

TENNESSEE VALLEY AUTHORITY  
 RESERVOIR SEDIMENTATION  
 DATA SUMMARY

Wilson

HYDRAULIC DATA BRANCH

18-6

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER TVA			2. RIVER Tennessee			3. STATE Alabama					
	4. SEC. TWP. RANGE		5. NEAREST TOWN Florence			6. COUNTY Colbert-Lauderdale						
	7. STREAM BED ELEV. 403			8. TOP OF DAM ELEV. 524.34			9. SPILLWAY CREST ELEV. 1/507.88					
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				5/		5/		5/		4/14/24	
	b. POWER											
	c. MULTIPLE USE		507.88		15,900		52,000		562,500		16. DATE NORMAL OPER. BEGAN	
	d. INACTIVE 2/		504.5		15,200		510,000		510,000			
e. Lowest Outlet		414.8		0		0		0		9/12/25		
WATERSHED	17. LENGTH OF RESERVOIR 15.5 MILES						AV. WIDTH OF RESERVOIR 1.60 MILES					
	18. TOTAL DRAINAGE AREA 30,750 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 52.1 (15) INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 1135 SQ. MI.				23. MEAN ANNUAL RUNOFF 22.3 (50) INCHES							
	20. LENGTH 664 MILES		AV. WIDTH 46 MILES		24. MEAN ANNUAL RUNOFF 36,561,000 AC.-FT.							
	21. MAX. ELEV. 6684		MIN. ELEV. 403		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.	
	Apr. 14, 1924						15,900		656,300		-	
	Dec. 6, 1928		4.6	4.6	Range	9	15,900		6/621,270		-	
	Dec. 4, 1931		3.0	7.6	Range	9	15,900		598,350		-	
	Dec. 13, 1936		5.0	12.6	Range	9	15,900		562,500		-	
	Sep. 25, 1946		9.8	22.4	Range	9	15,900		560,552		-	
	Jun. 6, 1951		4.7	27.1	Range(D)	9	15,900		Not Computed		-	
	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			
	Apr. 14, 1924				34,253,591	44,939,069	157,566,520	34,253,591	157,566,520			
	Dec. 6, 1928		46.1		34,526,308	34,882,922	103,578,925	34,361,243	261,145,445			
	Dec. 4, 1931		53.5		38,632,019	47,588,727	193,160,093	36,055,995	454,305,538			
	Dec. 13, 1936		50.3		31,549,552	35,912,319	309,185,610	34,084,426	763,491,118			
	Sep. 25, 1946		55.6		41,193,260	49,389,106	193,608,322	35,317,324	957,099,470			
	Jun. 6, 1951		Not Computed									
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					
Apr. 14, 1924		0	0	0	0	0	0					
Dec. 6, 1928		35,030	7,615	3/0.852	35,030	7,615	3/0.852					
Dec. 4, 1931		22,920	7,640	3/0.855	57,950	7,625	3/0.853					
Dec. 13, 1936		35,850	7,170	3/0.802	93,800	7,444	3/0.833					
Sep. 25, 1946		1,948	199	4/0.175	95,748	4,274	-					
Jun. 6, 1951		Not Computed										
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				
Dec. 6, 1928			983.5	983.5	7/1.160	7/5.337	189	189				
Dec. 4, 1931			987.0	984.7	1.162	8.830	188	188				
Dec. 13, 1936		53 (4)	925.8	961.6	1.134	14.292	158	175				
Sep. 25, 1946			202.0	-	0.651	14.589	5.35	107				
Jun. 6, 1951		Not Computed										

- 1/ Top of present gates. Gates raised 1.78 ft. Nov. 1, 1942. All data based on present elevation.
- 2/ Lowest elevation for flat pool navigation requirements.

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

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 14, 1924	0	0	0	0	0	0	0	0	0	0					
Dec. 6, 1928	4	5	5	6	6	9	10	11	24	20					
Dec. 4, 1931	5	7	7	8	8	9	11	11	20	14					
Dec. 13, 1936	5	7	8	10	10	10	10	12	18	10					
Sep 25, 1946	6	8	8	10	10	10	10	11	17	10					
Jun. 6, 1951	Not Computed														

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1941	506.18	503.18	18,484,746	1946	508.23	503.77	44,110,463
1942	506.50	502.98	19,397,696	1947	508.09	504.37	34,211,569
1943	508.03	503.13	33,863,147	1948	508.35	504.77	31,805,924
1944	508.21	503.58	33,374,635	1949	508.19	504.71	47,558,229
1945	508.18	503.19	32,463,671	1950	508.09	503.78	49,389,106
				1951	507.97	504.26	37,116,595

46. ELEVATION-AREA-CAPACITY DATA (1936)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
420	300	1,280	480	8,480	229,000			
430	1,000	7,540	490	10,600	324,000			
440	2,100	22,800	500	13,800	444,000			
450	3,520	50,700	505	15,300	517,600			
460	5,100	93,800	507.88	15,900	562,500			
470	6,750	153,000						

47. REMARKS AND REFERENCES  
 3/ Used drainage area below Hales Bar Dam (8935 sq. mi.)  
 4/ Sediment contributing area reduced by closing Wheeler Dam on Oct. 3, 1936 to 1135 sq. mi.  
 5/ From first accurate area-volume curves, 1936 conditions. Does not include original areas and volumes above Wheeler Dam.  
 6/ Estimated capacity at time of original survey below Wheeler Dam.  
 7/ Items 4/a and 4/b are based on an original volume of 656,300 acre-feet.

48. AGENCY SUPPLYING DATA  
 TENNESSEE VALLEY AUTHORITY  
 HYDRAULIC DATA BRANCH

49. DATE March 1, 1952

TENNESSEE VALLEY AUTHORITY  
**RESERVOIR SEDIMENTATION  
 DATA SUMMARY**

Wilson  
 NAME OF RESERVOIR

HYDRAULIC DATA BRANCH  
 18-6a  
 DATA SHEET NO.

DAM	1. OWNER TVA			2. RIVER Tennessee			3. STATE Alabama		
	4. SEC. TWP. RANGE		5. NEAREST TOWN Florence			6. COUNTY Colbert-Lauderdale			
	7. STREAM BED ELEV. 403			8. TOP OF DAM ELEV. 524.34			9. SPILLWAY CREST ELEV. 507.88		
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		5/	5/	5/	4/14/24			
	b. POWER								
	c. MULTIPLE USE	507.88	16,000	54,000	687,000	16. DATE NORMAL OPER. BEGAN			
	d. INACTIVE 2/	504.5	15,350	633,000	633,000				
	e. Lowest Outlet	414.84	0	0	0	9/12/25			
17. LENGTH OF RESERVOIR 15.5 MILES			AV. WIDTH OF RESERVOIR 1.6 MILES						
WATERSHED	18. TOTAL DRAINAGE AREA 30,750 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 51.1(18) INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 1,135 SQ. MI.			23. MEAN ANNUAL RUNOFF 22.3(50) INCHES					
	20. LENGTH 664 MILES		AV. WIDTH 46 MILES		24. MEAN ANNUAL RUNOFF 36,561,000 AC.-FT.				
	21. MAX. ELEV. 6684		MIN. ELEV. 403		25. CLIMATIC CLASSIFICATION Humid				
	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.
Dec. 6, 1928		0	0	Range	9	16,000	687,000		
Dec. 4, 1931		3.0	3.0	Range	9	16,000	674,000		
Dec. 13, 1936		5.0	8.0	Range	9	16,000	652,000		
Sep. 25, 1946		9.8	17.8	Range	9	16,000	651,000		
Jun. 6, 1951		4.7	22.5	Range(D)	15	16,000	650,000		
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
	Dec. 6, 1928								
	Dec. 4, 1931		46.1	34,526,308	34,882,922	103,578,925	34,361,243	103,578,925	
	Dec. 13, 1936		53.5	38,632,019	47,588,727	193,160,093	36,055,995	296,739,018	
	Sep. 25, 1946		50.3	31,549,552	35,912,319	309,185,610	34,084,426	605,924,628	
	Jun. 6, 1951		55.6	41,193,260	49,389,106	193,608,322	35,317,324	799,532,950	
	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	
	Dec. 6, 1928		6/						
Dec. 4, 1931		12,853	4,284	3/ 0.479	12,853	4,284	3/ 0.479		
Dec. 13, 1936		21,900	4,380	3/ 0.490	34,753	4,344	3/ 0.486		
Sep. 25, 1946		1,332	136	4/ 0.120	36,085	2,027	4/		
Jun. 6, 1951		638	136	4/ 0.120	36,723	1,632			
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		
Dec. 6, 1928									
Dec. 4, 1931		53*	552.9	552.9	0.624	1.871	105	105	
Dec. 13, 1936		53(4)	565.6	561.0	0.632	5.059	96	100	
Sep. 25, 1946		53*	138.5	4/	0.295	5.253	4	50	
Jun. 6, 1951		53*	138.5		0.238	5.345	3	39	

- 1/ Top of present gates. Gates raised 1.78 feet November 1, 1942. All data based on present elevation.
- 2/ Lowest elevation for flat pool navigation requirements.
- 3/ Used drainage area below Hales Bar Dam (8935 sq. mi.).
- 4/ Sediment contributing area reduced by closing Wheeler Dam on October 3, 1936, to 1135 sq. mi.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	113-90	90-80	80-70	70-60	60-50	50-40	40-30	30-20	20-10	10-Gates	Top
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
Dec. 6, 1928											
Dec. 4, 1931	5	5	6	5	12	8	32	20	6	1	
Dec. 13, 1936	4	5	8	7	13	11	21	23	7	1	
Sep. 25, 1946	5	7	9	8	13	11	19	20	7	1	
Jun. 6, 1951	5	7	10	9	12	10	19	19	8	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														
Dec. 6, 1928															
Dec. 4, 1931	3	8	7	6	5	16	18	18	14	4					
Dec. 13, 1936	4	8	8	7	8	15	17	16	13	4					
Sep. 25, 1946	5	10	9	8	8	14	15	15	12	4					
Jun. 6, 1951	6	10	10	10	10	13	14	14	10	3					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1941	506.18	503.18	18,484,746	1946	508.23	503.77	44,110,463
1942	506.50	502.98	19,397,696	1947	508.09	504.37	34,211,569
1943	508.03	503.13	33,863,147	1948	508.35	504.77	31,805,924
1944	508.21	503.58	33,374,635	1949	508.19	504.71	47,558,229
1945	508.18	503.19	32,463,671	1950	508.09	503.78	49,389,106
				1951	507.97	504.26	37,116,595

46. ELEVATION-AREA-CAPACITY DATA (1928)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
	(Acres)	(Ac.-Ft.)		(Acres)	(Ac.-Ft.)			
394.8	0	0	460	6,779	148,091			
400	48	124	470	8,478	224,478			
410	100	858	480	10,471	319,457			
420	1,151	6,987	490	12,057	432,174			
430	1,993	22,697	500	14,509	565,953			
440	3,541	50,263	506	15,634	656,750			
450	4,751	91,716	507.88	16,000	687,000			

47. REMARKS AND REFERENCES  
 5/ From first accurate area-volume curves, 1928 survey. Does not include original areas and volumes above Wheeler Dam.  
 6/ Does not include sediment deposits before December 6, 1928.  
 \* Assumed.

48. AGENCY SUPPLYING DATA  
 TENNESSEE VALLEY AUTHORITY  
 HYDRAULIC DATA BRANCH

49. DATE April 1, 1955

TENNESSEE VALLEY AUTHORITY  
 RESERVOIR SEDIMENTATION  
 DATA SUMMARY

Wilson

HYDRAULIC DATA BRANCH  
 18-6b  
 DATA SHEET NO.

DAM	1. OWNER <b>TVA</b>			2. RIVER <b>Tennessee</b>			3. STATE <b>Alabama</b>									
	4. SEC. <b>TWP.</b> RANGE			5. NEAREST TOWN <b>Florence</b>			6. COUNTY <b>Colbert-Lauderdale</b>									
	7. STREAM BED ELEV. <b>403</b>			8. TOP OF DAM ELEV. <b>524.34</b>			9. SPILLWAY CREST ELEV. <b>1/507.88</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				5/		5/		5/		4/14/24					
	b. POWER															
	c. MULTIPLE USE		507.88		16,000		54,000		687,000		16. DATE NORMAL OPER. BEGAN					
	d. INACTIVE 2/		504.5		15,350		633,000		633,000							
	e. Lowest Outlet		414.84		0		0		0		9/12/25					
WATERSHED	17. LENGTH OF RESERVOIR <b>15.5</b> MILES				AV. WIDTH OF RESERVOIR <b>1.6</b> MILES											
	18. TOTAL DRAINAGE AREA <b>30,750</b> SQ. MI.				22. MEAN ANNUAL PRECIPITATION <b>51.8(26)</b> INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA <b>1,135</b> SQ. MI.				23. MEAN ANNUAL RUNOFF <b>22.3(50)</b> INCHES											
	20. LENGTH <b>664</b> MILES		AV. WIDTH <b>46</b> MILES		24. MEAN ANNUAL RUNOFF <b>36,561,000</b> AC.-FT.											
	21. MAX. ELEV. <b>6684</b>		MIN. ELEV. <b>403</b>		25. CLIMATIC CLASSIFICATION <b>Humid</b>											
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.	
	Dec. 6, 1928		0		0		Range		9		16,000		687,000		-	
	Dec. 4, 1931		3.0		3.0		Range		9		16,000		674,000		-	
	Dec. 13, 1936		5.0		8.0		Range		9		16,000		652,000		-	
	Sep. 25, 1946		9.8		17.8		Range		9		16,000		651,000		-	
	Jun. 6, 1951		4.7		22.5		Range		15		16,000		650,000		-	
	Jun. 15, 1956		5.0		27.5		Range(D)		15		16,000		648,000		-	
	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			
	Dec. 4, 1931		46.1		34,526,308		34,882,922		103,318,925		34,361,243		103,578,925			
	Dec. 13, 1936		53.5		38,632,019		47,588,727		193,160,093		36,055,995		296,739,018			
	Sep. 25, 1946		50.3		31,549,552		35,912,319		309,185,610		34,084,426		605,924,628			
	Jun. 6, 1951		55.6		41,193,260		49,389,106		193,608,322		35,317,324		799,532,950			
Jun. 15, 1956		49.5		31,405,434		37,581,573		157,027,169		34,784,004		956,560,119				
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	
Dec. 4, 1931		6/ 12,853			4,284		3/ 0.479		12,853		4,284		3/ 0.479			
Dec. 13, 1936		21,900			4,380		3/ 0.490		34,753		4,344		3/ 0.486			
Sep. 25, 1946		1,332			136		4/ 0.120		36,085		2,027		4/			
Jun. 6, 1951		638			136		4/ 0.120		36,723		1,632					
Jun. 15, 1956		2,276			455		4/ 0.401		38,999		1,418					
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		
Dec. 4, 1931		53*		552.9		552.9		0.624		1.871		105		105		
Dec. 13, 1936		53*		565.6		561.0		0.632		5.059		96		100		
Sep. 25, 1946		53*		138.5		4/		0.295		5.253		4		50		
Jun. 6, 1951		53*		138.5				0.238		5.345		3		39		
Jun. 15, 1956		53*		462.0				0.206		5.677		12		35		

- 1/ Top of present gates. Gates raised 1.78 feet November 1, 1942. All data based on present elevation.
- 2/ Lowest elevation for flat pool navigation requirements.
- 3/ Used drainage area below Hales Bar Dam (8935 sq. mi.).
- 4/ Sediment contributing area reduced by closing Wheeler Dam on October 3, 1936, to 1135 square miles.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	13-90	90-80	80-70	70-60	60-50	50-40	40-30	30-20	20-10	10-Top	Gates
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
Dec. 4, 1931	5	5	6	5	12	8	32	20	6	1	
Dec. 13, 1936	4	5	8	7	13	11	21	23	7	1	
Sep. 25, 1946	5	7	9	8	13	11	19	20	7	1	
Jun. 6, 1951	5	7	10	9	12	10	19	19	8	1	
Jun. 15, 1956	4	6	11	10	13	11	18	18	8	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														
Dec. 4, 1931	3	8	7	6	5	16	18	18	14	4					
Dec. 13, 1936	4	8	8	7	8	15	17	16	13	4					
Sep. 25, 1946	5	10	9	8	8	14	15	15	12	4					
Jun. 6, 1951	6	10	10	10	10	13	14	14	10	3					
Jun. 15, 1956	5	11	11	11	10	13	13	13	10	3					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1941	506.18	503.18	18,484,746	1949	508.19	504.71	47,558,229
1942	506.50	502.98	19,397,696	1950	508.09	503.78	49,389,106
1943	508.03	503.13	33,863,147	1951	507.97	504.26	37,116,595
1944	508.21	503.58	33,374,635	1952	507.92	504.36	37,581,573
1945	508.18	503.19	32,463,671	1953	507.91	503.81	31,183,437
1946	508.23	503.77	44,110,463	1954	508.07	504.34	26,462,905
1947	508.09	504.37	34,211,569	1955	507.98	504.43	30,811,887
1948	508.35	504.77	31,805,924	1956	507.87	504.16	30,119,487

46. ELEVATION-AREA-CAPACITY DATA (1928)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
394.8	0	0	460	6,799	148,091			
400	48	124	470	8,478	224,478			
410	100	858	480	10,471	319,457			
420	1,151	6,987	490	12,057	432,174			
430	1,993	22,697	500	14,509	565,953			
440	3,541	50,263	506	15,634	656,750			
450	4,751	91,716	507.88	16,000	687,000			

47. REMARKS AND REFERENCES  
 5/ From first accurate area-volume curves, 1928 survey. Does not include original areas and volumes above Wheeler Dam.  
 6/ Does not include sediment deposits before December 6, 1928.  
 \* Assumed.

48. AGENCY SUPPLYING DATA  
 TENNESSEE VALLEY AUTHORITY  
 HYDRAULIC DATA BRANCH

49. DATE September 1, 1956

TENNESSEE VALLEY AUTHORITY  
 RESERVOIR SEDIMENTATION  
 DATA SUMMARY

Wilson

HYDRAULIC DATA BRANCH  
 18-6c

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER TVA			2. RIVER Tennessee			3. STATE Alabama									
	4. SEC. TWP. RANGE			5. NEAREST TOWN Florence			6. COUNTY Colbert-Lauderdale									
	7. STREAM BED ELEV. 403			8. TOP OF DAM ELEV. 524.34			9. SPILLWAY CREST ELEV. 1/507.88									
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				5/		5/		5/							
	b. POWER										4-14-24					
	c. MULTIPLE USE		507.88		16,000		54,000		687,000		16. DATE NORMAL OPER. BEGAN					
	d. INACTIVE		504.5		15,350		633,000		633,000							
	e. Lowest Outlet		414.84		0		0		0		9-12-25					
WATERSHED	17. LENGTH OF RESERVOIR 15.5 MILES			AV. WIDTH OF RESERVOIR 1.6 MILES												
	18. TOTAL DRAINAGE AREA 30,750 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 51.8(26) INCHES												
	19. NET SEDIMENT CONTRIBUTING AREA 1,135 SQ. MI.			23. MEAN ANNUAL RUNOFF 22.3(50) INCHES												
	20. LENGTH 664 MILES		AV. WIDTH 46 MILES		24. MEAN ANNUAL RUNOFF 36,561,000 AC.-FT.											
	21. MAX. ELEV. 6684		MIN. ELEV. 403		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.	
	Aug. 4, 1961		5.1		32.6		Range		15		16,000		641,000		-	
							(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. 4, 1961		52.9		35,541,881		45,086,423		181,263,595		34,902,568		1,137,823,714			
	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. 4, 1961		7,373		1,446		4/ 1.274		46,372		1,422		-			
	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. 4, 1961		53*		1,471		4/		0.207		6.750		35		35		

- 1/ Top of present gates. Gates raised 1.78 feet Nov. 1, 1942. All data based on present elevation.
- 2/ Lowest elevation for flat pool navigation requirements.
- 3/ Used drainage area below Hales Bar Dam. (8935 square miles)
- 4/ Sediment contributing area reduced by closing Wheeler Dam on Oct. 3, 1936, to 1,135 square miles.

26 DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	13-90	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											
Aug. 4, 1961	5	7	11	10	13	12	16	17	8	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														
Aug. 4, 1961	5	12	12	10	10	12	13	13	10	3					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1957	507.98	504.17	37,979,066				
1958	508.00	504.40	45,086,423				
1959	507.94	504.47	24,660,578				
1960	507.88	504.75	34,595,572				
1961	507.90	504.63	37,278,177				

46. ELEVATION-AREA-CAPACITY DATA (1928)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
394.8	0	0	460	6,779	148,091			
400	48	124	470	8,478	224,478			
410	100	858	480	10,471	319,457			
420	1,151	6,987	490	12,057	432,174			
430	1,993	22,697	500	14,509	565,953			
440	3,541	50,263	506	15,634	656,750			
450	4,751	91,716	507.88	16,000	687,000			

47. REMARKS AND REFERENCES  
 5/ From first accurate Area-Volume Curves, 1928 Survey. Does not include areas and volumes above Wheeler Dam.  
 6/ Does not include sediment deposits before Dec. 6, 1928.  
 \* Assumed.

48. AGENCY SUPPLYING DATA For preceding data see sheet No. 18-6a.  
 TENNESSEE VALLEY AUTHORITY  
 HYDRAULIC DATA BRANCH

49. DATE September 1, 1966