

RESERVOIR SEDIMENTATION
DATA SUMMARY

Lake Ericson

NAME OF RESERVOIR

35-23
DATA SHEET NO.

DAM	1. OWNER Consumer's PF District			2. RIVER Cedar		3. STATE Nebraska		
	4. SEC. 25 TWP. 21N RANGE 12W			5. NEAREST TOWN Ericson		6. COUNTY Wheeler		
	7. STREAM BED ELEV. 1984.0			8. TOP OF DAM ELEV. 2009.0		9. SPILLWAY CREST ELEV. 2005.0 g/		
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					May 1915		
	b. POWER	2005.0	160.6	1474	1652			
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION					1915		
	e. CONSERVATION							
	f. INACTIVE	1993	59.6	178	178			
17. LENGTH OF RESERVOIR 1.52 MILES				AV. WIDTH OF RESERVOIR 0.25 MILES				
WATERSHED	18. TOTAL DRAINAGE AREA 500 (41 b/) SQ. MI.			22. MEAN ANNUAL PRECIPITATION 20.54 (34 yr.) INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA 41 SQ. MI.			23. MEAN ANNUAL RUNOFF 2.5 INCHES				
	20. LENGTH 42 MILES		AV. WIDTH 12 MILES		24. MEAN ANNUAL RUNOFF 64,900 (59,800 g/) AC.-FT.			
	21. MAX. ELEV. 2250		MIN. ELEV. 1984		25. CLIMATIC CLASSIFICATION semi-humid			
	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
5-15 to 4-48		32.9	32.9	Range Detailed measurement of sediment	46 with 28 used for	161	1066	$\frac{1066}{41} = 26$
26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AC.-FT.		
5-15 to 4-48		20.54"	a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE	
			64,900	69,300 af in 1931 (for period of record 1931 to 1946)	$\frac{d}{2,206,000}$	64,900	$\frac{d}{2,206,000}$	
26. DATE OF SURVEY		37. PERIOD SEDIMENT DEPOSITS ACRE- FEET			38. TOTAL SED. DEPOSITS TO DATE ACRE- FEET.			
5-15 to 4-48		a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	
		585	17.8	0.434	585	17.8	0.434	
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	
5-15 to 4-48		a. PERIOD	b. TOTAL TO DATE	a. AV. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
		80	756	756	1.08	35.4	340	

SURVEY DATA

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	20-18	18-16	16-14	14-12	12-10	10-8	8-6	6-4	4-2	2 to Crest	Crest to
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
5-15 to 4-48	0	8	9	15	17	20	16	12	8	2	0

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														
5-15 to 4-48	1	1	2	4	19	13	17	19	16	8					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1915-1930	2004.0	2003.0	70,100 (mean annual est.)	1937	2004.0	2003.0	54,852
1931	2004.0	2003.0	68,142	1938	"	"	55,690
1932	"	"	67,639	1939	"	"	51,285
1933	"	"	59,261	1940	"	"	50,160
1934	"	"	54,879	1941	"	"	52,145
1935	"	"	61,660	1942	"	"	55,563
1936	"	"	57,535	1943	"	"	54,957
				1944	"	"	59,371
				1945	"	"	57,879
				1946	"	"	57,974
				1947	"	"	57,974
						1993.0	90,126

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1990	1.2	0.4	1998	78.1	234.8			
1991	6.6	3.9	1999	89.8	319.3			
1992	14.6	14.2	2000	100.6	414.8			
1993	18.4	30.7	2001	109.6	519.8			
1994	22.2	51.1	2002	122.4	635.7			
1995	34.4	79.2	2003	139.0	766.5			
1996	42.1	117.4	2004	150.0	910.8			
1997	57.5	167.3	2005	160.0	1065.8			

47. REMARKS AND REFERENCES
a/ The permanent crest is at elevation 1993.0 with stop logs to elevation 2005.0.
b/ The area assumed to contribute surface runoff is 41 square miles.
c/ For period of 1931-1946 the discharge was computed from power production records. The 64,900 af is for period 1915-1948 using estimated data for 1915 to 1930 and for 1947 and 1948.
d/ 1,057,000 acre-feet for period of record (1931 to date of survey) plus 1,169,000 acre-feet estimated for 1915 to 1930.
e/ Heavy flood in June 1947. Portion of dam washed out.

48. AGENCY SUPPLYING DATA
49. DATE 1/4/1950

Department of Interior
Bureau of Reclamation
Region 7, Lower Platte River Area
Grand Island, Nebraska