

RESERVOIR SEDIMENT
DATA SUMMARY

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

ISABELLA RESERVOIR

NAME OF RESERVOIR

71-42

DATA SHEET NO.

DAM	1. OWNER U.S. Army Engineers			2. STREAM Kern River			3. STATE California					
	4. SEC. 19 TWP. 26S RANGE 33E			5. NEAREST P O Isabella			6. COUNTY Kern					
	7. LAT 35° 38' 50" LONG. 118° 28' 50"			8. TOP OF DAM ELEVATION 2,633.5			9. SPILLWAY CREST ELEV 2,605.5					
RESERVOIR	10. STORAGE ALLOCATION		11. ELEVATION TOP OF POOL		12. ORIGINAL SURFACE AREA, ACRES		13. ORIGINAL CAPACITY, ACRE-Feet		14. GROSS STORAGE, ACRE-Feet		15. DATE STORAGE BEGAN	
	a. FLOOD CONTROL										1 May 1952	
	b. MULTIPLE USE		2,605.5		11,383		539,665		570,005			
	c. POWER										16. DATE NORMAL OPER BEGAN	
	d. WATER SUPPLY										15 Apr 54	
	e. IRRIGATION											
	f. CONSERVATION 1/		2,522.2		1,865		30,014		30,340			
	g. INACTIVE		2,470.0		55 2/		326 2/		326 2/			
WATERSHED	17. LENGTH OF RESERVOIR 8.05 3/ MILES				AV. WIDTH OF RESERVOIR 1.07 MILES							
	18. TOTAL DRAINAGE AREA 2,074 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 6-50 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 2,074 SQ. MI.				23. MEAN ANNUAL RUNOFF 6.02 INCHES							
	20. LENGTH 77.0 MILES		AV. WIDTH 26.9 MILES		24. MEAN ANNUAL RUNOFF 665,900 (48) AC.-FT.							
	21. MAX. ELEV. 14,495		MIN. ELEV. 2,455.0		25. ANNUAL TEMP. MEAN * 45 RANGE * -25 to 112							
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/I. RATIO, AC.-FT. PER AC.-FT.			
	16 Jun 53		0	0	(D)	20	11,383	539,665	.810			
	20 Sep 56		3.3	3.3	(R)	50 M.	11,383	539,115	.810			
	13 Dec 68		12.2	15.5	(R)	150 M.	11,350*	534,465	.803			
	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		
	16 Jun 53		-		-			0				
	20 Sep 56		20.8*		568,475			872,300				
	13 Dec 68		22.6*		594,175			1,615,600				
								2,273,900				
								7,130,100				
								568,475				
								587,744				
							9,403,900					
26. DATE OF SURVEY		37. PERIOD CAPACITY LOSS, 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		
16 Jun 53		0		-	-	0		-		-		
20 Sep 56		500		154	.074	500		154		.074		
13 Dec 68		4,700		386	.186	5,200		335		.162		
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. ANN.	b. TOT. TO DATE	a. PERIOD		b. TOT. TO DATE		
16 Jun 53		-		-		-	0	0		0		
20 Sep 56		62*		100		.02	.08	217.94		217.94		
13 Dec 68		62*		252		.05	.91	500.00		548.08		

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION										
	135-125	125-105	105-85	85-65	65-45	45-25	25-5	5-cr			
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
16 Jun 53											
20 Sep 56	-	-	-	-	-	-	-	-	-	-	-
13 Dec 68	5*	8*	8*	19*	31*	21*	6*	2*			

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														
16 Jun 53															
20 Sep 56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Dec 68	1*	2*	2*	3*	8*	14*	29*	28*	6*	1*					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1953	2488.19	2470*	543,700	1966	2567.05	2543.19	399,600
1954	2543.60	2470.67	502,600	1967	2602.71	2541.28	1,615,600
1955	2528.46	2496.33	355,300	1968	2574.61	2550.76	489,600
1956	2575.80	2509.43	872,300	1969	2606.21	2550.17	2,226,700
1957	2561.83	2547.58	436,200				
1958	2594.83	2546.08	1,052,000				
1959	2569.76	2539.13	271,100				
1960	2550.15	2522.37	279,200				
1961	2532.21	2514.60	174,900				
1962	2560.16	2513.85	653,600				
1963	2585.99	2541.34	737,800				
1964	2566.87	2545.13	322,600				
1965	2576.54	2544.53	697,900				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
2455	0	0	2540	3,522	77,334	2630	14,233	883,998
2460	8	152/	2550	4,745	118,540			
2470	55	3262/	2560	6,053	172,706			
2480	104	1,102	2570	7,224	239,047			
2490	204	2,559	2580	8,447	317,474			
2500	485	5,850	2590	9,575	407,552			
2510	991	13,092	2600	10,745	509,162			
2520	1,691	26,430	2610	11,908	622,415			
2530	2,508	47,316	2620	13,085	747,408			

47. REMARKS AND REFERENCES

* Assumed.

1/ Recreation Pool. May be used for flood control.

2/ The original sediment range survey indicates this storage space may have been lost to spoil and/or sedimentation during construction of the main dam (1 May 52-16 Jun 53).

3/ South Fork arm 8.53 miles in length along thalweg above river junction.

4/ Area-capacity data based on original data has not been revised.

48. AGENCY MAKING SURVEY U.S. Army Engineers, Sacramento District

49. AGENCY SUPPLYING DATA U.S. Army Engineers, Sacramento Dist. 50. DATE 2 February 1970