

RESERVOIR SEDIMENTATION  
DATA SUMMARY

Nepper Main

NAME OF RESERVOIR

36-7

DATA SHEET NO.

DAM	1. OWNER Nepper			2. RIVER			3. STATE Iowa						
	4. SEC. 35 TWP. 85N RANGE 43W			5. NEAREST TOWN Mapleton			6. COUNTY Monona						
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV.			9. SPILLWAY CREST ELEV. 1,192.0						
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		1,192.0		5.4		38.1		38.1		June 1948		
	b. POWER												
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION												
	e. CONSERVATION												
	f. INACTIVE		1,176.0		0		-		-		June 1948		
17. LENGTH OF RESERVOIR						MILES			AV. WIDTH OF RESERVOIR			MILES	
WATERSHED	18. TOTAL DRAINAGE AREA				0.196		SQ. MI.		22. MEAN ANNUAL PRECIPITATION 29.67 (40yr) INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA				0.186		SQ. MI.		23. MEAN ANNUAL RUNOFF 4.2 estimated INCHES				
	20. LENGTH		MILES		AV. WIDTH		MILES		24. MEAN ANNUAL RUNOFF				AC.-FT.
	21. MAX. ELEV.			MIN. ELEV.			25. CLIMATIC CLASSIFICATION					Sub-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 <sub>I</sub> /W RATIO 1/	
	Mar. 10, 1949		-	-	Detailed Contour (2ft)		5.4		38.1		194		
	Jul. 26, 1950		1.37	1.37	"		"		5.4		37.8	193	
	Jul. 30, 1951		1.01	2.38	"		"		5.4		34.4		176
	Nov. 21, 1952		1.31	3.69	"		"		5.4		34.4		176
	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	
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					
Jul. 26, 1950		0.318	0.232	1.25		0.318	0.232	1.25					
Jul. 30, 1951		3.37	3.34	17.96		3.69	1.55	8.33					
Nov. 21, 1952		Not measurable					3.69	1.00	5.38				
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			
Jul. 26, 1950		76.1 assumed		2,070		2,070	0.61	0.83	-	-			
Jul. 30, 1951		76.1 "		29,768		13,807	4.07	9.69	-	-			
Nov. 21, 1952		76.1 (3)		-		8,917	2.62	9.69	-	-			

1/ C/I ratio estimated to be 0.87 in 1949; 0.86 in 1950; and 0.78 in 1951 and 1952. Trap efficiency estimated to be 95% up to 1952.

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  
 "Dry" reservoir in Little Sioux Watershed.  
 Total load adjusted for trap efficiency 9,400 tons/sq.mi./yr.  
 35.6% of capacity to top of lower trash reach (el., 1,185.0  
 lost up to Nov. 21, 1952 (9.65% annually).