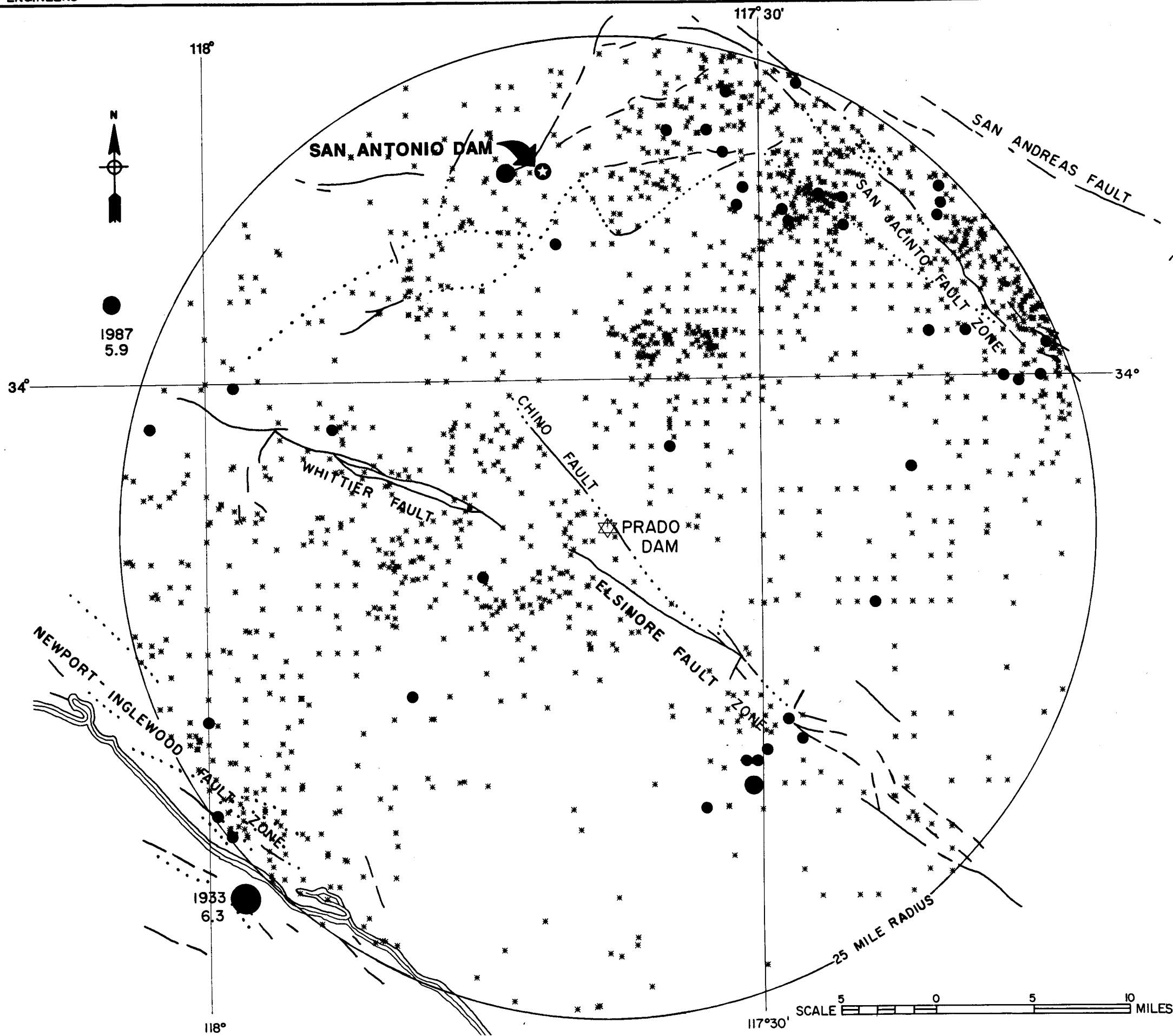


26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	117-	100-	80-60	60-40	40-20	20-	crest	22							
	100 80 PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
Jul 69 Aug 78 Sep 80 Feb 90	21	39	31	12	2	-1	-4								
	Excavation changed distribution of storage														
	"	"	"	"	"	"	"								
	"	"	"	"	"	"	"								
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.								
1969-70	2153.95	2125.00	2,090	1979-80	22225.60	2125.00	28,800								
1970-71	2148.70	2125.00	250	1980-81	2144.76	2125.00	274								
1971-72	2151.05	2125.00	147	1981-82	2157.60	2125.00	9,756								
1972-73	2160.95	2125.00	7,364	1982-83	2188.22	2125.00	49,510								
1973-74	2154.19	2125.00	478	1983-84	2156.33	2125.00	13,387								
1974-75	2145.00	2125.00	44	1984-85	2141.80	2125.00	1,438								
1975-76	2153.50	2125.00	712	1985-86	2158.94	2125.00	10,536								
1976-77	2153.10	2125.00	1,170	1986-87	2128.50	2125.00	48								
1977-78	2198.40	2125.00	65,040	1987-88	2145.24	2125.00	3,452								
1978-79	2171.16	2125.00	4,900	1988-89	2130.47	2125.00	216								
46. Feb 90 ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
2125	0	0	2205	106	4,371										
2135	5	31	2215	118	5,498										
2145	22	163	2225	130	6,742										
2155	41	489	2235	141	8,104										
2165	61	1,014	2245	152	9,579										
2175	73	1,690	2255	163	11,160										
2185	83	2,481	2260	168	11,992										
2195	94	3,367													
47. REMARKS AND REFERENCES															
<p>1/ Item 25 - Temperature taken at Claremont, California.</p> <p>2/ Revision due to revised method in computing storage table.</p> <p>3/ Item 37 - Sediment removed at various times.</p>															
50. DATE <u>20 Mar 91</u>						SAN ANTONIO DAM SAN ANTONIO CREEK, CALIFORNIA									
48. AGENCY MAKING SURVEY C of E 49. AGENCY SUPPLYING DATA C of E						RESERVOIR DATA SEDIMENT SURVEY									
						U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT									



LEGEND

- * EARTHQUAKE WITH MAGNITUDE LESS THAN 4.0
- EARTHQUAKE WITH MAGNITUDE 4.0 THROUGH 4.9
- EARTHQUAKE WITH MAGNITUDE 5.0 THROUGH 5.9
- EARTHQUAKE WITH MAGNITUDE 6.0 THROUGH 6.9
- TRACE OF FAULT, DASHED WHERE APPROXIMATELY LOCATED, DOTTED WHERE INFERRED OR CONCEALED

NOTES:

1. EARTHQUAKES SHOWN REPRESENT ALL EVENTS WITH RICHTER MAGNITUDES EQUAL TO OR GREATER THAN 2.0 WITHIN 25 MILES OF PRADO DAM DURING THE PERIOD 1932 THROUGH 1987.
2. EARTHQUAKE EPICENTER LOCATIONS ARE FROM CALIFORNIA INSTITUTE OF TECHNOLOGY'S SEISMOLOGIC DATA BASE FOR SOUTHERN CALIFORNIA, NEVADA, AND ARIZONA.
3. FAULT TRACES DEPICTED REPRESENT FAULTING WITH EVIDENCE OF POST-TERTIARY ACTIVITY AS SHOWN ON FAULT MAP OF CALIFORNIA COMPILED BY JENNINGS (1975).

SAN ANTONIO DAM SAN ANTONIO CREEK, CALIFORNIA
FAULT ZONES & SEISMIC ACTIVITY
U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT

RESERVOIR SEDIMENT
DATA SUMMARY

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

SAN ANTONIO FLOOD CONTROL BASIN(Revised)
NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER Corps of Engineers		2. STREAM San Antonio Creek		3. STATE California						
	4. SEC. 24 TWP. 1N RANGE 8W		5. NEAREST P.O. Claremont 4.5NNP		6. COUNTY L.A.-San Bernard						
	7. LAT. 34° 09' 26" LONG 117° 40' 50"		8. TOP OF DAM ELEVATION 2,260		9. SPILLWAY CREST ELEV. 2,238						
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	2,238	143	9,285	9,285	Nov 55					
	b. MULTIPLE USE										
	c. POWER										
	d. WATER SUPPLY										
	e. IRRIGATION										
	f. CONSERVATION										
	g. INACTIVE					May 56					
WATERSHED	17. LENGTH OF RESERVOIR 0.51 MILES		AV. WIDTH OF RESERVOIR 0.44 MILES								
	18. TOTAL DRAINAGE AREA 26.7 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 34.0 INCHES								
	19. NET SEDIMENT CONTRIBUTING AREA 26.7 SQ. MI.		23. MEAN ANNUAL RUNOFF 7.25 INCHES								
	20. LENGTH 11.0 MILES AV. WIDTH 2.43 MILES		24. MEAN ANNUAL RUNOFF 10,318 (13) AC.-FT.								
	21. MAX. ELEV. 10,080		MIN. ELEV. 2,125		25. ANNUAL TEMP. MEAN 62.1 RANGE 47.2 - 76.9						
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.			
	Jul 69 ^{2/}	12.92	12.92	Range Line	18	147	7,746	0.75			
	Aug 78	9.08	22.00	Contour	2'	144	7,650	0.74			
	Sep 80	2.08	24.16	Contour	2'	145	7,703	0.75			
	Feb 90	9.42	33.58	Contour	2'	145	8,535	0.83			
SURVEY DATA	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				
	Jul 69	32.92	10,381	67,356	134,128	10,381	134,128				
	Aug 78	20.26	8,513	65,040	77,295	9,610	211,423				
	Sep 80	46.36	16,202	28,800	33,700	10,146	245,123				
Feb 90	23.19	9,407	49,510	88,617	9,939	333,740					
SURVEY DATA	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				
	Jul 69	1,539	119	4.43	1,539	119	4.43				
	Aug 78	Intermittent excavation since 1972 disrupts data on sed. deposit.									
	Sep 80	"	"	"	"	"	"				
Feb 90	"	"	"	"	"	"					
SURVEY DATA	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			
	Jul 69				1.28	16.58					
	Aug 78				0.80	17.61					
	Sep 80				0.71	17.04					
Feb 90				0.24	8.05						

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	117-	100-	80-60	60-40	40-20	20-	crest								
	100	80	PERCENT OF TOTAL SEDIMENT CRESTED WITHIN DEPTH DESIGNATION												
Jul 69	21	39	31	12	2	-1	-4								
Aug 78	Excavation changed distribution of storage														
Sep 80	"	"	"	"	"	"	"								
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.								
1956-57	2127.50	2125.00	33	1968-69	2192.80	2125.00	67,356								
1957-58	2144.18	2125.00	13,604	1969-70	2153.95	2125.00	2,090								
1958-59	2132.25	2125.00	318	1970-71	2148.70	2125.00	250								
1959-60	2125.80	2125.00	15	1971-72	2151.05	2125.00	147								
1960-61	2125.00	2125.00	0	1972-73	2160.95	2125.00	7,364								
1961-62	2141.84	2125.00	2,066	1973-74	2154.19	2125.00	478								
1962-63	2130.45	2125.00	110	1974-75	2145.00	2125.00	44								
1963-64	2127.26	2125.00	842	1975-76	2153.50	2125.00	712								
1964-65	2129.86	2125.00	73	1976-77	2153.10	2125.00	1,170								
1965-66	2168.50	2125.00	27,726	1977-78	2198.40	2125.00	65,040								
1966-67	2168.33	2125.00	20,406	1978-79	2171.16	2125.00	4,900								
1967-68	2142.40	2125.00	1,579	1979-80	2225.60	2125.00	28,800								
46. Sep 80 ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
2125	.08	0	2205	106	3,557										
2135	.16Est	.4	2215	118	4,672										
2145	3.5	8.2	2225	130	5,914										
2155	25	148	2235	141	7,275										
2165	45	511	2245	152	8,740										
2175	59	1,033	2255	163	10,315										
2185	77	1,708	2260	169Est	11,144										
2195	93	2,560													

47. REMARKS AND REFERENCES

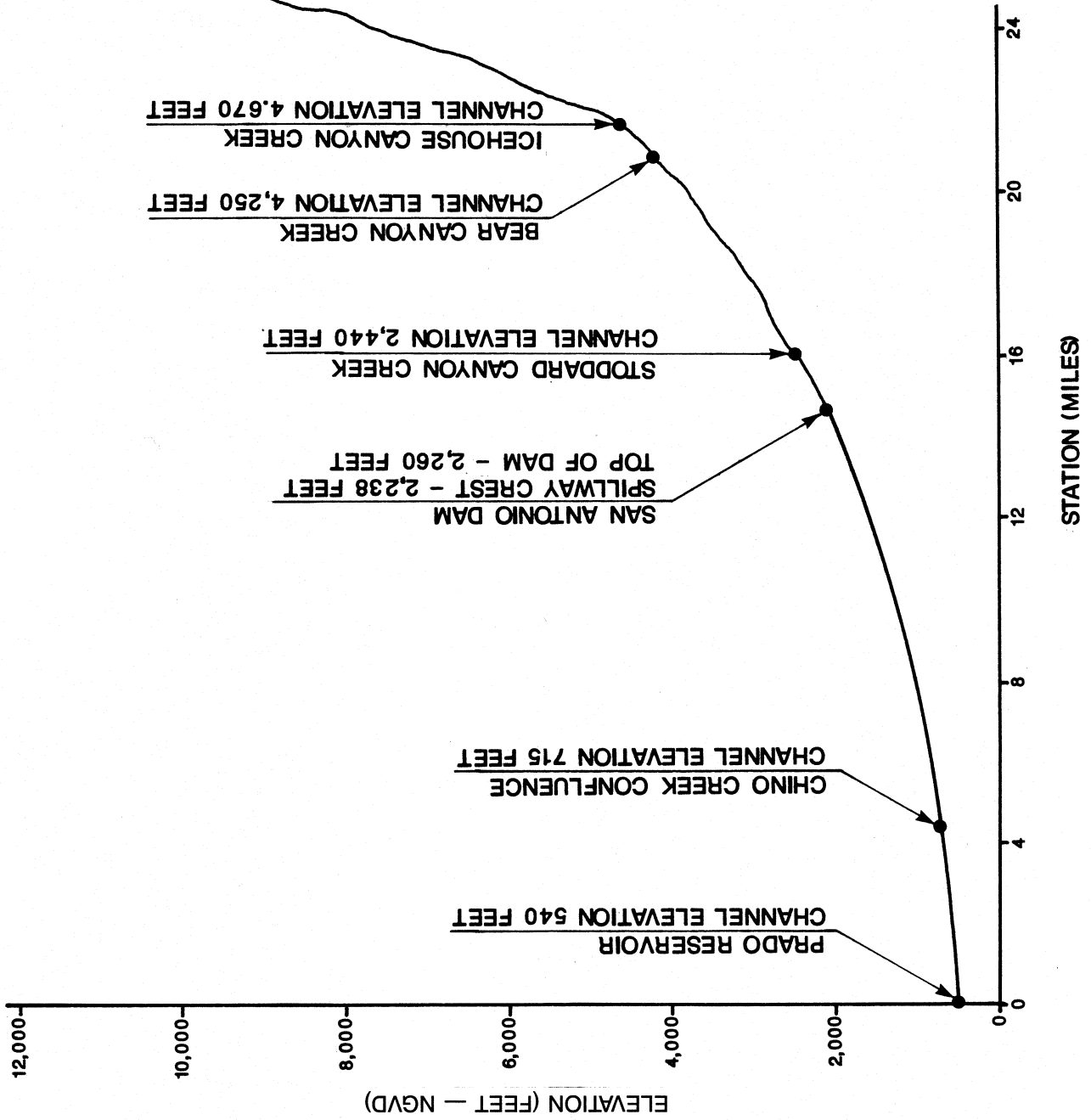
1/ Item 25 - Temperature taken at Claremont, California.
2/ Revision due to revised method in computing storage table.
3/ Item 37 - Sediment removed at various times.

48. AGENCY MAKING SURVEY C of E
49. AGENCY SUPPLYING DATA C of E

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

RESERVOIR DATA
SEDIMENT SURVEY

U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



SAN ANTONIO DAM
 SAN ANTONIO CREEK, CALIFORNIA

**CHINO & SAN ANTONIO CREEK
 CHANNEL PROFILE**

U.S. ARMY CORPS OF ENGINEERS
 LOS ANGELES DISTRICT

CLIMATOGRAPHY OF THE UNITED STATES NO. 20
 UPLAND, CA

CLIMATOLOGICAL SUMMARY

PERIOD: 1951-80
 ELEVATION: 1605 FT

	TEMPERATURE (F)														PRECIPITATION TOTALS (INCHES)													
	MEANS			EXTREMES						MEAN NUMBER OF DAYS					DEGREE DAYS		*	*	YEAR	GREATEST DAILY	YEAR	DAY	SNOW			MEAN NUMBER OF DAYS		
	* DAILY MAXIMUM	* DAILY MINIMUM	* MONTHLY	RECORD HIGHEST	YEAR	DAY	RECORD LOWEST	YEAR	DAY	90 AND ABOVE	32 AND BELOW	32 AND BELOW	0 AND BELOW	* HEATING BASE 65	* COOLING BASE 65	MEAN							GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY	MEAN
																	MAX	MIN										
JAN	63.4	40.6	52.0	89+	71	18	25+	63	13	0	0	3	0	403	0	4.79	19.64	69	6.38	69	25	.0	.0		5	3	2	
FEB	66.1	41.6	53.9	88+	63	3	29+	65	10	0	0	2	0	319	8	3.77	17.79	80	3.65	69	24	.0	.0		4	2	1	
MAR	67.4	42.0	54.7	97+	66	31	29+	71	2	0	0	1	0	328	8	3.40	14.71	78	3.48	52	07	.0	.0		5	2	1	
APR	71.8	44.5	58.2	100+	66	1	31+	53	9	2	0	0	0	230	26	1.70	6.81	58	2.75	58	01	.0	.0		3	1	0	
MAY	76.3	48.5	62.4	104+	67	21	31	59	31	3	0	0	0	124	44	.57	4.03	77	2.01	77	09	.0	.0		1	0	0	
JUN	83.4	52.5	68.0	109+	61	15	38+	67	2	8	0	0	0	50	140	.06	.42	67	.19	70	10	.0	.0		0	0	0	
JUL	91.8	58.1	75.0	111+	60	17	44+	56	14	21	0	0	0	0	310	.05	.86	68	.84	68	28	.0	.0		0	0	0	
AUG	90.9	58.6	74.8	108+	62	25	45+	71	31	19	0	0	0	5	309	.10	2.13	77	1.92	77	17	.0	.0		0	0	0	
SEP	88.3	56.8	72.6	111+	71	13	42	51	2	14	0	0	0	13	241	.36	3.59	76	1.43	63	19	.0	.0		1	0	0	
OCT	80.0	51.1	65.6	104+	64	5	32+	71	30	6	0	0	0	91	110	.44	3.93	57	2.02	79	20	.0	.0		1	0	0	
NOV	70.4	45.3	57.9	93#	56	9	30+	75	29	0	0	0	0	231	18	1.96	10.46	65	3.35	70	29	.0	.0		3	1	1	
DEC	64.8	41.1	53.0	88+	58	3	23+	68	21	0	0	2	0	381	9	2.69	12.67	66	4.61	66	03	.0	.0		3	2	1	
YEAR	76.2	48.4	62.3	111	71	13	23	68	21	73	0	8	0	2175	1223	19.89	19.64	69	6.38	69	25	.0	.0		26	11	6	

*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												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
BELOW 65	403	319	328	230	124	50	0	5	13	91	231	381	2175
60	260	198	196	131	46	14	0	0	0	32	126	245	1248
57	183	140	135	85	19	6	0	0	0	15	79	179	841
55	140	109	101	59	10	0	0	0	0	9	53	142	623
50	60	45	36	19	0	0	0	0	0	0	15	67	242
BASE	COOLING DEGREE DAYS												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ABOVE 55	47	79	92	155	239	390	620	614	528	337	140	80	3321
57	28	54	63	121	187	336	558	552	468	281	106	55	2809
60	12	27	31	77	121	254	465	459	378	205	63	28	2120
65	0	8	8	26	44	140	310	309	241	110	18	9	1223
70	0	0	0	8	9	62	168	174	128	42	0	0	591

DERIVED FROM THE 1951-80 MONTHLY NORMALS

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

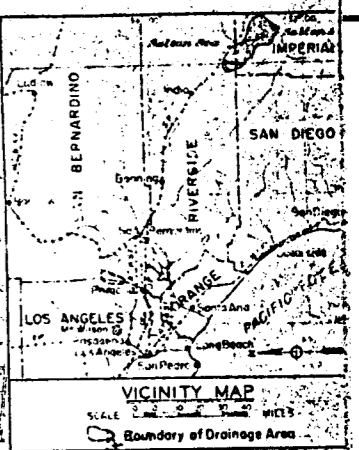
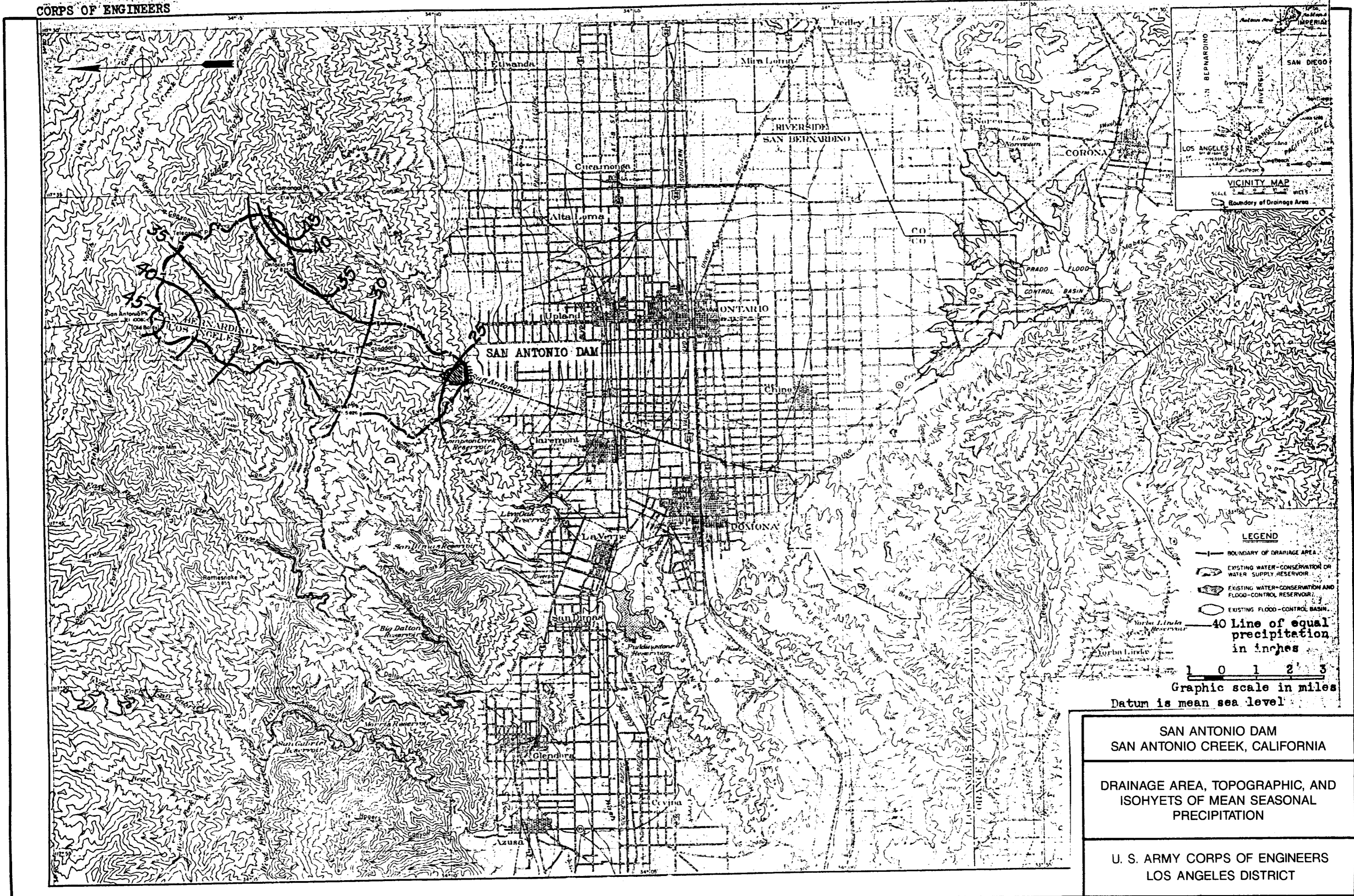
PROBABILITY LEVELS	MONTHLY PRECIPITATION (INCHES)											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
.05	.00	.04	.00	.01	.00	.00	.00	.00	.00	.00	.01	.00
.10	.43	.12	.00	.07	.00	.00	.00	.00	.00	.00	.06	.04
.20	1.25	.38	.84	.24	.02	.00	.00	.00	.00	.00	.23	.28
.30	2.01	.77	1.43	.45	.09	.00	.00	.00	.00	.00	.46	.61
.40	2.80	1.30	2.02	.71	.18	.00	.00	.00	.00	.03	.75	1.03
.50	3.68	2.01	2.66	1.04	.29	.02	.00	.00	.00	.13	1.13	1.57
.60	4.71	2.95	3.40	1.46	.45	.04	.00	.00	.00	.27	1.62	2.25
.70	5.95	4.25	4.31	2.01	.66	.07	.00	.00	.08	.47	2.27	3.16
.80	7.67	6.21	5.50	2.81	.96	.11	.00	.00	.42	.77	3.24	4.49
.90	10.51	9.76	7.48	4.22	1.50	.19	.11	.14	1.23	1.33	4.95	6.84
.95	13.27	13.47	9.40	5.65	2.06	.26	.35	.62	2.15	1.90	6.70	9.24

THESE VALUES WERE DETERMINED FROM THE INCOMPLETE GAMMA DISTRIBUTION.

SAN ANTONIO DAM
 SAN ANTONIO CREEK, CALIFORNIA

CLIMATOLOGICAL SUMMARY
 UPLAND, CALIFORNIA
 1951-1980

U. S. ARMY CORPS OF ENGINEERS
 LOS ANGELES DISTRICT



LEGEND

- BOUNDARY OF DRAINAGE AREA
- EXISTING WATER-CONSERVATION OR WATER SUPPLY RESERVOIR
- EXISTING WATER-CONSERVATION AND FLOOD-CONTROL RESERVOIR
- EXISTING FLOOD-CONTROL BASIN
- 40 Line of equal precipitation in inches

1 0 1 2 3
Graphic scale in miles
Datum is mean sea level

**SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA**

**DRAINAGE AREA, TOPOGRAPHIC, AND
ISOHYETS OF MEAN SEASONAL
PRECIPITATION**

**U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT**

SOURCE: Plate 1, Ref. 17

SUMMARY OF PRECIPITATION DATA AT SAN ANTONIO DAM AND
THREE STATIONS IN WATERSHED ABOVE DAM

LACDPW NUMBER	STATION NAME	LAT(W)	LONG(W)	ELEV. (FT NGVD)	PERIOD OF RECORDS		
					JUN	JUL	AUG
1115	SAN ANTONIO DAM	34-09-24	117-40-20	2120			1956-1991
619	SAN ANTONIO CANYON	34-12-29	117-40-26	3110			1900-1991
85G	MT. BALDY	34-14-12	117-39-32	4275			1920-1977
1109	USFS RANGER STATION MT. BALDY	34-16-53	117-37-00	8650			1955-1979

STN.	INCHES PRECIPITATION											
	HIST.	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	SEP
619	AVG.	.639	2.687	3.471	4.864	4.401	3.969	1.733	.592	.095	.026	.643
1115	1964-1990											
STN	HIST.	1.06	3.11	5.34	6.19	6.93	5.20	2.60	.62	.07	.03	.59
619	AVG.											
	87 YRS											
	1900-1989											

ANNUAL AVERAGE: 31.94 IN.

ANNUAL PRECIPITATION TOTAL BY STATION

YR	1115	619	85G	1109
1900-01		31.90		
1901-02		19.78		
1902-03		31.07		
1903-04		18.34		
1904-05		34.88		
1905-06		37.96		
1906-07		39.48		
1907-08		25.51		
1908-09		35.30		
1909-10		26.12		
1910-11		42.88		
1911-12		23.83		
1912-13		15.98		
1913-14		48.05		
1914-15		34.89		
1915-16		55.26		
1916-17		37.31		
1917-18		30.50		
1918-19		20.45		
1919-20		31.18		
1920-21		34.98	34.01	
1921-22		52.84	66.57	
1922-23		27.01	30.85	
1923-24		19.46	19.82	
1924-25		19.89	21.99	
1925-26		37.01	38.29	
1926-27		38.47	39.42	
1927-28		19.55	21.41	
1928-29		28.10	19.55	
1929-30		27.19	25.89	
1930-31		25.04	25.44	
1931-32		39.91	40.68	
1932-33		21.06	20.41	
1933-34		24.31	23.35	
1934-35		39.19	43.27	
1935-36		28.09	27.99	
1936-37		51.90	52.67	
1937-38		57.94	57.35	
1938-39		34.47	34.47	
1939-40		24.20	24.20	
1940-41		58.54	57.32	
1941-42		20.51	23.05	
1942-43		24.45	57.22	
1943-44		33.64	43.26	
1944-45		37.07	36.67	
1945-46		31.57	34.75	
1946-47		33.63	35.69	
1947-48		17.41	19.30	
1948-49		17.89	20.38	
1949-50		24.07	22.34	
1950-51		13.33	11.73	
1951-52		46.54	50.26	
1952-53		17.40	18.01	
1953-54		29.53	30.93	
1954-55		20.69	21.06	
1955-56		21.05	20.32	27.59
1956-57	15.53	21.77	20.99	26.31
1957-58	41.35	57.80	57.31	63.45
1958-59	10.54	17.27	20.04	22.60
1959-60	12.20	INC	17.40	24.07
1960-61	9.2	13.23	12.89	14.95
1961-62	25.31	34.47	37.28	48.63
1962-63	15.85	19.84	21.88	24.03
1963-64	14.23	19.96	23.25	31.17
1964-65	17.55	24.60	25.29	27.77
1965-66	25.25	47.57	53.10	57.41
1966-67	38.31	52.42	56.06	65.15
1967-68	14.90	INC	24.74	30.97
1968-69	46.81	80.70	88.80	117.23
1969-70	13.72	19.44	22.83	NO RCD
1970-71	17.43	18.88	24.73	NO RCD
1971-72	10.78	13.52	19.97	NO RCD
1972-73	25.77	36.43	41.60	69.51
1973-74	18.27	24.97	26.90	27.75
1974-75	17.55	22.90	27.05	29.36
1975-76	16.79	26.67	30.44	37.38
1976-77	17.58	26.00	26.24	23.92
1977-78	47.78	75.70		87.30
1978-79	24.09	33.80		55.48
1979-80	45.32	61.40		
1980-81	12.13	17.00		
1981-82	26.64	37.20		
1982-83	INC	67.50		
1983-84	14.41	21.30		
1984-85	17.48	24.80		
1985-86	27.78	26.61		
1986-87	11.86	13.24		
1987-88	22.13	28.90		
1988-89	18.26	21.27		
1989-90	14.10	16.30		

SAN ANTONIO DAM SAN ANTONIO CREEK, CALIFORNIA
PRECIPITATION DATA SUMMARY FOR SAN ANTONIO WATERSHED 1900-1990
U. S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT

MAXIMUM PRECIPITATION FOR INDICATED DURATION***

RETURN PERIOD IN YEARS	5M	10M	15M	30M	1H	2H	3H	6H	12H	24H	C-YR	STATION
2	.12	.18	.23	.33	.43	.60	.75	1.11	1.56	2.07	15.63	NAME: BEAUMONT ELEVATION: 2610 FT LAT/LONG** 33.933/116.967
5	.18	.27	.35	.51	.65	.91	1.13	1.68	2.37	3.14	21.99	
10	.22	.33	.43	.63	.81	1.12	1.40	2.07	2.91	3.87	25.94	
20	.26	.39	.51	.74	.95	1.32	1.65	2.44	3.44	4.56	29.54	
25	.27	.41	.53	.77	.99	1.38	1.72	2.56	3.60	4.78	30.65	
40	.30	.45	.58	.85	1.09	1.52	1.89	2.80	3.94	5.23	32.92	
50	.31	.47	.60	.88	1.13	1.58	1.96	2.91	4.10	5.44	33.97	
100	.35	.52	.68	.99	1.27	1.77	2.20	3.26	4.59	6.09	37.16	
200	.38	.58	.75	1.09	1.40	1.95	2.43	3.60	5.07	6.73	40.23	
2	.14	.21	.27	.40	.63	1.01	1.37	2.18	3.22	4.35	32.42	NAME: BIG BEAR LAKE DAM ELEVATION: 6815 FT LAT/LONG** 34.233/116.967
5	.21	.32	.42	.60	.96	1.56	2.08	3.30	4.88	6.60	45.60	
10	.26	.40	.51	.74	1.18	1.89	2.56	4.07	6.01	8.1	53.79	
20	.31	.47	.60	.88	1.39	2.23	3.02	4.79	7.08	8.58	61.25	
25	.33	.49	.63	.92	1.46	2.34	3.16	5.02	7.42	9.04	63.55	
40	.36	.54	.69	1.01	1.59	2.56	3.46	5.50	8.13	10.99	68.26	
50	.37	.56	.72	1.05	1.66	2.66	3.61	5.72	8.46	11.44	70.45	
100	.42	.62	.81	1.17	1.86	2.98	4.04	6.41	9.47	12.80	77.05	
200	.46	.69	.89	1.29	2.05	3.29	4.46	7.08	10.46	14.15	83.42	
2	.13	.18	.24	.32	.44	.67	.84	1.22	1.62	2.09	11.93	NAME: PRADO DAM ELEVATION: 560 FT LAT/LONG** 33.890/117.635
5	.19	.27	.35	.47	.65	1.00	1.24	1.80	2.38	3.09	16.80	
10	.23	.32	.43	.57	.78	1.21	1.50	2.18	2.89	3.74	19.88	
20	.27	.37	.50	.67	.91	1.40	1.74	2.54	3.36	4.35	22.72	
25	.28	.39	.52	.70	.95	1.46	1.82	2.65	3.51	4.54	23.59	
40	.30	.42	.56	.76	1.03	1.59	1.98	2.88	3.81	4.94	25.39	
50	.31	.44	.58	.79	1.07	1.65	2.05	2.99	3.95	5.12	26.23	
100	.35	.49	.65	.87	1.19	1.83	2.27	3.32	4.38	5.68	28.77	
200	.38	.54	.71	.96	1.30	2.01	2.49	3.64	4.81	6.23	31.23	
2	0.00	0.00	0.00	0.00	.34	.48	.57	.78	1.01	1.26	9.52	NAME: RIVERSIDE CITRUS EXP STA ELEVATION: 1015 FT LAT/LONG** 33.967/117.334
5	0.00	0.00	0.00	0.00	.51	.73	.87	1.19	1.53	1.91	13.38	
10	0.00	0.00	0.00	0.00	.63	.90	1.07	1.47	1.89	2.35	15.79	
20	0.00	0.00	0.00	0.00	.74	1.06	1.27	1.73	2.23	2.77	17.98	
25	0.00	0.00	0.00	0.00	.78	1.11	1.33	1.87	2.33	2.90	18.6	
40	0.00	0.00	0.00	0.00	.85	1.21	1.45	1.98	2.56	3.17	20.04	
50	0.00	0.00	0.00	0.00	.88	1.26	1.51	2.06	2.66	3.30	20.68	
100	0.00	0.00	0.00	0.00	.99	1.41	1.69	2.31	2.98	3.70	22.62	
200	0.00	0.00	0.00	0.00	1.09	1.56	1.87	2.55	3.29	4.09	24.49	
2	0.00	0.00	.25	.35	.5	.77	0.00	1.45	1.98	2.69	*16.91	NAME: UPLAND ELEVATION: 1840 FT LAT/LONG** 34.140/117.677
5	0.00	0.00	.38	.54	.77	1.17	0.00	2.20	3.01	4.08	*23.78	
10	0.00	0.00	.46	.66	.95	1.44	0.00	2.71	3.71	5.02	*28.05	
20	0.00	0.00	.55	.78	1.12	1.69	0.00	3.19	4.37	5.92	*31.94	
25	0.00	0.00	.57	.82	1.17	1.77	0.00	3.35	4.58	6.21	*33.14	
40	0.00	0.00	.63	.89	1.29	1.94	0.00	3.66	5.01	6.79	*35.60	
50	0.00	0.00	.65	.93	1.34	2.02	0.00	3.81	5.22	7.07	*36.74	
100	0.00	0.00	.73	1.04	1.50	2.26	0.00	4.27	5.84	7.92	*40.18	
200	0.00	0.00	.81	1.15	1.66	2.50	0.00	4.72	6.46	8.75	*43.50	

* THE DURATION IS FOR FISCAL-YEAR (JULY TO JUNE)

** LATITUDE/LONGITUDE

*** M: MINUTES

H: HOURS

C-YR: CALENDER YEAR

SAN ANTONIO DAM SAN ANTONIO CREEK, CALIFORNIA
PRECIPITATION DEPTH - DURATION - FREQUENCY TABLE
U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT

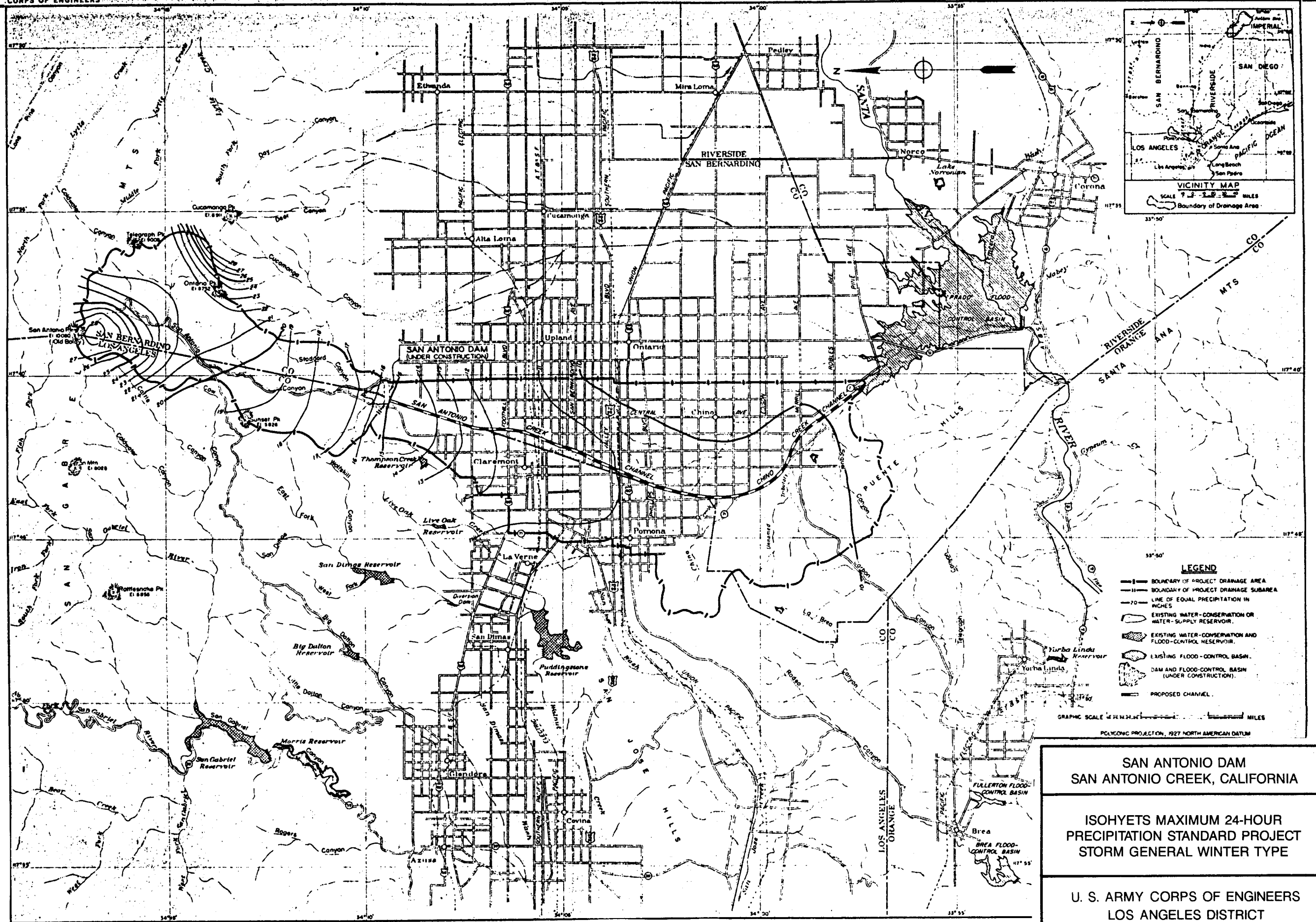
ANNUAL MAXIMUM INFLOW, OUTFLOW, AND STORAGE OF WATER AT SAN ANTONIO DAM

WATER YEAR	PEAK INFLOW cfs	DATE	PEAK OUTFLOW cfs	DATE	MAX.		ANNUAL INFLOW (AC-ft)
					WATER SURFACE ELEVATION (ft. NGVD)	STORAGE (AC-ft)	
56-57	82	23 FEB	0	-	2127.50	43	33
57-58	549	3 APR	855	2 APR	2144.14	520	13,604
58-59	220	11 FEB	0	-	2139.37	350	318
59-60	5	27 APR	0	-	2125.00	0	15
60-61	0	-	0	-	2125.00	0	0
61-62	376	20 NOV	239	14 MAR	2141.94	444	2,066
62-63	244	9 FEB	0	-	2132.46	160	110
63-64	125	22 JAN	.1	-	2127.26	39	842
64-65	558	2 APR	7	2 APR	2129.84	90	73
65-66	2422	29 DEC	920	30 DEC	2168.25	1780	27,726
66-67	3098	6 DEC	3900	6 DEC	2168.33	1780	20,406
67-68	1579	19 NOV	601	2 JAN	2143.43	500	1,579
68-69	6570	25 JAN	8420	25 JAN	2192.80	2319	67,356
69-70	106	1 MAR	2141	4 MAR	2153.95	173	2,090
70-71	174	29 NOV	21	1 DEC	2148.70	86	250
71-72	50	24 DEC	66	3 JAN	2151.05	121	147
72-73	537	12 MAR	590	11 FEB	2160.95	340	7,364
73-74	52	7 JAN	73	16 JAN	2154.17	177	478
74-75	31	6 MAR	7	26 MAR	2144.95	36	44
75-76	294	9 FEB	103	17 SEP	2153.5	164	712
76-77	422	3 JAN	250	25 JAN	2153.1	157	1,170
77-78	2040	4 MAR	1979	1 MAR	2198.39	2850	65,040
78-79	266	27 MAR	77	20 MAR	2171.16	781	4,900
79-80	1624	16 FEB	2057	20 FEB	2225.6	5948	28,800
80-81	172	29 JAN	106	29 JAN	2146.00	14	2,450
81-82	121	17 MAR	125	14 APR	2157.60	215	10,111
82-83	998	1 MAR	351	4 MAR	2188.13	1965	50,046
83-84	102	2 JAN	120	27 DEC	2156.33	178	8,853
84-85	62	19 DEC	61	19 DEC	2141.80	2	1,137
85-86	149	19 FEB	149	19 FEB	2158.94	258	10,242
86-87	26	4 JAN	26	4 JAN	2128.5	2	54
87-88	63	3 NOV	64	3 NOV	2145.3	170	3,052
88-89	198	18 MAR	198	18 MAR	2128.43	2	257
89-90	21	9 FEB	21	9 FEB	2127.28	.5	26

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

ANNUAL MAXIMUM INFLOW,
OUTFLOW, AND STORAGE OF
WATER AT SAN ANTONIO DAM

U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



LEGEND

- BOUNDARY OF PROJECT DRAINAGE AREA
- BOUNDARY OF PROJECT DRAINAGE SUBAREA
- LINE OF EQUAL PRECIPITATION IN INCHES
- EXISTING WATER-CONSERVATION OR WATER-SUPPLY RESERVOIR
- EXISTING WATER-CONSERVATION AND FLOOD-CONTROL RESERVOIR
- EXISTING FLOOD-CONTROL BASIN
- DAM AND FLOOD-CONTROL BASIN (UNDER CONSTRUCTION)
- PROPOSED CHANNEL

GRAPHIC SCALE 1" = 1 MILE

POLYCONIC PROJECTION, 1927 NORTH AMERICAN DATUM

**SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA**

**ISOHYETS MAXIMUM 24-HOUR
PRECIPITATION STANDARD PROJECT
STORM GENERAL WINTER TYPE**

U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

AVERAGE RAINFALL
IN INCHES

0.00
.50
1.00

DISCHARGE IN HUNDRED C.F.S.

28

24

20

16

12

8

4

0

PEAK 3,000 C.F.S.

NOTE: HYDROGRAPH ESTIMATED BY
L.A.C.F.C.D.

TIME IN HOURS

JAN. 22

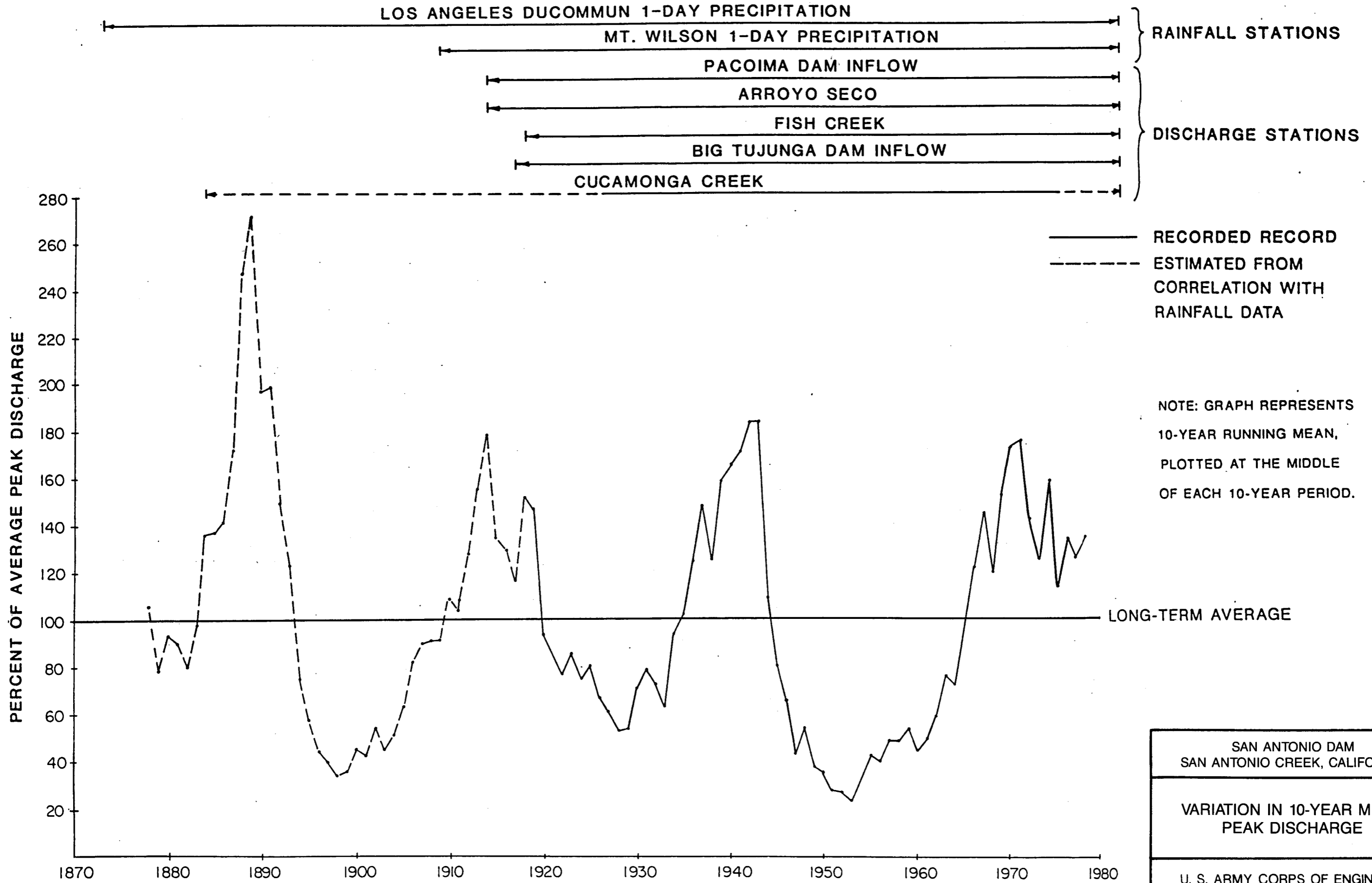
JAN. 23

JAN. 24

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

HYDROGRAPH
JANUARY 1943 FLOOD

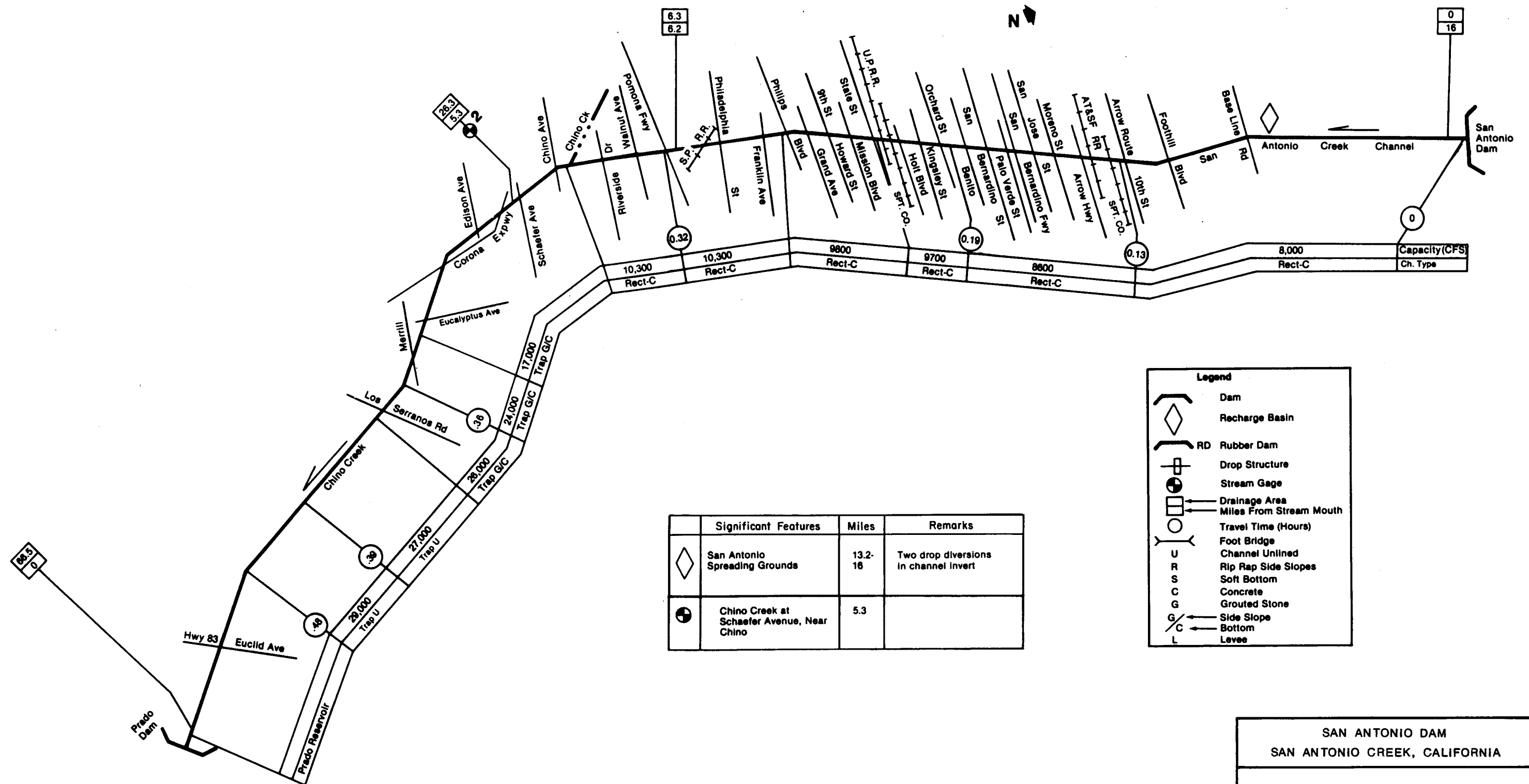
U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



SAN ANTONIO DAM
 SAN ANTONIO CREEK, CALIFORNIA

VARIATION IN 10-YEAR MEAN
 PEAK DISCHARGE

U. S. ARMY CORPS OF ENGINEERS
 LOS ANGELES DISTRICT



	Significant Features	Miles	Remarks
◇	San Antonio Spreading Grounds	13.2-16	Two drop diversions in channel invert
⊙	Chino Creek at Schaefer Avenue, Near Chino	5.3	

Legend

- ⎓ Dam
- ◇ Recharge Basin
- ⎓ RD Rubber Dam
- ⊥ Drop Structure
- ⊙ Stream Gage
- ← Drainage Area
- ← Miles From Stream Mouth
- Travel Time (Hours)
- ⎓ Foot Bridge
- U Channel Unlined
- R Rip Rap Side Slopes
- S Soft Bottom
- C Concrete
- G Grouted Stone
- G/C Side Slope
- C Bottom
- L Levee

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

**SAN ANTONIO & CHINO CREEKS
SCHEMATIC**

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SAN ANTONIO CHANNEL BELOW SAN ANTONIO DAM

HIGHWAY BRIDGES

Location of Proposed Crossings	Station	Width (feet)	Length (feet)	No. of Spans
Base Line Rd	978+41	49	20	1
Foothill Blvd	924+41	96	20	1
Arrow Highway (10th St.)	897+52	58	20	1
8th St. (Cucamonga Ave.)	869+17	83	25	1
7th St. (Moreno Ave.)	855+03	55	25	1
San Jose Ave.	841+39	46	25	1
Interstate 10*	830+00			
Margarita Ave.	827+56	45	25	1
San Bernardino Ave.	813+68	84	25	1
Ramona Ave. (Olive Ave.)	808+01	100	25	1
Benito Ave.	797+73	68	25	1
Orchard Ave.	783+84	56	25	1
Kingsley Ave.	768+54	73	25	1
Holt Blvd.*	753+00			
State St. (1st St.)	737+94	84	25	1
Kodata Ave. (5th)	734+91	88	25	1
9th St.	706+34	55	25	1
East End Ave.	696+35	144	25	1
Grand Ave.	690+29	110	25	1
Phillips Blvd.	676+40	80	25	1
Franklin Ave.	662+58	58	30	1
Philadelphia Ave.	634+07	92	30	1
Interstate 60*	609+65			
Walnut Ave.	607+15	67	30	1
Riverside Dr.	579+28	80	30	1
Chino Ave.	552+63	32	115	2
Schaefer Ave.	525+01	32	130	2
Corona Freeway (71)	516+51	32	360	4
Edison Ave.	494+62	20	130	2
Carey Ave.	458+80	230	55	1
Ramona Ave. (Olive Ave.)	429+66	32	192	3
Merrill Ave.	398+50	32	271	4
Los Serranos Rd.	366+37	32	184	3

*Constructed after project design was completed and approved.

RAILROAD BRIDGES

Name	Station	Width (feet)	Length (feet)
Pacific Electric (interurban line)	882+47	67	25
Atchison, Topeka & Santa Fe (main line)	875+08	48	25
Southern Pacific (main line)	739+35	78	25
Union Pacific (main line)**	738+46	60	25
Southern Pacific (Chino branch line)	617+44	41	30

**Combination highway and railroad bridge; dimensions given are for railroad part only.

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

HIGHWAY AND RAILROAD
CROSSINGS ON SAN ANTONIO
AND CHINO CREEKS CHANNEL

U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT