1897.27	269,308				
1964	1927.07	1901.00	357,679				
1965	1921.07	1900.31	359,696				

46. ELEVATION-AREA-CAPACITY DATA (1965)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1804	0	0	1870	1,387	29,900			
1810	24	42	1880	1,966	46,056			
1820	91	487	1890	2,646	68,809			
1830	205	1,888	1900	3,446	99,077			
1840	414	4,867	1910	4,438	138,387			
1850	678	10,262	1920	5,680	189,080			
1860	989	18,355	1928	7,151	240,516			

47. REMARKS AND REFERENCES

1/ Top of flashboards

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

3/ Includes Shooting Creek tributary.

48. AGENCY SUPPLYING DATA  
TENNESSEE VALLEY AUTHORITY  
HYDRAULIC DATA BRANCH

49. DATE September 1, 1965