

Legend	
	Dam
	RD Rubber Dam
	Stream Gage
	Drainage Area
	Miles From Stream Mouth
	Travel Time (Hours)
	Foot Bridge
	Channel Unlined
	Rip Rap Side Slopes
	Soft Bottom
	Concrete
	Grouted Stone
	Side Slope
	Bottom
	Levee

Significant Features	Miles	Remarks
	6.0	
	5.7	
	1.4-1.8	
	.8	Station No. 211

BREA CREEK, CALIFORNIA

**SCHMATIC SYSTEM DIAGRAM
BREA DAM
TO
COYOTE CREEK**

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

Summary of Climatological Data
at Yorba Linda

YORBA LINDA, CA

CLIMATOLOGICAL SUMMARY

PERIOD: 1951-80
ELEVATION: 350 FT

	TEMPERATURE (F)														PRECIPITATION TOTALS (INCHES)													
	MEANS			EXTREMES						MEAN NUMBER OF DAYS					DEGREE DAYS		PRECIPITATION TOTALS (INCHES)						SNOW					
	DAILY MAXIMUM	DAILY MINIMUM	MONTHLY	RECORD HIGHEST	YEAR	DAY	RECORD LOWEST	YEAR	DAY	MAX		MIN			HEATING BASE 65	COOLING BASE 65	MEAN	GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY	MEAN	MAXIMUM MONTHLY	YEAR	MEAN NUMBER OF DAYS		
										90 AND ABOVE	32 AND BELOW	32 AND BELOW	0 AND BELOW	.10 OR MORE												.50 OR MORE	1.00 OR MORE	
JAN	67.3	42.4	54.9	91+	76	17	23	60	2	0	0	2	0	320	7	3.58	12.58	69	5.20	56	26	.0	.0	.0	5	2	1	
FEB	69.3	43.1	56.2	92+	77	15	27+	56	17	0	0	1	0	253	7	2.78	11.69	80	3.01	69	24	.0	.0	.0	4	2	1	
MAR	70.4	43.6	57.0	93+	59	12	29	51	2	0	0	1	0	256	8	2.30	6.98	78	2.90	68	08	.0	.0	.0	4	1	1	
APR	73.7	46.0	59.9	99	66	15	32+	56	2	1	0	0	0	179	26	1.15	5.21	58	1.64	58	01	.0	.0	.0	3	1	0	
MAY	76.7	50.9	63.8	104+	79	13	38+	60	5	2	0	0	0	84	47	.27	2.42	77	1.38	77	08	.0	.0	.0	1	0	0	
JUN	81.8	54.5	68.2	111+	73	20	41+	53	3	5	0	0	0	26	122	.05	.51	76	.51	76	10	.0	.0	.0	0	0	0	
JUL	88.8	58.2	73.5	110+	57	4	46+	53	2	13	0	0	0	0	264	.02	.29	68	.22	68	27	.0	.0	.0	0	0	0	
AUG	89.2	59.0	74.1	108+	56	23	46	51	7	14	0	0	0	0	282	.15	2.61	77	2.41	77	17	.0	.0	.0	0	0	0	
SEP	87.4	56.7	72.0	114+	55	1	43+	54	21	11	0	0	0	0	215	.29	2.37	76	1.40	76	10	.0	.0	.0	1	0	0	
OCT	81.4	52.0	66.7	109+	58	16	30+	71	29	6	0	0	0	55	108	.23	1.96	57	.94	79	20	.0	.0	.0	1	0	0	
NOV	74.2	46.1	60.1	100+	76	4	29+	79	21	1	0	0	0	172	25	1.57	7.33	65	2.40	67	19	.0	.0	.0	2	1	1	
DEC	68.9	42.3	55.6	99+	58	3	22+	68	21	0	0	1	0	299	7	2.07	6.91	66	3.15	51	29	.0	.0	.0	3	1	1	
YEAR	77.4	49.6	63.5	114	55	1	22	68	21	53	0	5	0	1644	1118	14.46	12.58	69	5.20	56	26	.0	.0	.0	24	8	5	

*FROM 1951-80 NORMALS * ESTIMATED VALUE BASED ON DATA FROM SURROUNDING STATIONS + ALSO ON EARLIER DATES.

DEGREE DAYS TO SELECTED BASE TEMPERATURES (F)

BASE	HEATING DEGREE DAYS													ANN
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
BELOW 65	320	253	256	179	84	26	0	0	0	55	172	299	1644	
60	107	138	132	86	19	0	0	0	0	12	80	168	822	
57	126	88	79	46	6	0	0	0	0	41	110	496		
55	92	60	51	27	0	0	0	0	0	23	78	331		
50	30	16	11	6	0	0	0	0	0	0	22	85		
BASE	COOLING DEGREE DAYS													ANN
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
ABOVE 55	89	94	113	174	273	396	574	592	510	363	176	96	3450	
57	61	66	79	133	216	336	512	530	450	305	134	66	2888	
60	29	31	39	83	137	250	419	437	360	220	83	31	2119	
65	7	7	8	26	47	122	264	282	215	108	25	7	1119	
70	0	0	0	6	7	41	118	145	93	36	5	0	451	

DERIVED FROM THE 1951-80 MONTHLY NORMALS

PROBABILITY THAT THE MONTHLY PRECIPITATION WILL BE EQUAL TO OR LESS THAN THE INDICATED PRECIPITATION AMOUNT

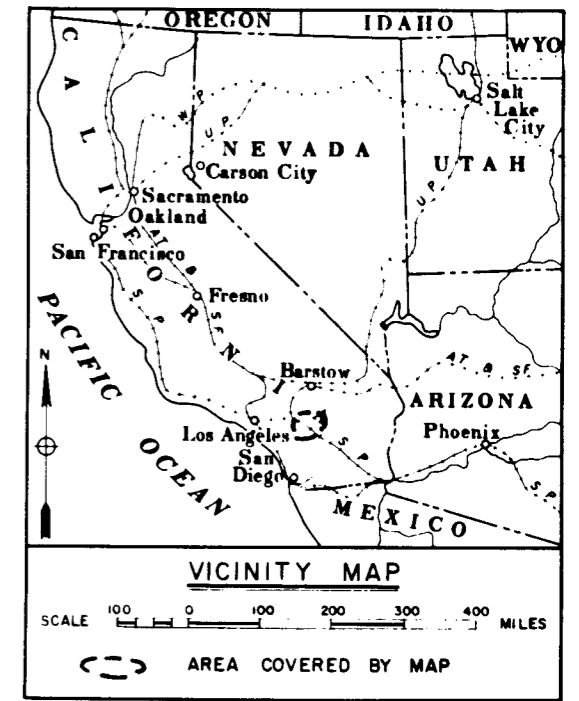
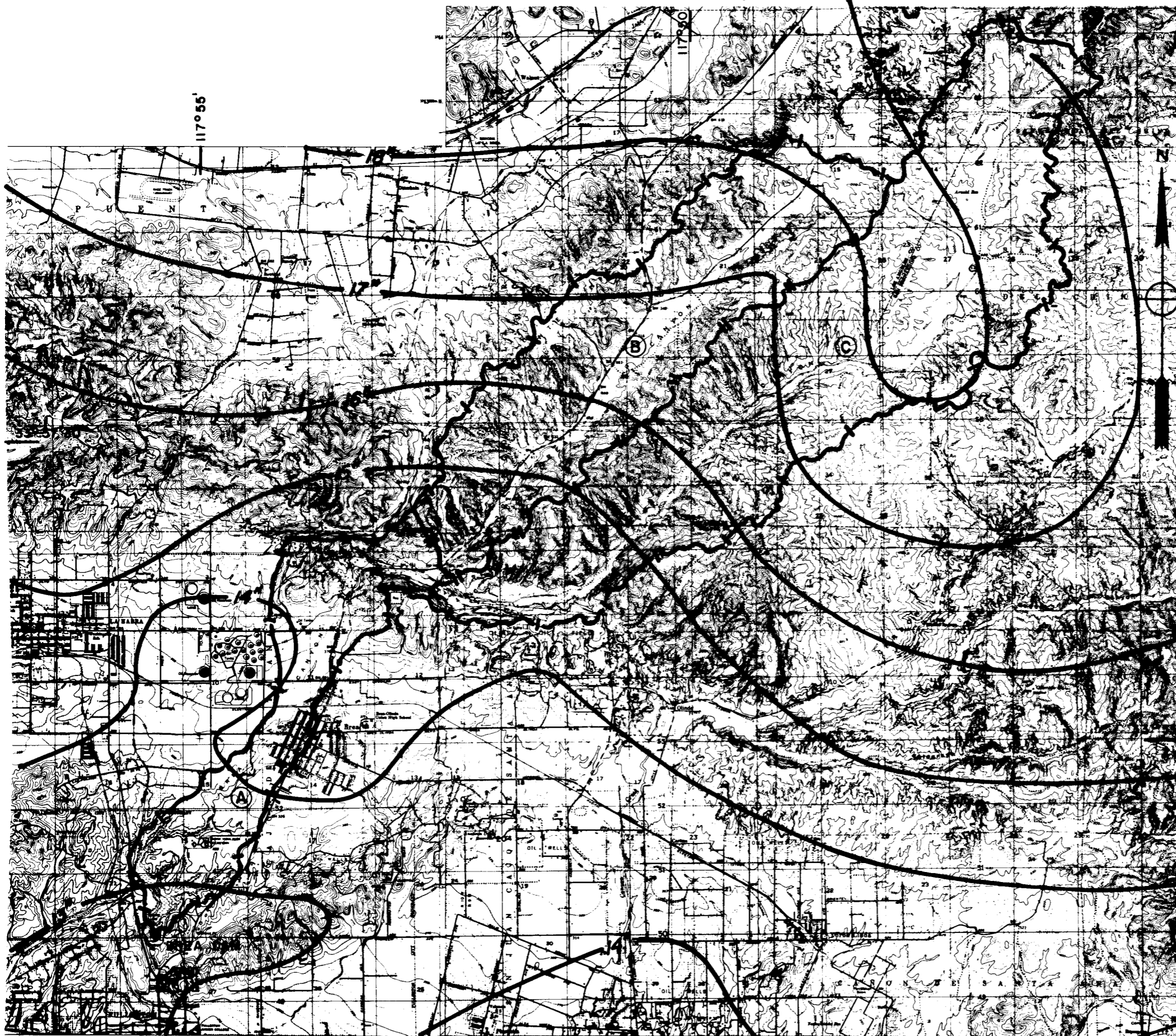
PROBABILITY LEVELS	MONTHLY PRECIPITATION (INCHES)											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
.05	.00	.00	.00	.00	.00	.00	**	.00	.00	.00	.00	.00
.10	.22	.04	.00	.00	.00	.00	**	.00	.00	.00	.02	.00
.20	.77	.29	.49	.06	.00	.00	**	.00	.00	.00	.15	.17
.30	1.31	.62	.88	.25	.01	.00	**	.00	.00	.00	.34	.47
.40	1.91	1.06	1.28	.46	.05	.00	**	.00	.00	.00	.59	.83
.50	2.59	1.61	1.73	.72	.10	.00	**	.00	.00	.03	.90	1.27
.60	3.41	2.32	2.25	1.02	.18	.01	**	.00	.01	.12	1.30	1.80
.70	4.42	3.26	2.89	1.42	.29	.03	**	.00	.12	.24	1.83	2.51
.80	5.83	4.64	3.75	1.97	.46	.07	**	.01	.38	.42	2.62	3.51
.90	8.20	7.08	5.19	2.90	.78	.16	**	.35	.98	.72	4.02	5.21
.95	10.53	9.58	6.60	3.84	1.11	.25	**	.86	1.67	1.03	5.45	6.93

THESE VALUES WERE DETERMINED FROM THE INCOMPLETE GAMMA DISTRIBUTION.
** STATISTICS NOT COMPUTED BECAUSE LESS THAN SIX YEARS OUT OF THIRTY HAD MEASUREABLE PRECIPITATION




BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

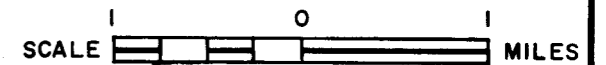
SUMMARY OF CLIMATOLOGICAL
DATA AT YORBA LINDA

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



LEGEND

-  DRAINAGE AREA
-  DRAINAGE SUBAREA
-  SUBAREA DESIGNATION



BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

**NORMAL ANNUAL
PRECIPITATION
(INCHES)**

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

Historical Annual and Monthly Runoff Data at Brea Dam
(All Values in Acre-Feet)

Year	Flow Per Month												Water Year Total		
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP			
1941-42	0.	0.	0.	11.70	16.46	19.10	12.40	0.	0.	0.	0.	0.	0.	0.	59.66
1942-43	0.	0.	0.	859.44	347.11	883.83	72.20	5.16	0.20	0.	0.	0.	0.	0.	2180.24
1943-44	24.99	21.82	171.17	14.88	518.08	230.68	16.66	0.	0.	0.	0.	0.	0.	0.	998.28
1944-45	9.32	48.00	58.12	8.53	70.81	128.33	14.08	10.12	5.95	6.74	9.72	11.70	0.	0.	381.42
1945-46	1.19	5.95	141.42	12.30	11.11	15.37	37.50	12.30	5.95	6.15	6.15	5.95	0.	0.	261.34
1946-47	8.17	54.66	48.20	6.55	5.95	16.66	10.51	8.33	7.93	3.33	2.06	3.57	0.	0.	175.92
1947-48	0.	0.	0.	0.	3.37	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.37
1948-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
1949-50	0.	0.	0.	0.	67.44	0.	0.	0.	0.	0.	0.	0.	0.	0.	67.44
1950-51	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
1951-52	0.	0.	187.15	1134.09	0.	703.5	0.	0.	0.	0.	0.	0.	0.	0.	2024.74
1952-53	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
1953-54	0.	0.	0.	0.	113.34	0.	0.	0.	0.	0.	0.	0.	0.	0.	113.34
1954-55	0.	0.20	0.	25.98	3.97	4.56	1.19	16.46	0.60	0.	0.	0.	0.	0.	52.96
1955-56	0.	0.	0.	527.80	0.	0.	20.03	3.97	0.	0.	0.	0.	0.	0.	551.80
1956-57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
1957-58	0.	0.	0.	0.	444.75	323.70	576.56	0.60	0.	0.	0.	0.	0.	0.	1345.61
1958-59	0.	0.	0.	24.79	62.26	0.	0.	0.	0.	0.	0.	0.	0.	0.	87.05
1959-60	0.	0.	0.99	29.45	40.86	0.	5.95	0.	0.	0.	0.	0.	0.	0.	77.25
1960-61	0.	0.	0.	3.49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.49
1961-62	0.	1.59	75.57	103.14	741.62	11.11	0.	0.	0.	0.	0.	0.	0.	0.	933.03
1962-63	0.	0.	0.	0.20	200.93	35.40	22.41	0.	0.	0.	0.	0.	0.	0.	266.68
1963-64	4.76	144.00	0.	19.24	0.	48.6	14.68	0.	0.	0.	0.	0.	0.	0.	231.28
1964-65	0.	9.92	5.95	0.	5.95	92.83	283.83	0.	0.	0.	0.	0.	0.	0.	398.48
1965-66	0.	405.62	337.19	42.64	138.25	6.94	0.	0.	0.	0.	0.	0.	0.	0.	930.64
1966-67	0.	97.79	878.88	560.33	0.	17.65	136.25	0.	0.	0.	0.	0.	0.	0.	1690.90
1967-68	0.	338.34	284.23	22.02	16.86	623.21	27.37	0.	0.	0.	0.	0.	0.	0.	1312.03
1968-69	6.35	8.73	84.10	1783.78	2913.92	309.42	105.12	10.71	13.88	16.26	11.70	12.75	0.	0.	5276.72
1969-70	4.24	107.25	11.80	48.42	148.17	277.09	11.92	8.53	9.10	11.68	9.10	7.48	0.	0.	654.78
1970-71	12.77	365.81	265.79	52.96	74.78	34.31	21.40	36.83	17.53	17.36	16.54	9.76	0.	0.	925.84
1971-72	18.45	9.38	690.25	6.15	5.72	16.50	21.20	12.95	11.07	5.61	16.94	27.17	0.	0.	841.39
1972-73	24.36	123.37	260.67	343.34	1019.50	315.37	20.21	28.48	33.02	18.49	26.64	17.49	0.	0.	2230.94
1973-74	16.03	58.91	16.07	1215.07	15.07	334.02	24.50	0.	0.	0.	0.	0.	0.	0.	1679.67
1974-75	61.59	13.67	326.88	14.48	239.78	341.16	85.69	0.	0.	0.	0.	0.	0.	0.	1083.25
1975-76	16.07	21.22	11.50	12.89	378.84	163.44	119.50	0.	0.	0.	0.	0.	0.	0.	723.46
1976-77	12.75	29.55	59.50	166.81	56.33	91.64	17.85	0.	0.	0.	0.	0.	0.	0.	434.43
1977-78	9.30	11.64	660.10	1549.09	2632.07	5521.98	353.06	0.	0.	0.	0.	0.	0.	0.	10,737.24
1978-79	6.15	557.32	368.01	2632.26	928.26	961.79	5.95	0.	0.	0.	26.78	24.00	0.	0.	5510.52
1979-80	116.63	117.02	72.00	2416.07	7844.03	3004.96	5.95	6.15	5.95	6.15	6.15	5.95	0.	0.	13,607.01
1980-81	6.15	5.95	6.15	447.27	5.55	1313.26	6.35	5.95	5.95	6.15	6.15	5.95	0.	0.	1820.83
1981-82	23.60	335.21	515.90	168.00	6.15	2421.42	786.17	6.15	0.	0.	0.	0.	0.	0.	4262.60
1982-83	12.30	934.21	11.90	885.82	3076.52	4554.90	1282.71	12.30	11.90	12.30	12.30	11.90	0.	0.	10,819.06
1983-84	1329.45	11.90	11.90	12.30	11.50	11.90	12.30	12.30	11.90	12.30	12.30	11.90	0.	0.	1461.95
1984-85	68.13	322.79	2603.11	424.66	477.22	287.40	45.98	54.13	36.46	37.07	43.44	30.64	0.	0.	4431.03
Mean	40.7	94.6	185.6	354.2	514.6	525.6	94.9	5.7	4.0	3.7	4.7	4.6	0.	0.	1832.9
High	1329.45	934.21	2603.11	2632.26	7844.03	5521.98	1282.71	54.13	36.46	37.07	43.44	30.64	0.	0.	10,819.06
Low	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Computed values from Corps records

BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

HISTORICAL ANNUAL & MONTHLY
RUNOFF DATA AT BREA DAM

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

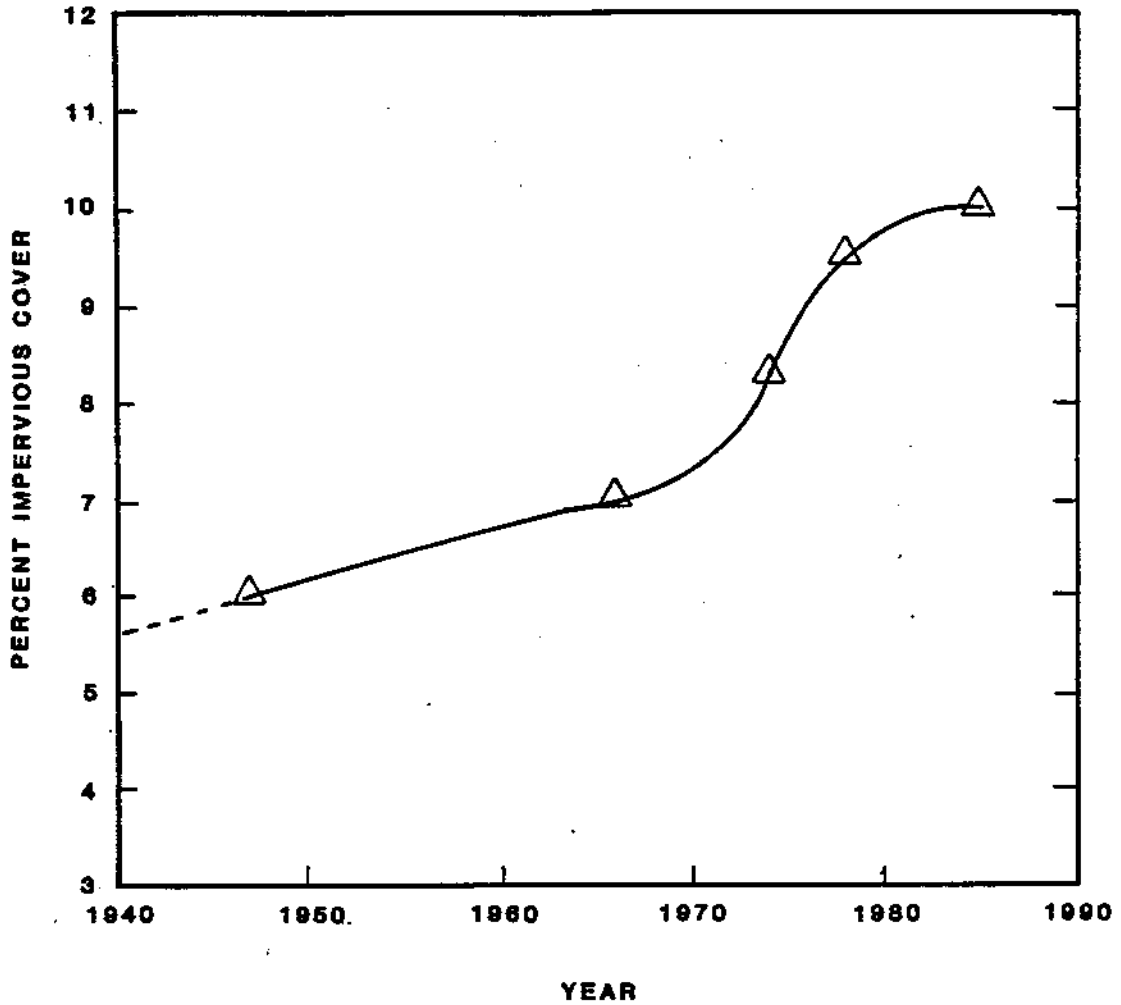
**Annual Maximum Inflow, Outflow, Elevation, and Storage of Water
at Brea Dam, Fullerton, California**

Water Year	Peak Inflow (cfs)	Date	Peak Outflow (cfs)	Date	Maximum Water Surface Elevation (ft., NGVD)		Maximum Storage (ac-ft)	Date
1941-42	42	15 Mar	4.3	15 Mar	209.00	15 Mar	0.2	15 Mar
1942-43	702	23 Jan	203	25 Jan	240.77	23 Jan	458.0	23 Jan
1943-44	354	22 Feb	652	29 Feb	239.77	23 Feb	490.2	23 Feb
1944-45	48	2 Feb	13	23 Mar	223.22	3 Feb	54.3	3 Feb
1945-46	146	23 Dec	166	23 Dec	213.73	23 Dec	2.0	23 Dec
1946-47	28	25 Dec	6.5	12 Nov	221.95	26 Dec	30.4	26 Dec
1947-48	4	4 Feb	0.5	4 Feb	208.0		0	
1948-49	20		0		208.0		0	
1949-50	64	6 Feb	87	6 Feb	215.21	6 Feb	3.2	6 Feb
1950-51	1		0		208.0		0	
1951-52	907	18 Jan	250	3 Mar	237.92	18 Jan	403.6	18 Jan
1952-53	6		0		208.0		0	
1953-54	141	13 Feb	137	13 Feb	213.25	13 Feb	1.8	13 Feb
1954-55	8.5	18 Jan	7.4	18 Jan	209.42	18 Jan	0.2	18 Jan
1955-56	388	26 Jan	223	26 Jan	225.11	26 Jan	69.0	26 Jan
1956-57	1		0		208.0		0	
1957-58	392	7 Apr	270	7 Apr	224.34	7 Apr	57.9	7 Apr
1958-59	11	16 Feb	11	16 Feb	208.53	16 Feb	0.1	16 Feb
1959-60	80	1 Feb	82	1 Feb	210.70	1 Feb	0.6	1 Feb
1960-61	7.2	26 Jan	10	26 Jan	208.30	26 Jan	0.1	26 Jan
1961-62	282	11 Feb	226	11 Feb	224.35	19 Feb	58.0	19 Feb
1962-63	211	10 Feb	190	10 Feb	217.00	10 Feb	5.7	10 Feb
1963-64	129	20 Nov	150	20 Nov	213.73	20 Nov	2.1	20 Nov
1964-65	256	9 Apr	194	9 Apr	217.80	9 Apr	8.1	9 Apr
1965-66	371	29 Dec	327	29 Dec	223.20	29 Dec	37.5	29 Dec
1966-67	784	24 Jan	250	3 Dec	233.57	24 Jan	225.4	24 Jan
1967-68	778	18 Dec	344	8 Mar	233.00	8 Mar	210.1	8 Mar
1968-69	1192	25 Jan	636	25 Feb	248.70	25 Feb	862.0	25 Feb
1969-70	240	4 Mar	225	5 Mar	218.30	5 Mar	9.5	5 Mar
1970-71	341	29 Nov	230	29 Nov	220.00	29 Nov	15.0	29 Nov
1971-72	644	27 Dec	234	24 Dec	226.20	27 Dec	73.4	27 Dec
1972-73	775	11 Feb	286	11 Feb	229.07	11 Feb	136.0	11 Feb
1973-74	663	7 Jan	236	7 Jan	232.02	7 Jan	186.1	7 Jan
1974-75	1451	4 Dec	574	4 Dec	229.12	4 Dec	123.0	4 Dec
1975-76	255	1 Mar	340	1 Mar	217.97	9 Feb	8.2	9 Feb
1976-77	296	3 Jan	224	3 Jan	219.32	3 Jan	12.5	3 Jan
1977-78	1727	4 Mar	1007	4 Mar	231.41	4 Mar	172.5	4 Mar
1978-79	1585	6 Jan	1172	31 Jan	232.90	31 Jan	209.0	31 Jan
1979-80	2240	16 Feb	1220	16 Feb	246.00	18 Feb	720.0	18 Feb
1980-81	827	1 Mar	1000	1 Mar	223.75	1 Mar	43.1	1 Mar
1981-82	1015	17 Mar	1020	18 Mar	223.60	17 Mar	41.5	17 Mar
1982-83	2641	1 Mar	1440	1 Mar	252.00	1 Mar	1073	1 Mar
1983-84	1239	1 Oct	820	1 Oct	224.80	1 Oct	55.5	1 Oct
1984-85	1049	18 Dec	699	18 Dec	233.90	18 Dec	44.8	18 Dec
1985-86	1876	15 Feb	1281	15 Feb	228.95	15 Feb	121.0	15 Feb
1986-87	928	4 Jan	928	4 Jan	230.85	4 Jan	159.0	4 Jan
1987-88	1147	4 Dec	1018.1	17 Jan	232.80	17 Jan	206.0	17 Jan

Mean	602		391		223.52		136	
Maximum	2641	1 Mar 83	1440	1 Mar 83	252.00	1 Mar 83	1073	1 Mar 83
Minimum	1		0		208.00		0	

Notes: Computed values from Corps records
Gate Sill Elevation at 208.0 feet
Peak inflows are peak hourly mean values

BREA DAM SAN GABRIEL RIVER BASIN CALIFORNIA
ANNUAL MAXIMUM INFLOW, OUTFLOW, ELEVATION, & STORAGE OF WATER AT BREA DAM, FULLERTON, CA
U. S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT

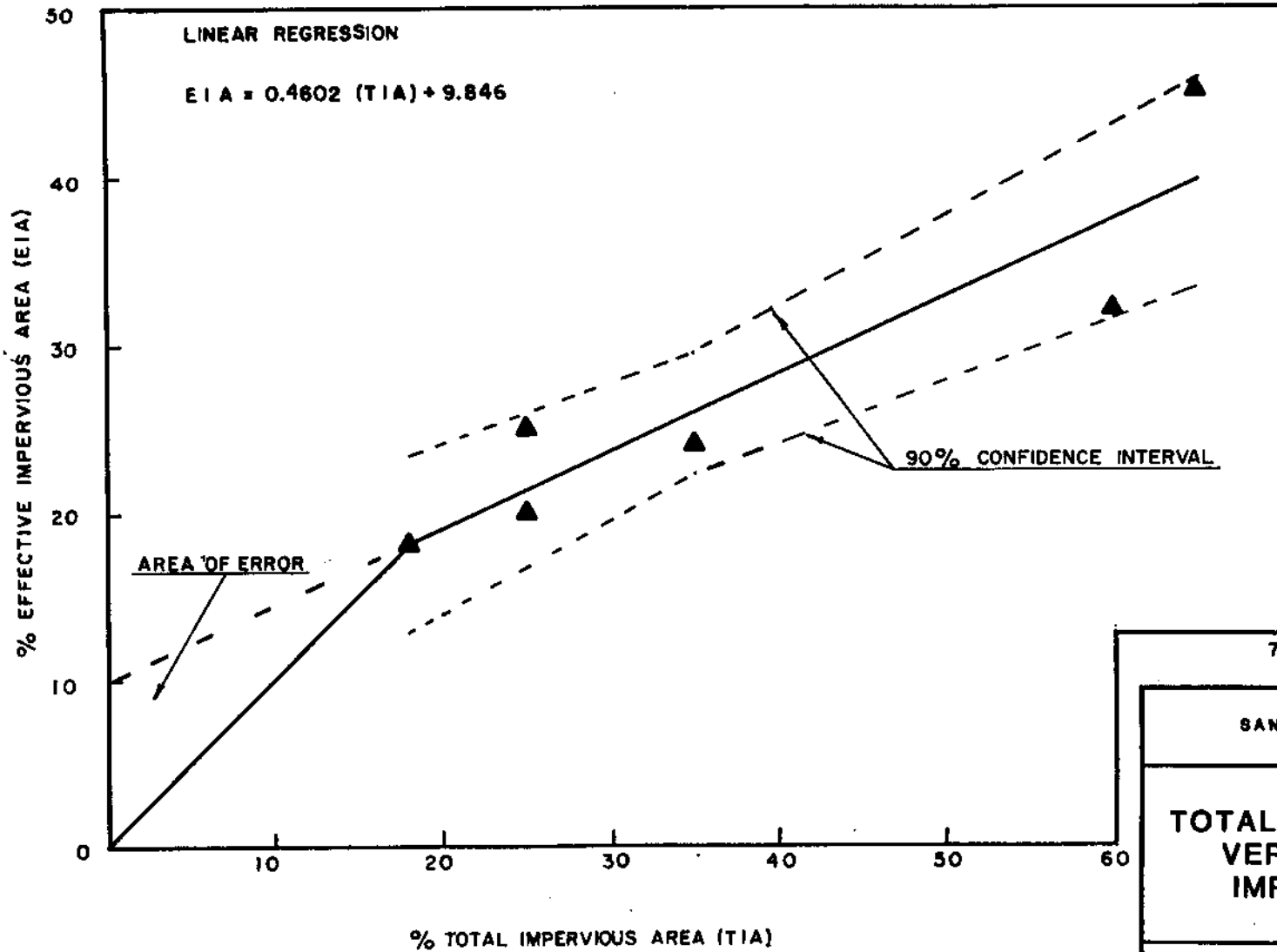


BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

EFFECTIVE PERCENT OF
IMPERVIOUS COVER
IN DRAINAGE BASIN

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

Total Basin Drainage Area: 22 mi.²

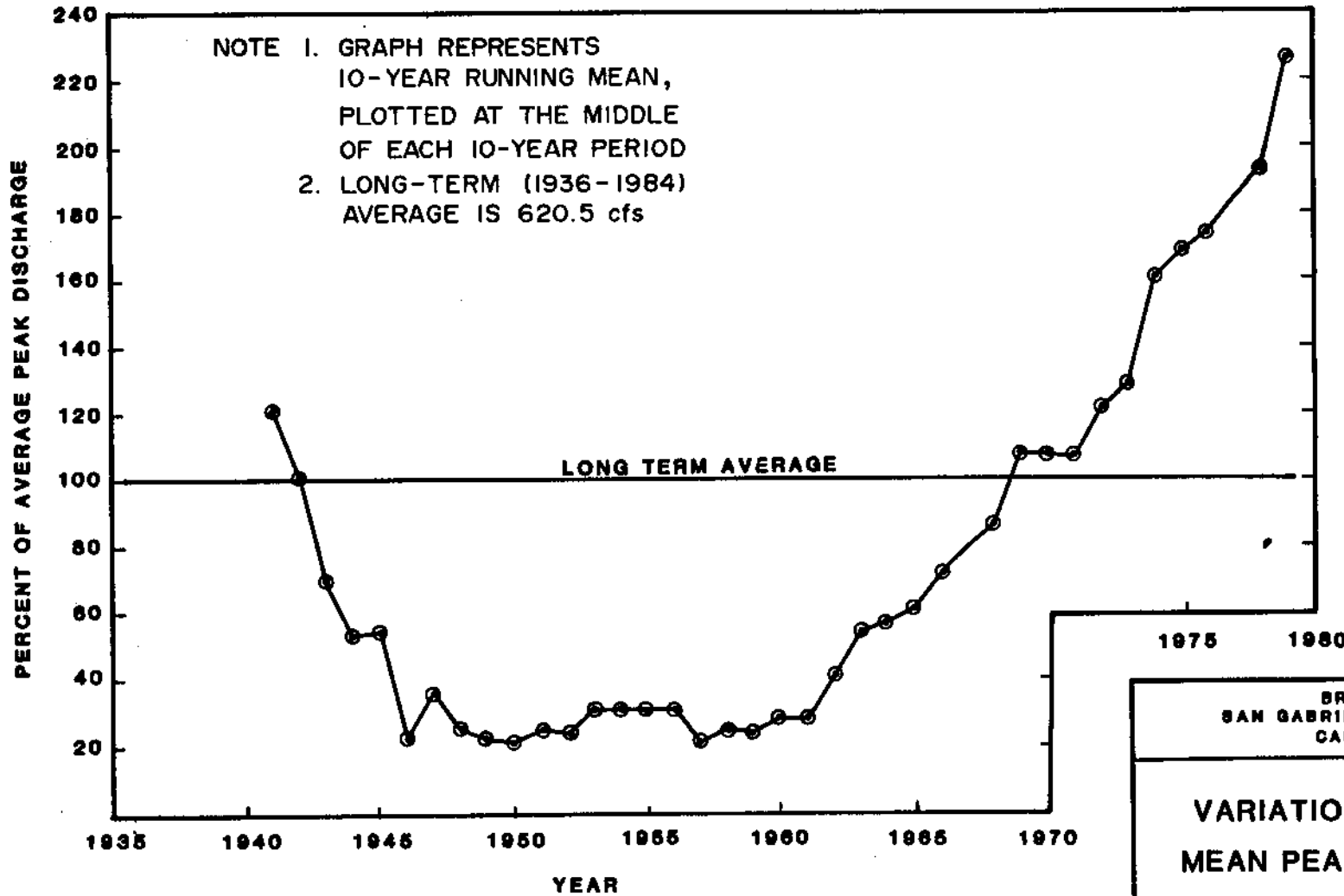


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BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

**TOTAL IMPERVIOUS AREA
VERSUS EFFECTIVE
IMPERVIOUS AREA**

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

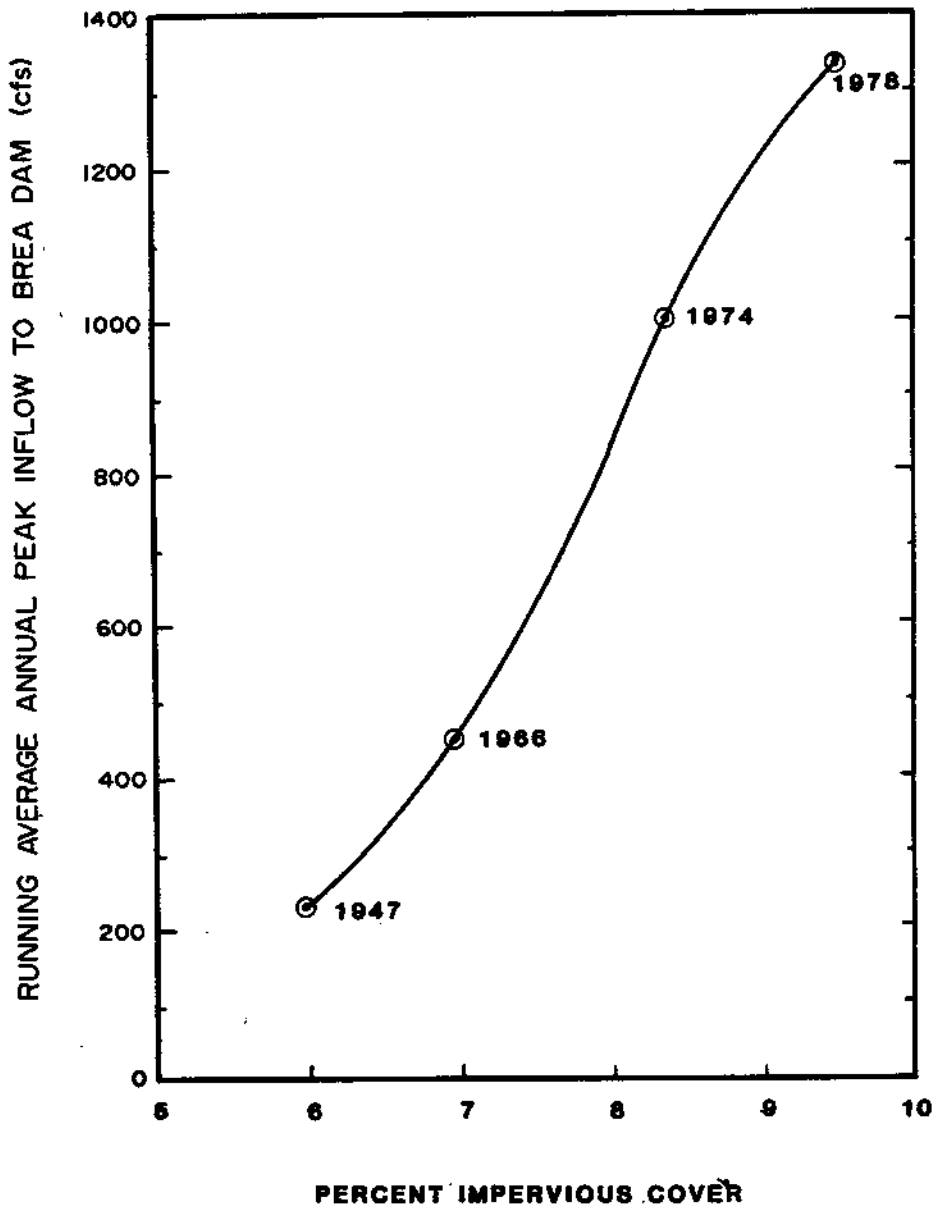


1975 1980

BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

VARIATION IN 10-YEAR
MEAN PEAK DISCHARGE

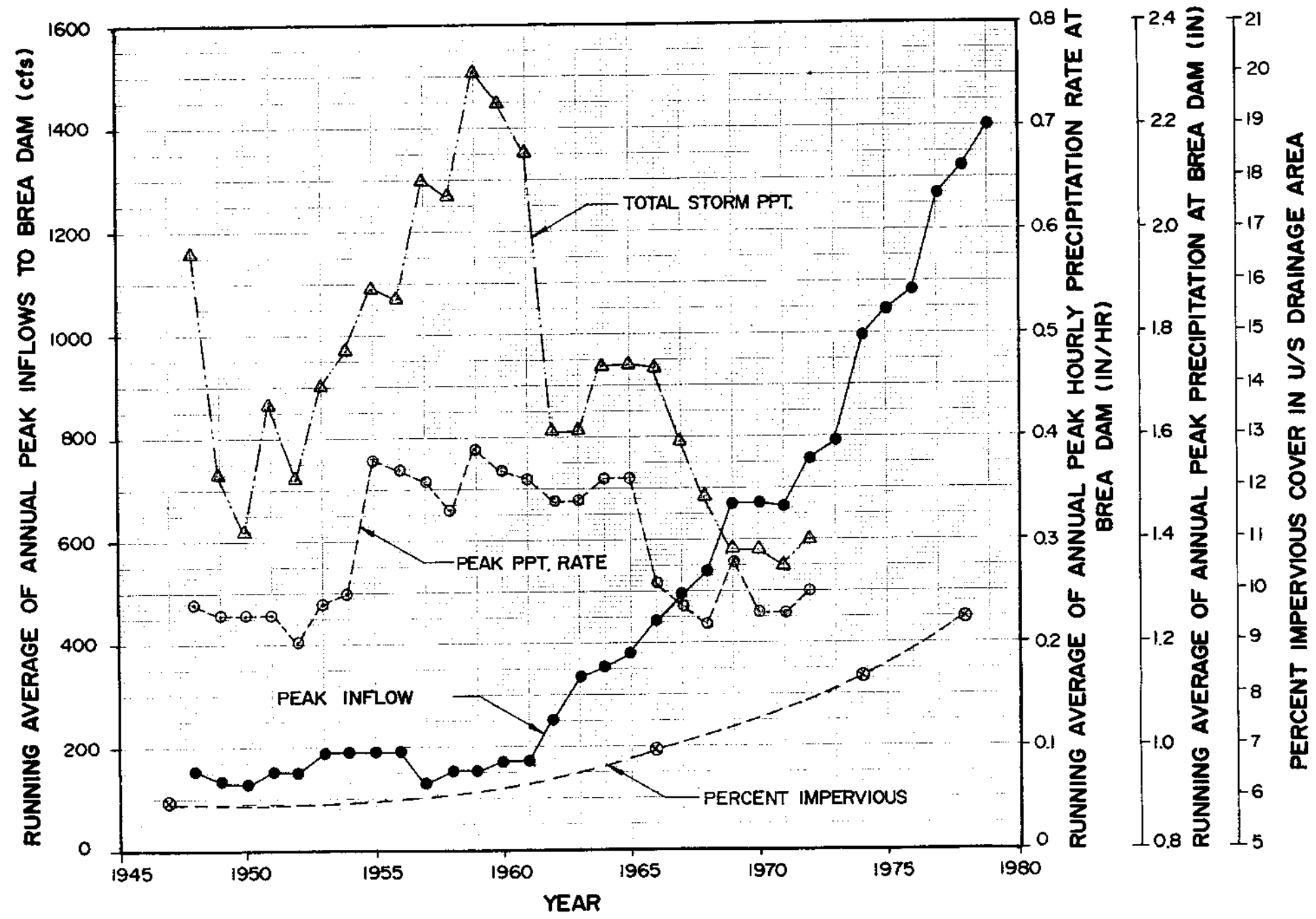
U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

INFLOW
VERSUS
URBANIZATION

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



BREA DAM
 SAN GABRIEL RIVER BASIN
 CALIFORNIA

RUNNING AVERAGE OF ANNUAL PEAK INFLOWS AND PRECIPITATION RATES

U.S. ARMY CORPS OF ENGINEERS
 LOS ANGELES DISTRICT

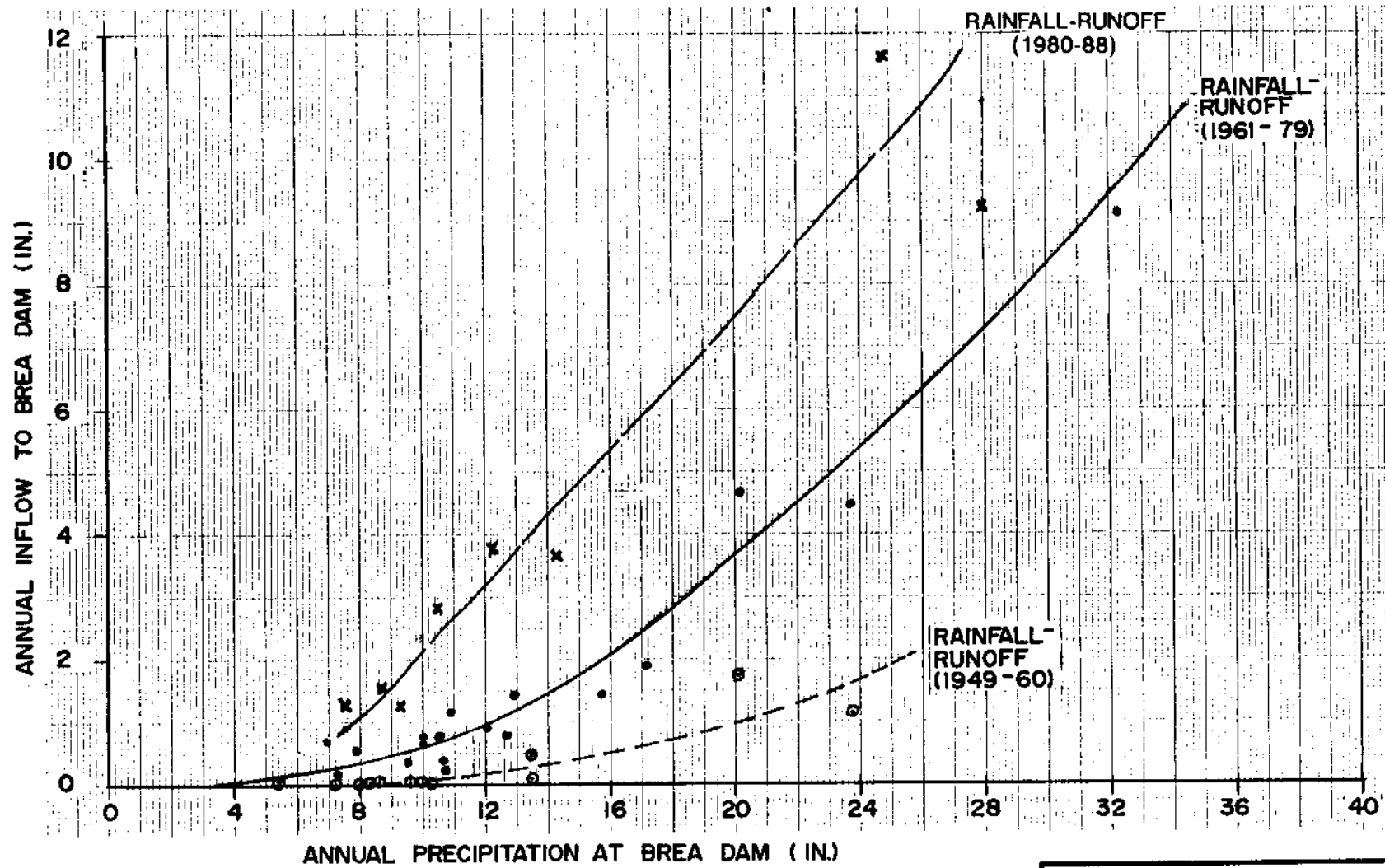
Historical Monthly and Annual Rainfall at Brea Dam Station
(all values in inch)

<u>Year</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUNE</u>	<u>JULY</u>	<u>AUG</u>	<u>SEP</u>	<u>ANNUAL</u>
1948-49	0	0	2.81	1.94	2.24	1.08	0	.24	0	0	0	0	8.31
1949-50	0	.83	2.58	2.55	2.33	.85	.79	.09	0	0	0	0	10.02
1950-51	0	2.63	0	2.36	.84	.35	1.59	.09	0	0	.11	.12	8.09
1951-52	.41	.91	1.95	8.53	.14	6.35	1.80	0	0	0	0	.13	20.22
1952-53	0	3.64	2.62	1.30	.76	.81	1.07	0	0	0	0	0	10.20
1953-54	0	1.19	.24	5.67	2.29	4.16	.10	0	0	0	0	0	13.65
1954-55	0	1.26	.73	4.32	.99	.21	1.42	.70	0	0	0	0	9.63
1955-56	0	1.49	.55	8.11	.39	0	2.25	.69	0	0	0	0	13.48
1956-57	.25	0	.28	3.20	1.01	.54	.97	.79	.18	0	0	0	7.22
1957-58	1.77	.97	3.18	1.90	6.57	4.36	4.11	0	.03	0	.37	.53	23.79
1958-59	.02	.28	0	1.59	3.01	0	.68	0	0	0	0	0	5.58
1959-60	0	.09	1.46	2.76	1.95	1.35	.96	.08	0	0	0	0	8.65
1960-61	.63	1.87	.09	1.05	0	.58	.04	0	0	0	.02	0	4.28
1961-62	0	.50	.55	1.87	8.70	.89	0	.23	0	0	0	0	12.74
1962-63	.09	.02	0	0	4.89	2.00	1.43	0	.09	0	.09	2.04	10.65
1963-64	.59	3.36	0	1.04	.09	1.64	.30	.09	.16	0	0	0	7.27
1964-65	.25	1.37	1.24	.55	.15	2.20	3.96	.04	0	.02	0	1.06	10.84
1965-66	0	6.73	3.24	.95	1.27	.34	0	0	0	0	0	.05	12.58
1966-67	.02	2.11	4.74	3.69	0	1.60	2.84	.01	.06	0	0	.60	15.67
1967-68	0	3.91	1.47	1.14	.54	2.92	.57	.04	0	.30	0	0	10.89
1968-69	.16	.28	1.57	11.05	8.75	1.17	.61	.05	0	.10	0	0	23.74
1969-70	0	2.03	.10	1.99	2.22	1.52	.05	0	0	0	0	0	7.91
1970-71	0	3.95	3.89	.60	.72	.40	.45	.13	0	0	0	0	10.14
1971-72	.30	.20	5.41	0	0	0	.30	.10	.27	0	.30	.11	6.99
1972-73	.59	3.55	1.58	2.98	5.20	3.25	0	0	0	0	0	0	17.15
1973-74	0	1.71	.55	6.83	.25	3.33	.20	.08	0	0	0	0	12.95
1974-75	.68	0	3.72	.13	2.42	3.66	1.55	0	0	0	0	0	12.16
1975-76	.39	.30	.17	0	3.43	1.42	1.42	0	.32	0	0	2.58	10.03
1976-77	0	.50	.80	2.44	.60	.91	0	2.07	0	0	2.24	0	9.56
1977-78	0	0	5.32	7.67	8.84	7.79	1.54	0	0	0	0	1.10	32.26
1978-79	0	.60	2.58	10.07	2.77	4.11	0	0	0	0	0	0	20.13
1979-80	.61	.25	.36	8.59	10.55	3.93	.34	.13	0	0	0	0	24.76
1980-81	0	0	.79	2.55	1.55	3.24	.41	.06	0	0	0	.01	8.61
1981-82	.83	3.60	.58	2.68	.44	4.85	1.02	.07	0	0	0	.19	14.26
1982-83	.22	3.40	1.72	3.87	5.39	8.37	3.25	.16	0	0	.35	1.26	27.99
1983-84	2.62	3.39	1.84	0.26	0	.20	.65	0	0	0	.02	.25	9.23
1984-85	.07	2.21	5.41	1.23	1.63	1.20	.02	.12	0	0	0	.32	12.21
1985-86	.23	4.07	.28	2.20	4.96	3.51	.61	0	0	.21	0	1.73	17.80
1986-87	.30	.90	.24	3.57	.93	1.12	.19	.01	.02	.01	.09	.09	7.47
1987-88	1.84	.55	2.04	2.31	1.19	.10	2.36	.01	0	0	.01	.08	10.49
Mean	0.32	1.62	1.67	3.14	2.50	2.16	1.00	0.15	0.03	0.02	0.09	0.31	12.99

BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

HISTORICAL MONTHLY & ANNUAL
RAINFALL AT BREA DAM STATION

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



- 1949 - 60
- 1961 - 79
- x 1980 - 88

BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

ANNUAL RAINFALL - RUNOFF
RELATIONS

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

Unit Hydrograph Ordinates for Watershed Above Brea Dam

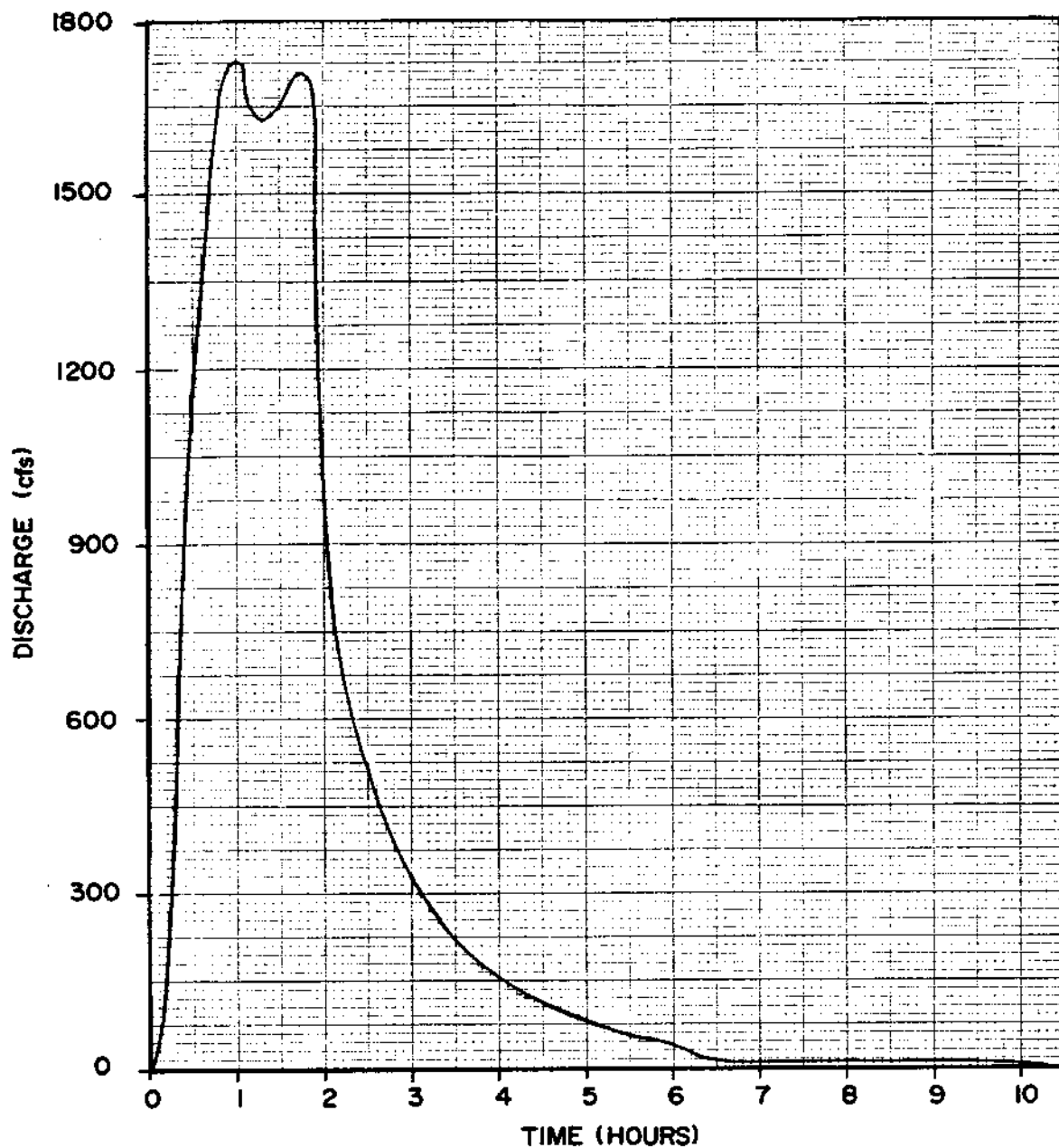
<u>15-Minute Time Period</u>	<u>Discharge (cfs)</u>	<u>15-Minute Time Period</u>	<u>Discharge (cfs)</u>
1	0	23	55
2	288	24	50
3	1,079	25	39
4	1,552	26	17
5	1,728	27	10
6	1,623	28	9
7	1,646	29	9
8	1,715	30	9
9	1,032	31	9
10	660	32	9
11	514	33	9
12	404	34	9
13	326	35	9
14	271	36	9
15	228	37	9
16	179	38	9
17	146	39	9
18	130	40	9
19	111	41	8
20	96	42	4
21	82	43	1
22	70	44	0

Note: Unit hydrograph derived on the basis of 1 inch/hour for each 15 minute period of 1 hour. Unit hydrographs for three sub-drainage areas upstream of Brea Dam were combined to obtain the above unit hydrograph.

BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

UNIT HYDROGRAPH ORDINATES FOR
WATERSHED ABOVE BREA DAM

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

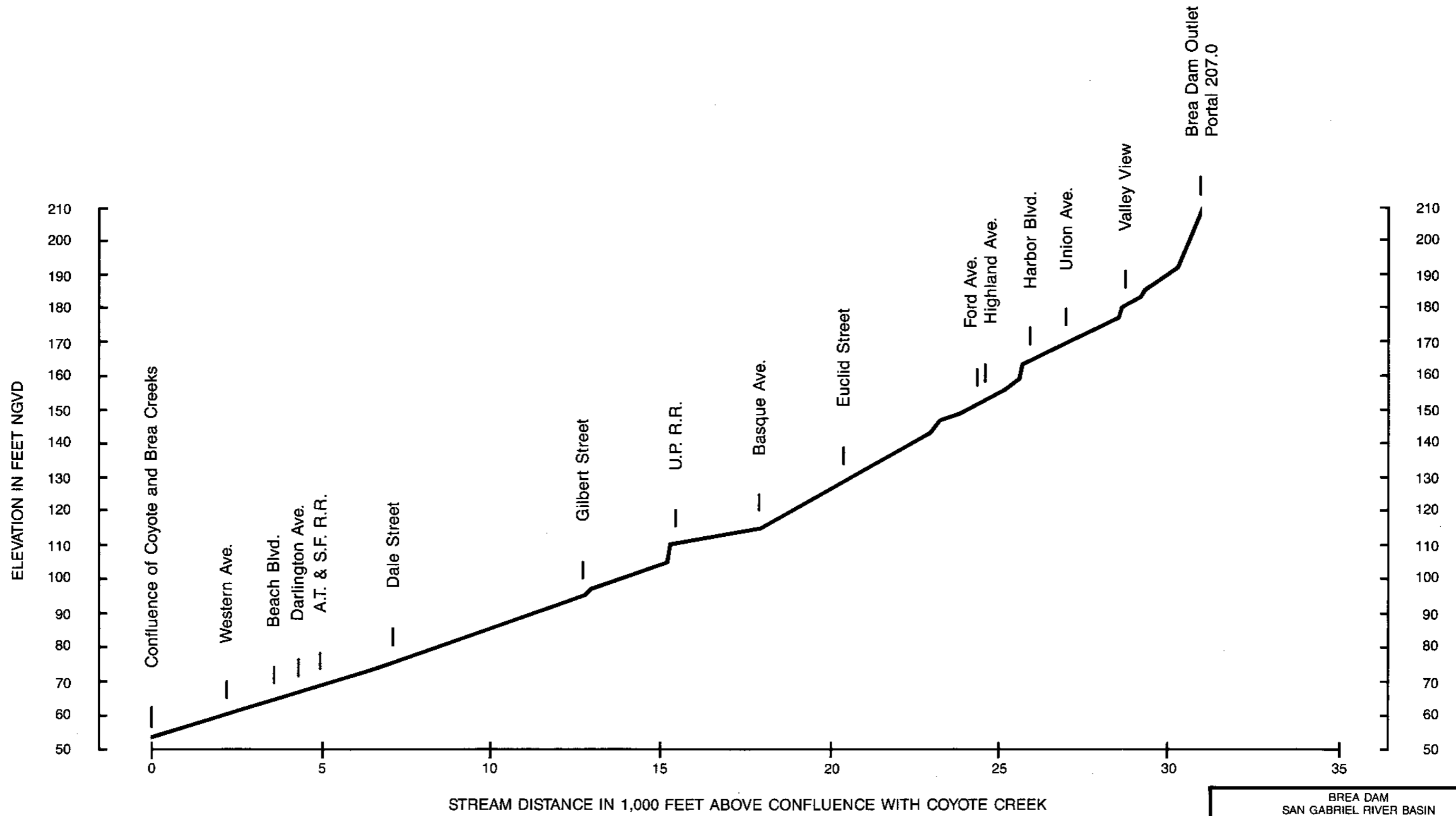


NOTE: 15-MINUTE PERIOD UNIT HYDROGRAPH IS DERIVED ON THE BASIS OF 1 INCH/HOUR RAINFALL EXCESS FOR EACH 15-MINUTE PERIOD BY COMBINING UNIT HYDROGRAPHS FOR THREE SUBDRAINAGE AREAS UPSTREAM OF BREA DAM. VALUES PLOTTED HERE ARE LISTED IN TABLE 4-07

BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

UNIT HYDROGRAPH
DRAINAGE BASIN ABOVE
BREA DAM

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



BREA DAM
SAN GABRIEL RIVER BASIN
CALIFORNIA

BREA CREEK
STEAMBED PROFILE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT