

RESERVOIR SEDIMENT
DATA SUMMARY

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

POOL NO. 4
NAME OF RESERVOIR

15-35
DATA SHEET NO.

DAM	1. OWNER Dept. of the Army, C. of E.			2. STREAM Arkansas River			3. STATE Arkansas									
	4. SEC. 29 TWP. 5 S RANGE 8 W			5. NEAREST P. Pine Bluff 6 E			6. COUNTY Jefferson									
	7. LAT 34° 14' 52.5" LONG 91° 54' 20.5"			8. TOP OF DAM ELEVATION 214			9. SPILLWAY CREST ELEV. 197 1/2									
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. FLOOD CONTROL										15. DATE STORAGE BEGAN Dec 17, 1968					
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN Jan 1, 1969					
	e. IRRIGATION															
	f. CONSERVATION 2/		196		5,660		70,360		70,360							
g. INACTIVE 3/		169		0		0		0								
WATERSHED	17. LENGTH OF RESERVOIR 19.95 MILES				AV. WIDTH OF RESERVOIR 0.44 MILES											
	18. TOTAL DRAINAGE AREA 158,658 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 12-50 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 4,252 SQ. MI.				23. MEAN ANNUAL RUNOFF 3.42 (44 yrs) 4 INCHES											
	20. LENGTH 1,310 MILES		AV. WIDTH 121 MILES		24. MEAN ANNUAL RUNOFF 29,167,000 (44) 4/AC.-FT.											
	21. MAX. ELEV. 14,431		MIN. ELEV. 169		25. ANNUAL TEMP. MEAN 56 RANGE -22 to 114											
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/H. RATIO 5/ AC.-FT. PER AC.-FT.	
	Aug 1, 1969						Range (D)		23		5,660		70,360		.0165	
	Jul 1, 1970		.91		.91		Range (D)		17		5,650		76,020		.0176	
	Sep 14, 1971		1.21		2.12		Range (D)		23		5,870		74,540		.0171	
	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			
	Jul 1, 1970				28,299,700				25,752,700		28,299,700		25,752,700			
	Sep 14, 1971				18,104,105				21,906,000		22,480,500		47,658,700			
	26. DATE OF SURVEY		37. PERIOD CAPACITY LOSS, 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			
Jul 1, 1970		-5,660		-6,220		-1.463		-5,660		-6,220		-1.463				
Sep 14, 1971		1,480		1,321		.311		-4,180		-1,972		-.464				
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, TONS PER		43. PERIOD		44. TOTAL TO DATE				
				a. PERIOD		b. TOTAL TO DATE		a. AV. ANN.		b. TOT. TO DATE						
Jul 1, 1970		80*		-2,549		-2,549		-8.84		-8.04		164				
Sep 14, 1971		80		542		-808		-2.80		-5.94		77				

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET											
	M.S.J.											
	70-76	76-78	78-80	80-85	85-88	88-90	90-92	92-94	94-96	96-98	98-100	100-102
Jul 1, 1970	-3	-6	-11	-25	-7	-10	-12	-11	-9	-5	-2	+1
Sep 14, 1971	0	0	0	0	-17	6	16	17	17	21	19	21

26. DATE OF SURVEY	44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGTH OF RESERVOIR														
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
	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
Jul 1, 1970	-14	-3	-7	-11	-10	-19	-12	-12	-9	-3					
Sep 14, 1971	32	1	26	64	11	-5	-13	5	9	-30					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1969	197.5	195.3	39,928,000				
1970	196.6	195.4	26,110,000				
1971	196.5	195.4	19,818,000				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
Original Survey - 1969			180	1,220	13,350	190	3,900	44,120
198	6,440	83,620	178	1,000	10,700	188	3,350	36,540
196	5,660	70,360	176	800	8,350	186	2,990	29,980
194	4,930	58,620	174	610	6,300	184	2,580	24,160
192	4,250	48,400				182	2,100	18,898
190	3,540	39,790	1971 Survey			180	1,540	14,480
188	3,060	32,500	198	6,670	87,370	178	1,060	11,200
186	2,660	26,300	196	5,870	74,540	176	810	8,500
184	2,300	20,920	194	5,160	63,040	174	610	6,300
182	1,550	16,340	192	4,550	52,930			

47. REMARKS AND REFERENCES

- 1/ Top of spillway gates in closed position.
- 2/ Top of navigation pool.
- 3/ Spillway crest, 9 bays at elev. 169 and 8 bays at elev. 174.
- 4/ Based on USGS Water Resources Data for Arkansas at Murray Dam at Little Rock and runoff from area between Dardanelle and Murray Dam.
- 5/ Adjustment based on inflow from net sediment contributing area (Item 19) as taken from USGS W.R. Data; 1969 (4,278,560 AC.FT); 1970 (4,307,160 AC.FT); 1971 (4,347,200 AC. FT).
- 6/ Computed from measured suspended sediment concentrations.

48. AGENCY MAKING SURVEY Department of the Army, Corps of Engineers
 49. AGENCY SUPPLYING DATA Southwestern Div., Little Rock Dist. 50. DATE 1 Nov 76