

RESERVOIR SEDIMENTATION
DATA SUMMARY

SANTIAGO DAM

70-32

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER Serrano Irr. District		2. RIVER Santiago Creek		3. STATE California			
	4. SEC. TWP. 4 S RANGE 8 W		5. NEAREST TOWN Villa Park		6. COUNTY Orange			
	7. STREAM BED ELEV. 675		8. TOP OF DAM ELEV. 810		9. SPILLWAY CREST ELEV. 790.0			
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					Jan. 1932		
	b. POWER							
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION	790.0	590	25,000	25,000			
	e. CONSERVATION							
	f. INACTIVE					Jan. 1932		
17. LENGTH OF RESERVOIR 1.8		MILES		AV. WIDTH OF RESERVOIR .4		MILES		
WATERSHED	18. TOTAL DRAINAGE AREA 63		SQ. MI.		22. MEAN ANNUAL PRECIPITATION 21.7		INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA 62.1		SQ. MI.		23. MEAN ANNUAL RUNOFF 4.60		INCHES	
	20. LENGTH 15.5		MILES		AV. WIDTH 7.7		MILES	
	21. MAX. ELEV. 5680 ft.		MIN. ELEV. 675		25. CLIMATIC CLASSIFICATION Subhumid			
	24. MEAN ANNUAL RUNOFF 15,440 (17)		AC.-FT.					
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.
	Dec. 1931							
	Sept. 1948	16.8	16.8	Contour	10' & 2'	590	25,000	397
						594	24,840	394
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE-FEET			36. WATER INF. TO DATE AC.-FT.		
			a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE	
	Dec. 1931							
	Sept. 1948	23.5	15,440	48,760	258,400	15,380	258,360	
	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.	
Dec. 1931								
Sept. 1948	160	9.47	0.15	160	9.47	0.15		
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	
Dec. 1931								
Sept. 1948				.04	.64			

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION													
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
1/														

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.
1931-32	758	747.7	13,466	1940-41	793.9	765.8	48,763
1932-33	746.3	730.5	5,752	1941-42	786.0	771.8	5,732
1933-34	732.5	715.0	5,216	1942-43	794.0	770.0	34,804
1934-35	742.0	718.2	6,474	1943-44	792.5	781.2	17,384
1935-36	733.5	708.5	5,392	1944-45	793.1	780.2	15,812
1936-37	793.3	715.2	38,624	1945-46	783.8	772.6	8,717
1937-38	792.8	781.2	32,643	1946-47	778.8	766.2	7,228
1938-39	785.4	773.6	9,154	1947-48	766.2	740.7	2,792
1939-40	781.0	768.8	8,586				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
690 2/	8.4	100	745	253	5,930	790	594	24,840
700	31	196	750	291	7,230	795	640	27,800
705	46	400	755	322	8,850	800	683	30,400
710	63	664	760	368	10,510			
715	84	1,030	765	396	12,150			
720	106	1,510	770	437	14,540			
725	132	2,080	775	475	16,920			
730	152	2,810	780	514	19,280			
735	188	3,680	785	556	22,100			
740	220	4,690						

47. REMARKS AND REFERENCES

1/ Item 43. From elev. 690 to 730, capacity is based on 1932 survey, and it was considered inadvisable to locate sediment within depth designation.

2/ Item 46. Reservoir capacity below elev. 690 undetermined.