

**RESERVOIR SEDIMENTATION  
DATA SUMMARY**

Sardis Reservoir

15-30

NAME OF RESERVOIR

DATA SHEET NO.

DAY	1. OWNER Dept. of the Army, C. E.		2. RIVER Little Tallahatchie		3. STATE Mississippi			
	4. SEC. 11 TWP. 8 S RANGE 6 W		5. NEAREST TOWN Sardis, Miss.		6. COUNTY Panola			
	7. STREAM BED ELEV. 194.0 m.s.l.		8. TOP OF DAM ELEV. 311.4		9. SPILLWAY CREST ELEV. 281.4			
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	281.4	58,500	1,478,000	1,569,900	26 Aug 1939		
	b. POWER	-	-	-	-			
	c. WATER SUPPLY	-	-	-	-			
	d. IRRIGATION	-	-	-	-	16. DATE NORMAL OPER. BEGAN		
	e. CONSERVATION	234.4	9,800	91,900	91,900			
	f. INACTIVE	-	-	-	-	16 Mar 1940		
17. LENGTH OF RESERVOIR		35.0	MILES	AV. WIDTH OF RESERVOIR		3.0 MILES		
WATERSHED	18. TOTAL DRAINAGE AREA		1,545	SQ. MI.	22. MEAN ANNUAL PRECIPITATION		52.42 (20.7) INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA		1,454	SQ. MI.	23. MEAN ANNUAL RUNOFF		20.02 (20.7) INCHES	
	20. LENGTH	80	MILES	AV. WIDTH	19	MILES	24. MEAN ANNUAL RUNOFF	1,664,500 (20.7) AC.-FT.
	21. MAX. ELEV.		600	MIN. ELEV.	194	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.
	3-1-1937 1/	2	2	Contour	5-ft. inter.	58,500	1,569,900	1,016
	10-1-1939 2/	-	-	Range	22	-	-	-
	9-30-1943 3/	4.0	4.0	Range (R)	15	-	-	-
	1-1-1953 4/	10.1	14.1	Range (R)	8	-	-	-
5-1-1960	6.6	20.7	Range (D)	18	58,500	1,543,500	999	
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	a. MEAN ANNUAL	b. TOTAL TO DATE	
	9-30-1943	42.68	1,004,870	1,240,940	4,019,460	1,004,870	4,019,460	
	11-1-1953	57.69	2,023,370	2,474,470	20,436,030	1,734,430	24,455,490	
5-1-1960	52.42	1,467,340	2,474,470	9,684,470	1,649,270	34,139,960		
SURVEY DATA	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.	
	5/1/1960	26,426	1,277	0.878	26,426	1,277	0.878	
SURVEY DATA	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
5-1-1960	60*	1,147	1,147	0.0813	1.68	744	744	
		*Estimated						

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION														
	77-67	67-57	57-47	47-37	37-27	27-17	17-7	7-Crest							
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
5-1-1960	4.2	27.3	23.0	10.9	5.5	13.4	9.2	6.5							
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														
5-1-1960	35	17	9	5	3	5	10	7	5	4					

45. RANGE IN RESERVOIR OPERATION								
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	
1939-1940	247.88	223.80	1,061,300	1949-1950	272.92	234.46	2,335,200	
1940-1941	247.11	229.01	883,300	1950-1951	271.85	235.10	2,120,200	
1941-1942	256.05	228.93	1,187,400	1951-1952	268.76	235.13	1,751,000	
1942-1943	255.53	233.52	887,400	1952-1953	274.71	234.76	1,910,900	
1943-1944	272.39	235.38	1,461,000	1953-1954	247.85	234.49	996,200	
1944-1945	269.46	229.55	1,868,000	1954-1955	269.20	235.05	1,432,100	
1945-1946	276.65	235.55	2,678,800	1955-1956	260.97	235.71	1,298,600	
1946-1947	259.90	234.64	1,786,400	1956-1957	263.25	235.84	1,646,300	
1947-1948	275.30	234.37	2,121,000	1957-1958	263.66	236.04	2,154,800	
1948-1949	276.71	234.58	2,369,000	1959-1959	254.45	234.38	1,084,400	
				1959-1960	262.79	235.95	1,346,400	

46. ELEVATION-AREA-CAPACITY DATA 57								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
194	0	0	235	10,100	83,000	275	49,800	1,196,100
205	0	0	240	13,800	140,900	280	56,700	1,461,600
210	80	100	245	17,700	218,600	281.4	58,500	1,543,500
215	610	900	250	22,500	318,500	285.0	63,500	1,787,840
220	2,370	3,900	255	27,500	443,500	290.0	71,210	2,124,940
225	4,180	17,500	260	32,600	591,900	295.0	79,870	2,502,590
230	7,160	42,800	265	37,300	765,000	300.0	88,530	2,923,850
234.4	9,800	77,500	270	43,100	964,800			

47. REMARKS AND REFERENCES  
 1/ Reservoir area survey.  
 2/ Survey establishing reservoir silt ranges.  
 3/ Resurvey under adverse field conditions; however, study indicated negligible silting.  
 4/ Survey indicated insufficient deposits to compute amounts.  
 5/ Original area-capacity data.

48. AGENCY SUPPLYING DATA Dept. of the Army, C.E.  
 Vicksburg District

49. DATE 6 November 1961

**RESERVOIR SEDIMENT  
DATA SUMMARY**

Sardis Reservoir  
NAME OF RESERVOIR

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS

15-30a

DATA SHEET NO.

DAM	1. OWNER U.S. Army Corps of Engrs		2. STREAM Little Tallahatchie		3. STATE Mississippi			
	4. SEC. 11 TWP. 8S RANGE 6W		5. NEAREST TOWN Sardis, Miss.		6. COUNTY Panola			
	7. STREAM BED ELEVATION 194.0 msl 1/		8. TOP OF DAM ELEVATION 312.0 1/		9. SPILLWAY CREST ELEV. 282.0 1/			
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. ORIGINAL SURFACE AREA ACRES	13. ORIGINAL CAPACITY ACRE-FEET	14. GROSS STORAGE ACRE-FEET	15. DATE STORAGE BEGAN		
	a. MULTIPLE USE	-	-	-	-	-		
	b. FLOOD CONTROL	282.00 1/	58,500	1,478,000	1,569,900	26 Aug 39		
	c. POWER	-	-	-	-	-		
	d. WATER SUPPLY	-	-	-	-	-		
	e. IRRIGATION	-	-	-	-	16. DATE NOR- MAL OPER. BEGAN		
	f. CONSERVATION	235.00 1/	9,800	86,580 2/	91,900	-		
	g. SEDIMENT	-	-	-	-	16 Mar 40		
h. INACTIVE	219.00 1/	1,800	5,320	5,320	-			
17. LENGTH OF RESERVOIR 62.0 3/		MILES		AV. WIDTH OF RESERVOIR 1.47		MILES		
WATERSHED	18. TOTAL DRAINAGE AREA 1,545		SQ. MI.		22. MEAN ANNUAL PRECIPITATION 52.6 (26)		INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA 1,454		SQ. MI.		23. MEAN ANNUAL RUNOFF 20.4 (26)		INCHES	
	20. LENGTH 87		MILES		AV. WIDTH 18		MILES	
	21. MAX. ELEV. 600		MIN. ELEV. 194		24. MEAN ANNUAL RUNOFF 1,681,000		AC.-F T.	
					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. PERSQ. MI.
	8-26-39 4'	-	-	Cont D	5 ft	58,500	1,569,900	1,016
	10-1-39 4/	0	0	Range D	22			
	10-1-43 5/	4.0	4.0	Range R&D	15			
	11-1-48	5.1	9.1	Range R&D	8			
	11-1-53	5.0	14.1	Range D	8			
	5-1-60	6.5	20.6	Range D	18	58,500	1,549,336	1,003
	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	
	10-1-43	42.8	1,004,870	1,240,940	4,019,460	1,004,870	4,019,460	
	11-1-48	61.1	1,950,640	2,474,470	9,948,160	1,534,900	13,967,620	
	11-1-53	55.4	2,097,570	2,434,920	10,454,090	1,732,040	24,421,710	
	5-1-60	51.2	1,505,300	2,275,060	9,684,420	1,655,640	34,106,130	
	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	
10-1-43	(Not determined)							
11-1-48	"	"	"					
11-1-53	"	"	"					
5-1-60	"	"	"	20,564	998	0.687		
26. DATE OF SURVEY	39. AV. DRY WGT. LBS. PER CU. FT.	40. SED. DEP. TONS PERSQ. MI.-YR.		41. STORAGE LOSS PCT.		42. SED. INFLOW PPM		
		a. PERIOD	b. TOTAL TO DATE	a. AV. AN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
5-1-60	60.0*		898	0.0636	1.31		579	
	*Assumed.							

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION												
	77-67	67-57	57-47	47-37	37-27	27-17	17-7	7-Crest					
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
5-1-60	6	32	24	9	6	12	7	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															
5-1-60	42	21	7	2	3	3	10	6	3	3					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV. ▼	INFLOW AC.-FT.
1939-1940	247.88	223.80	1,061,300	1949-1950	272.92	234.46	2,335,200
1940-1941	247.11	229.01	883,300	1950-1951	271.85	235.10	2,120,200
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1946-1947	259.90	234.64	1,786,400	1956-1957	263.25	235.84	1,646,400
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1948-1949	276.71	234.58	2,369,000	1958-1959	254.45	234.38	1,084,400
				1959-1960	262.79	235.95	1,347,200

46. ELEVATION-AREA-CAPACITY DATA (1937)

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
205.0	0	0	240	13,300	149,500	275.0	49,100	1,192,600
210.0	70	340	245	17,300	225,900	280.0	56,000	1,455,400
215.0	490	1,830	250	22,100	323,600	282.0	58,500	1,569,900
220.0	2,200	6,900	255	26,900	446,800	285.0	62,700	1,751,700
225.0	3,880	23,500	260	32,100	594,200			
230.0	6,850	51,100	265	36,700	766,100			
235.0	9,800	91,900	270	42,400	963,800			

47. REMARKS AND REFERENCES  
 1/ Subtract 0.57 ft. from elevations to correct for 1941 and 1944 adjustments.  
 2/ Capacity including inactive storage was 91,900 AC-FT  
 3/ Thalweg distance along major stream to valley El. 282.0; Valley length of reservoir at spillway crest El. 282.0 is 31.0 miles.  
 4/ Survey of 3-1-37 to determine reservoir area and volume.  
 4/ Survey establishing 22 reservoir sediment ranges.  
 5/ 1943 resurvey made under adverse conditions but indicated negligible sediment.

48. AGENCY MAKING SURVEY U. S. Army Engineer Dist., Vicksburg  
 49. AGENCY SUPPLYING DATA Vicksburg, Miss.  
 December 1967 (Rev.)  
 50. DATE February 1966