

RESERVOIR SEDIMENTATION
DATA SUMMARY

Nepper Southwest

NAME OF RESERVOIR

36-8

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. 1,147.0																													
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		1,147.0		2.54		8.45		8.45		July 1948																									
	b. POWER																																			
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN																									
	d. IRRIGATION																																			
	e. CONSERVATION																																			
	f. INACTIVE		1,140.0		-		-		-		July 1948																									
WATERSHED	17. LENGTH OF RESERVOIR						MILES						AV. WIDTH OF RESERVOIR						MILES																	
	18. TOTAL DRAINAGE AREA						0.075						SQ. MI.						22. MEAN ANNUAL PRECIPITATION						29.67(40yr) INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA						0.069						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. ACGL. YEARS		29. TYPE OF SURVEY		30. NO. OF RANGES OR CONTOUR INT.		31. SURFACE AREA ACRES		32. CAPACITY ACRE- FEET		33. C _w RATIO 1/		AC.-FT. PER SQ. MI.																			
	Mar. 7, 1949		-		-		Detailed		Contour (2ft)		2.54		8.45		113																					
	Aug. 10, 1950		1.42		1.42		"		"		2.54		8.45		113																					
	Aug. 2, 1951		0.98		2.40		"		"		2.50		7.88		105																					
	Nov. 20, 1952		1.30		3.70		"		"		2.54		7.88		105																					
	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																							
Aug. 10, 1950		Negligible		Negligible		Negligible		Negligible		Negligible		Negligible																								
Aug. 2, 1951		0.568		0.580		8.41		0.568		0.237		3.43																								
Nov. 20, 1952		Not measurable						0.568		0.154		2.23																								
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																								
Aug. 10, 1950		72.7 assumed		Negligible		Negligible		Negligible		-		-																								
Aug. 2, 1951		72.7 "		13,319		5,431		2.80		6.72		-																								
Nov. 20, 1952		72.7 (3)		-		3,531		1.82		6.72		-																								

1/ C/I ratio estimated to be 0.50 in 1949 and 1950; 0.47 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 3,720 tons/sq.mi./yr.
 6.73% of capacity to top of trash reach (el. 1,147.25) lost up to
 Nov. 20, 1952 (1.82% annually).