

RESERVOIR SEDIMENTATION
DATA SUMMARY

Charleston Lake

NAME OF RESERVOIR

44-9

DATA SHEET NO.

DAM	1. OWNER City of Charleston, Ark.		2. RIVER Ark. River Trib.		3. STATE Arkansas			
	4. SEC. 14 TWP. 7N RANGE 29W		5. NEAREST TOWN Charleston		6. COUNTY Franklin			
	7. STREAM BED ELEV.		8. TOP OF DAM ELEV.		9. SPILLWAY CREST ELEV.			
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					April 1937		
	b. POWER							
	c. WATER SUPPLY		65.8	325	325	16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION							
	e. CONSERVATION							
f. INACTIVE								
17. LENGTH OF RESERVOIR		0.05	MILES	AV. WIDTH OF RESERVOIR		0.25 MILES		
18. TOTAL DRAINAGE AREA		1.03	SQ. MI.	22. MEAN ANNUAL PRECIPITATION		43 INCHES		
19. NET SEDIMENT CONTRIBUTING AREA		0.93	SQ. MI.	23. MEAN ANNUAL RUNOFF		Approx. 13 INCHES		
20. LENGTH		0.75	MILES	AV. WIDTH		0.80 MILES		
21. MAX. ELEV.			MIN. ELEV.	24. MEAN ANNUAL RUNOFF		693 Ac. ft./sq. mi. 3000		
				25. CLIMATIC CLASSIFICATION		Humid		
WATERSHED	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.
	April 1937	-	-	-	-	65.8	325	314
	Dec. 1, 1953	16.66	16.66	Recon.	3 ranges	65.8	264	256
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.		
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.-YEAR	d. TOTAL TO DATE	e. AV. ANNUAL	f. PER SQ. MI.-YEAR	
	Dec. 1, 1953	61.00	3.66	3.94	61.00	3.66	3.94	
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. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
	Dec. 1, 1953	-	-	-	1.13	18.8	-	-

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION												
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												

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														

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

C/I ratio = 1937-0.45, 1953-0.37.
 Estimated trap efficiency 96%
 Total sediment load, adjusted for trap efficiency = 4.10 Ac.ft./sq.mi.

48. AGENCY SUPPLYING DATA SCS, Fort Worth, Texas 49. DATE January 1954