

RESERVOIR SEDIMENTATION
DATA SUMMARY

Brea Flood Control Basin

70-19

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER Dept of the Army, C of E		2. RIVER Brea Creek		3. STATE California				
	4. SEC. 21 TWP. 3 S RANGE 10-W		5. NEAREST TOWN Fullerton		6. COUNTY Orange				
	7. STREAM BED ELEV. 205		8. TOP OF DAM ELEV. 295		9. SPILLWAY CREST ELEV. 279				
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	279	164	4,168	4,168	22 Jan 1943			
	b. POWER								
	c. WATER SUPPLY								
	d. IRRIGATION					16. DATE NORMAL OPER. BEGAN			
	e. CONSERVATION					30 Mar 1942			
	f. INACTIVE								
17. LENGTH OF RESERVOIR		1.9	MILES	AV. WIDTH OF RESERVOIR		.1 MILES			
WATERSHED	18. TOTAL DRAINAGE AREA		23.4	SQ. MI.	22. MEAN ANNUAL PRECIPITATION		17.4 INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA		23.1	SQ. MI.	23. MEAN ANNUAL RUNOFF		.84 INCHES		
	20. LENGTH		13	MILES	AV. WIDTH		1.8 MILES		
	21. MAX. ELEV.		1,470		MIN. ELEV.		205		
					24. MEAN ANNUAL RUNOFF		1,050 AC.-FT.		
				25. CLIMATIC CLASSIFICATION		Semi-arid			
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.	
	30 Mar 1942			Contour	5 ft.	164	4,168	178	
	Oct 1949	7.5	7.5	Contour	5 ft.	163	4,097	175	
	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		
	Oct. 1949	13.9	558	2,180	4,183	558	4,183		
	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.		
	Oct. 1949	71	9.5	.41	71	9.5	.41		
	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		
Oct. 1949	-	-	-	.227	1.70	-	-		

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION												
<u>1/</u>	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
<u>1/</u>	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.
1942-43	240.77	Dry	2,180				
1943-44	239.77	Dry	1,020				
1944-45	223.22	208.40	361				
1945-46	215.65	208.50	399				
1946-47	221.89	208.10	143				
1947-48	208.50	208.10	47				
1948-49	208.60	Day	33				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
210	.3	.4	235	31.9	303.4	260	88.2	1,766.6
215	.9	3.1	240	40.6	484.0	265	104.7	2,246.0
220	5.6	16.1	245	52.3	715.3	270	123.4	2,816.0
225	14.9	67.4	250	63.4	1,004.7	275	143.6	3,484.0
230	23.7	164.2	255	76.6	1,354.1	280	168.5	4,263.0

47. REMARKS AND REFERENCES 1/ No survey was made between the date dam was completed and the date storage began. The original capacity is based on a survey made in 1939. The estimated allowance for the borrow pit excavation was added to the 1939 survey capacity and the assumption made that the result represents the capacity when storage was began (22 Jan. 1943). No information was available as to the distribution of the borrow pit volumes between contours; consequently, items 43 & 44 could not be completed.