

RESERVOIR SEDIMENTATION
DATA SUMMARY

Nimrod

14-6

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER <u>Dept of Army, C. of E.</u>		2. RIVER <u>Fourche La Fave</u>		3. STATE <u>Arkansas</u>			
	4. SEC. <u>32</u> TWP. <u>4 N</u> RANGE <u>20 W</u>		5. NEAREST TOWN <u>Nimrod</u>		6. COUNTY <u>Perry</u>			
	7. STREAM BED ELEV. <u>303</u>		8. TOP OF DAM ELEV. <u>400</u>		9. SPILLWAY CREST ELEV. <u>373</u>			
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	<u>373</u>	<u>18,300</u>	<u>307,000</u>	<u>336,000</u>	<u>May 18, 1942</u>		
	b. POWER							
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION							
	e. CONSERVATION	<u>342</u>	<u>3,600</u>	<u>29,000</u>	<u>29,000</u>	<u>May 1942</u>		
	f. INACTIVE							
17. LENGTH OF RESERVOIR <u>20</u> MILES		AV. WIDTH OF RESERVOIR <u>1.4</u> MILES						
WATERSHED	18. TOTAL DRAINAGE AREA <u>680</u> SQ. MI.		22. MEAN ANNUAL PRECIPITATION <u>48.7 (35 years)</u> INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA <u>652</u> SQ. MI.		23. MEAN ANNUAL RUNOFF <u>17.4 (27 years)</u> INCHES					
	20. LENGTH <u>69</u> MILES AV. WIDTH <u>10</u> MILES		24. MEAN ANNUAL RUNOFF <u>631,800 (27 years)</u> AC.-FT.					
	21. MAX. ELEV. <u>2,800</u> MIN. ELEV. <u>303</u>		25. CLIMATIC CLASSIFICATION <u>Humid</u>					
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.
	<u>May 18, 1942</u>	<u>7.9</u>	<u>7.9</u>	<u>Range</u>	<u>25</u>	<u>18,300</u>	<u>336,000</u>	<u>494</u>
	<u>April 12, 1950</u>						<u>See note below</u>	
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	
	<u>April 12, 1950</u>	<u>50</u>	<u>822,000</u>	<u>1,499,000</u>	<u>6,500,000</u>	<u>822,000</u>	<u>6,500,000</u>	
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.	
	<u>April 12, 1950</u>	<u>Sediment deposits during period were too small to determine by range sounding. Deposits in the cultivated areas of the flood control pool were mixed with original soil by plowing. Deposits in the channel were computed to be in the order of 140 acre-feet. Suspended-load inflow, based on measurements on Fourche La Fave at Gravelly, Arkansas, was 608 acre-feet assuming a unit weight</u>						
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
		<u>of 62 pounds per cubic foot. Suspended load outflow was computed as 200 acre-feet. The net is 408 acre-feet.</u>						

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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-F
1942 <u>1/</u>	343.2	318.0	107,000	1947	359.1	339.0	424,700
1943	352.6	339.1	293,700	1948	359.1	339.1	656,600
1944	356.1	341.8	747,000	1949	369.3	340.3	918,400
1945	474.8	341.6	1,499,000	1950 <u>2/</u>	369.6	340.5	844,200
1946	362.9	342.0	1,009,400				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
300	0	0	342	3,550	29,000			
310	60	240	350	6,400	68,600			
320	250	1,830	360	10,380	151,800			
330	710	6,170	370	16,420	283,900			
340	2,900	22,560	373	18,300	336,000			

47. REMARKS AND REFERENCES

1/ Data for period May 18 - Sept. 30, 1942

2/ Data for period Oct. 1, 1949 - April 12, 1950.

Reference: "Sedimentation Survey of Nimrod Reservoir, Arkansas, April 1950", Little Rock District, 1951.

48. AGENCY SUPPLYING DATA
Dept of the Army, Little Rock District

49. DATE January 1951