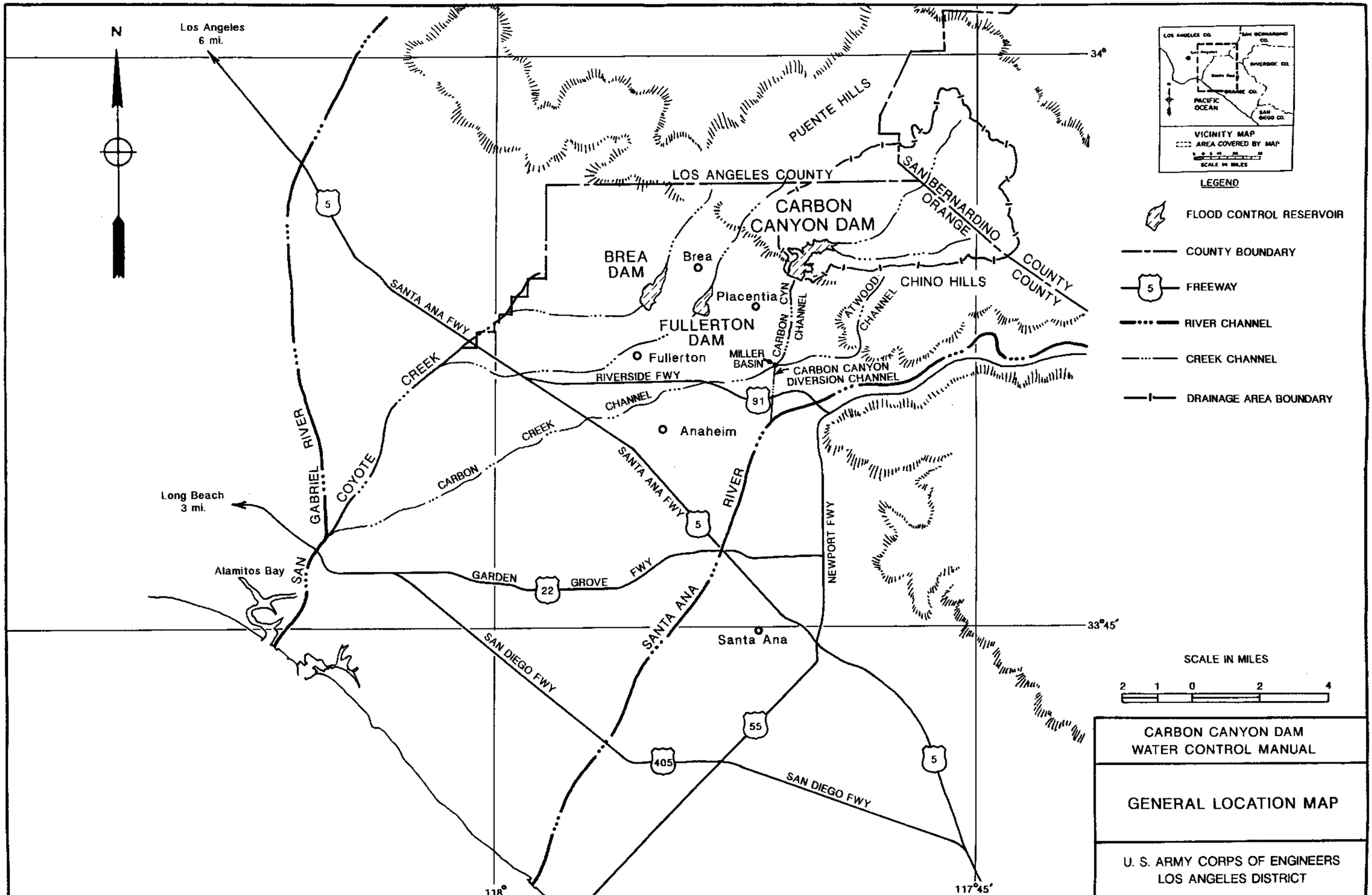
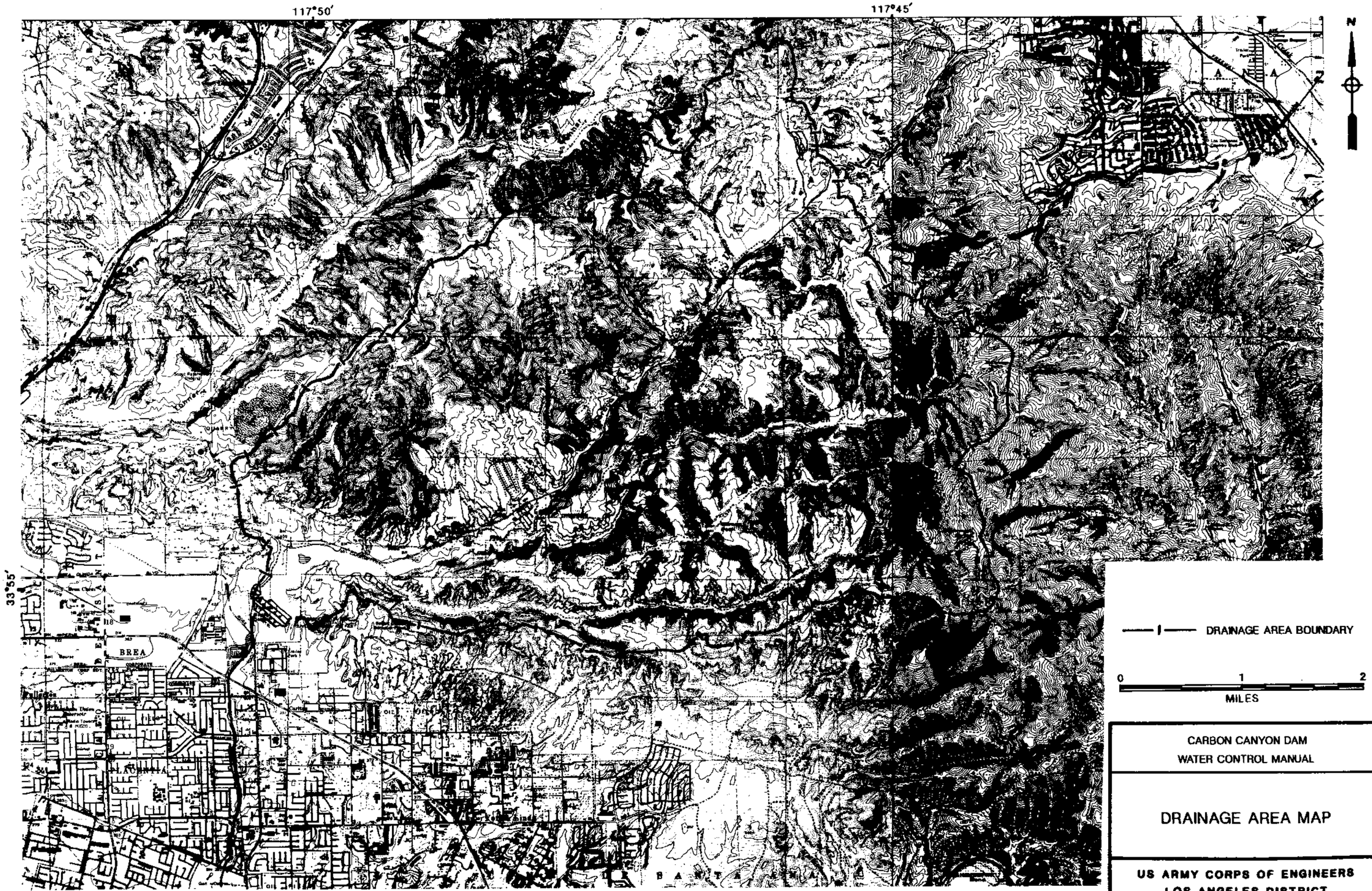


CARBON CANYON DAM
WATER CONTROL MANUAL

GENERAL LOCATION MAP

U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



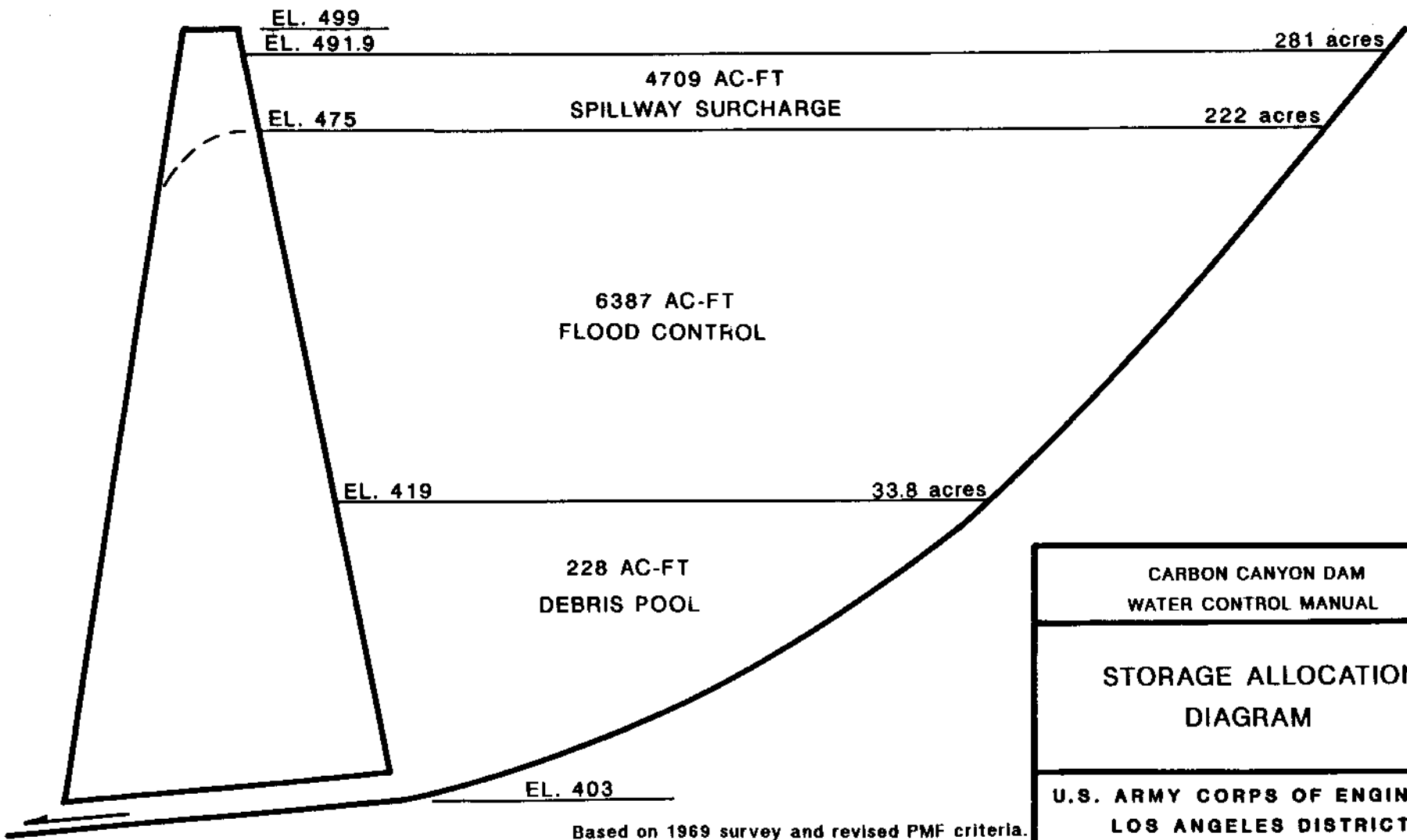
CARBON CANYON DAM
WATER CONTROL MANUAL

DRAINAGE AREA MAP

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 2-1

CARBON CANYON RESERVOIR, CALIFORNIA



Based on 1969 survey and revised PMF criteria.

CARBON CANYON DAM
WATER CONTROL MANUAL

STORAGE ALLOCATION
DIAGRAM

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

The Plate you are attempting to access is not currently available.

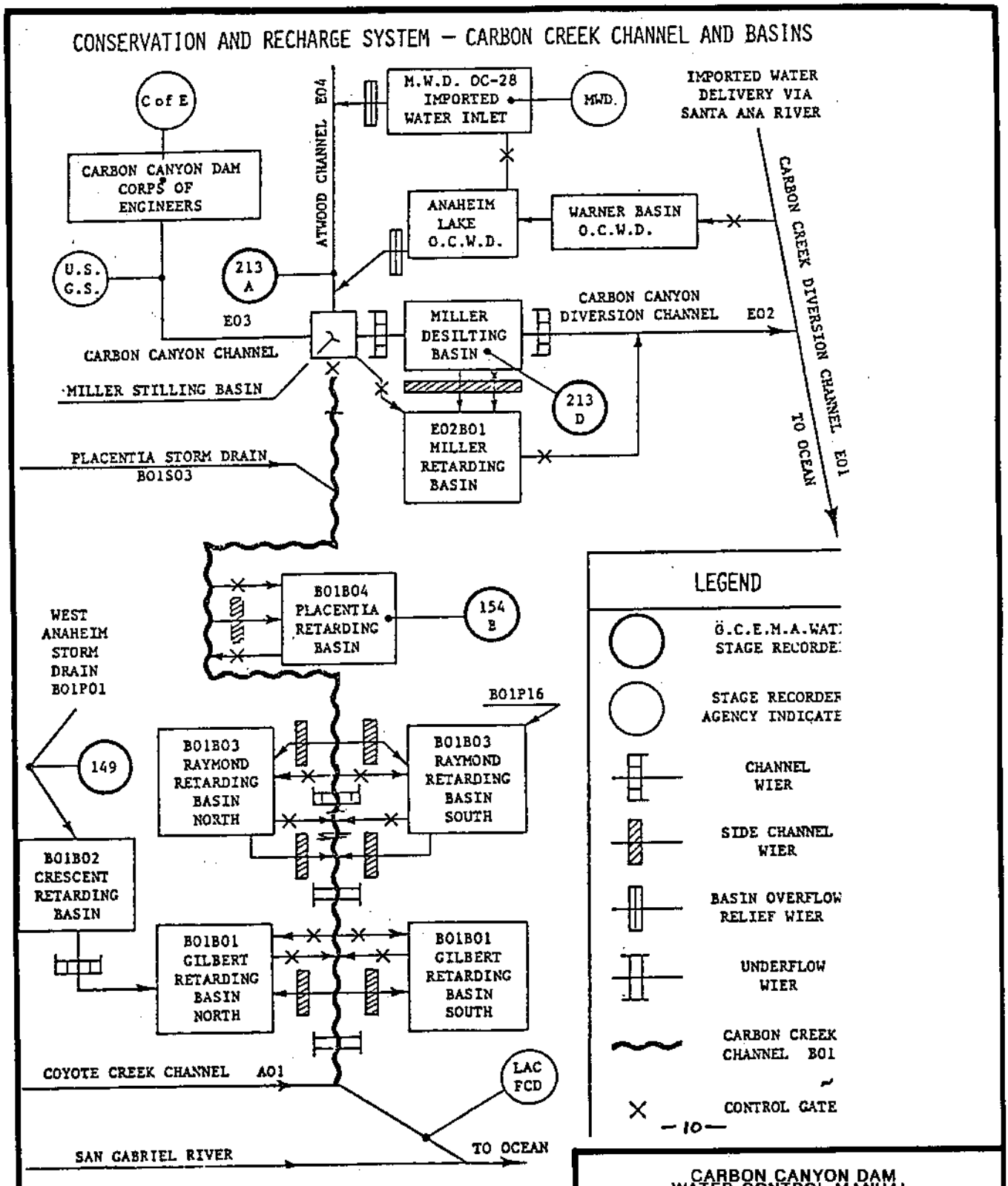
For additional information, please contact the Los Angeles District Public Affairs Office at (213) 452-3908.

The Plate you are attempting to access is not currently available.

For additional information, please contact the Los Angeles District Public Affairs Office at (213) 452-3908.

The Plate you are attempting to access is not currently available.

For additional information, please contact the Los Angeles District Public Affairs Office at (213) 452-3908.

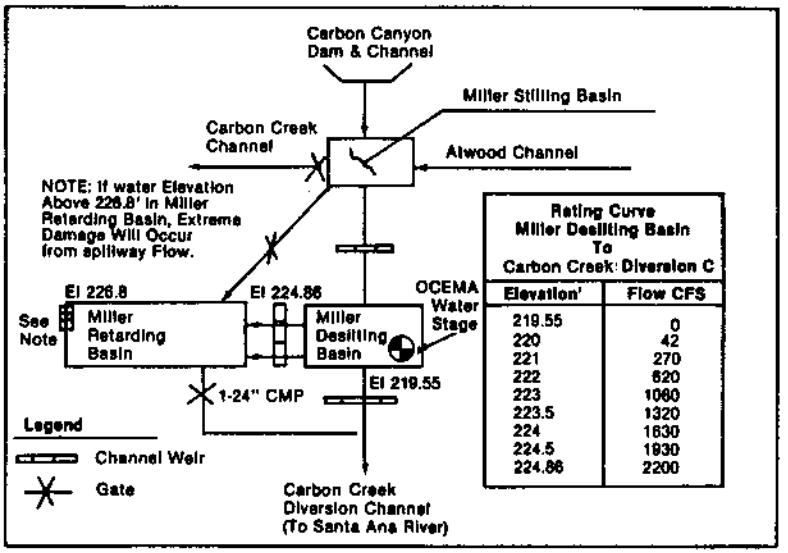


CARBON CANYON DAM
WATER CONTROL MANUAL

CARBON CANYON DAM
FLOOD RETARDING FACILITIES
DOWNSTREAM

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 2-6

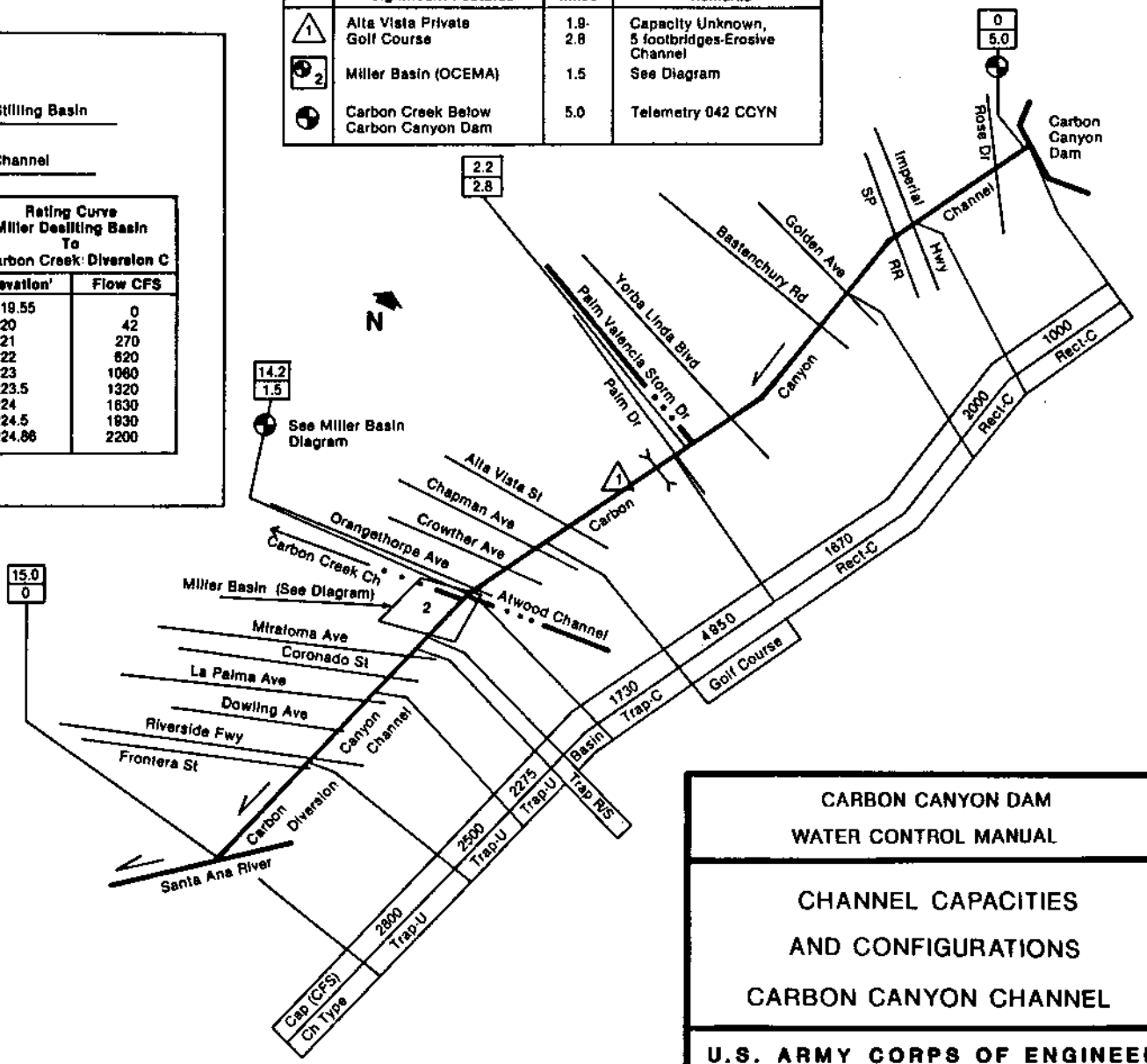


Rating Curve Miller Desilting Basin To Carbon Creek Diversion C

Elevation'	Flow CFS
219.55	0
220	42
221	270
222	620
223	1060
223.5	1320
224	1630
224.5	1930
224.86	2200

Miller Basin

	Significant Features	Miles	Remarks
1	Alta Vista Private Golf Course	1.9-2.8	Capacity Unknown, 5 footbridges-Erosive Channel
2	Miller Basin (OCEMA)	1.5	See Diagram
	Carbon Creek Below Carbon Canyon Dam	5.0	Telemetry 042 CCYN



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 / Bottom
- L Levee

CHANNEL CAPACITIES AS OF SEPTEMBER 1979

CARBON CANYON DAM
WATER CONTROL MANUAL

CHANNEL CAPACITIES
AND CONFIGURATIONS
CARBON CANYON CHANNEL

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

N

LEGEND

▲ RECORDING STREAM GAUGE

1 CARBON CREEK AT OLINDA

2 CARBON CREEK BELOW CARBON CANYON DAM

3 CARBON CREEK NEAR YORBA LINDA

⊖ STANDARD RAIN GAUGE

4 CARBON CANYON DAM

5 CARBON CANYON-SUMMIT

6 YORBA LINDA

◐ RECORDING RAIN GAUGE

7 CARBON CANYON-GILMAN

8 CARBON CANYON-WORKMAN

DRAINAGE AREA BOUNDARY

18

ISOHYET OF MEAN SEASONAL PRECIPITATION IN INCHES

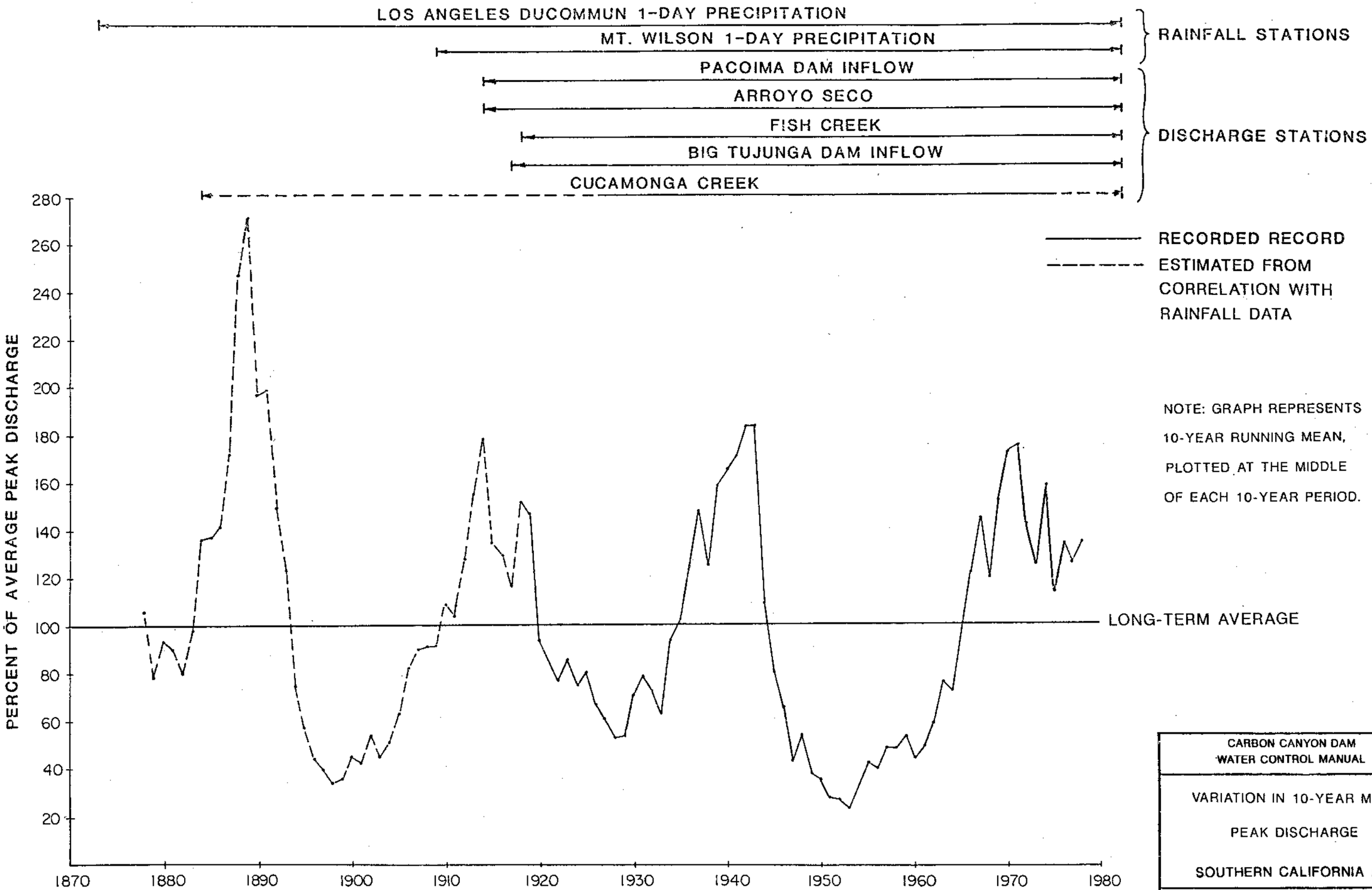
0 1 2

MILES

CARBON CANYON DAM
WATER CONTROL MANUAL

HYDROLOGIC MAP

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



CARBON CANYON DAM
WATER CONTROL MANUAL

VARIATION IN 10-YEAR MEAN

PEAK DISCHARGE

SOUTHERN CALIFORNIA AREA

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SOURCE: SEPULVEDA DAM WATER CONTROL MANUAL

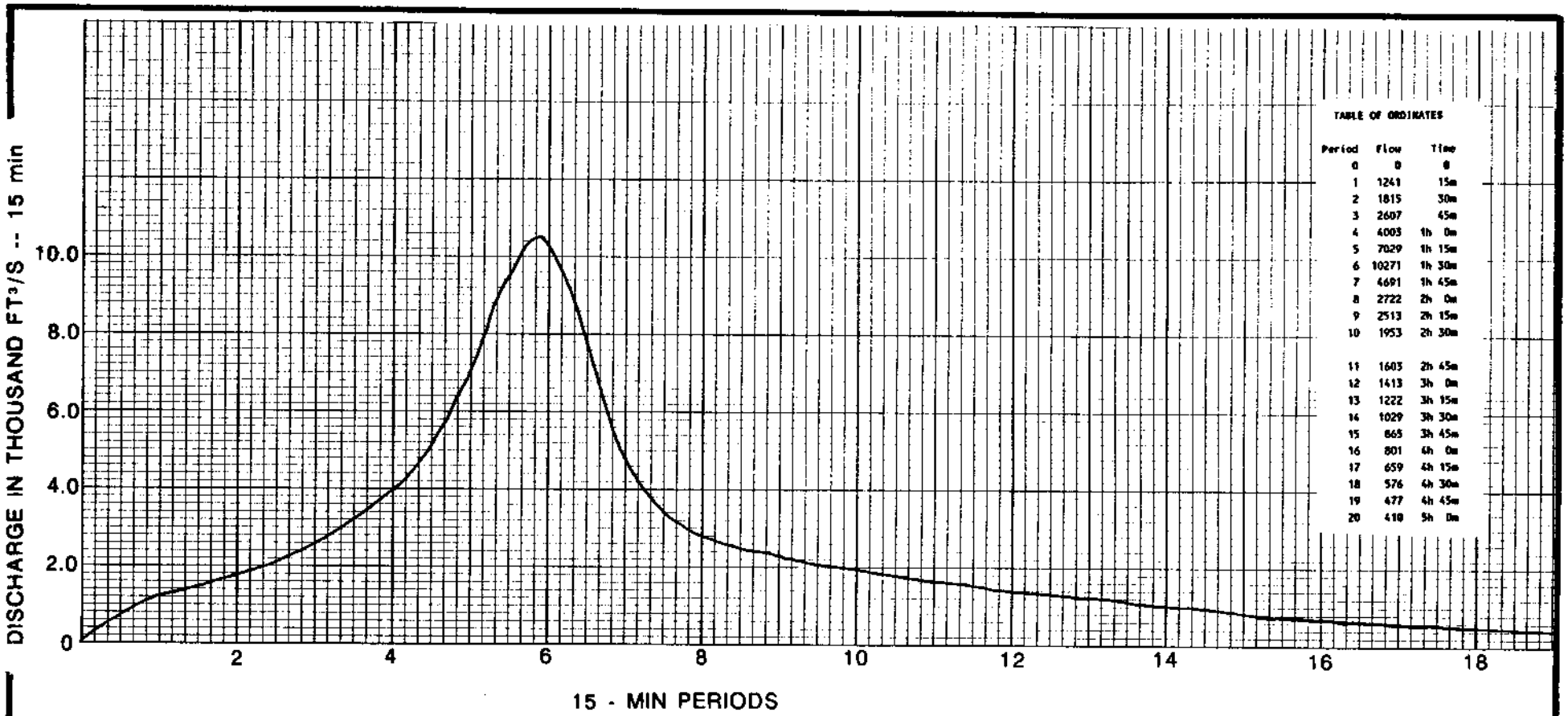


TABLE OF ORDINATES

Period	Flow	Time
0	0	0
1	1241	15m
2	1815	30m
3	2607	45m
4	4003	1h 0m
5	7029	1h 15m
6	10271	1h 30m
7	4691	1h 45m
8	2722	2h 0m
9	2513	2h 15m
10	1953	2h 30m
11	1603	2h 45m
12	1413	3h 0m
13	1222	3h 15m
14	1029	3h 30m
15	865	3h 45m
16	801	4h 0m
17	659	4h 15m
18	576	4h 30m
19	477	4h 45m
20	410	5h 0m

BASIN PARAMETERS

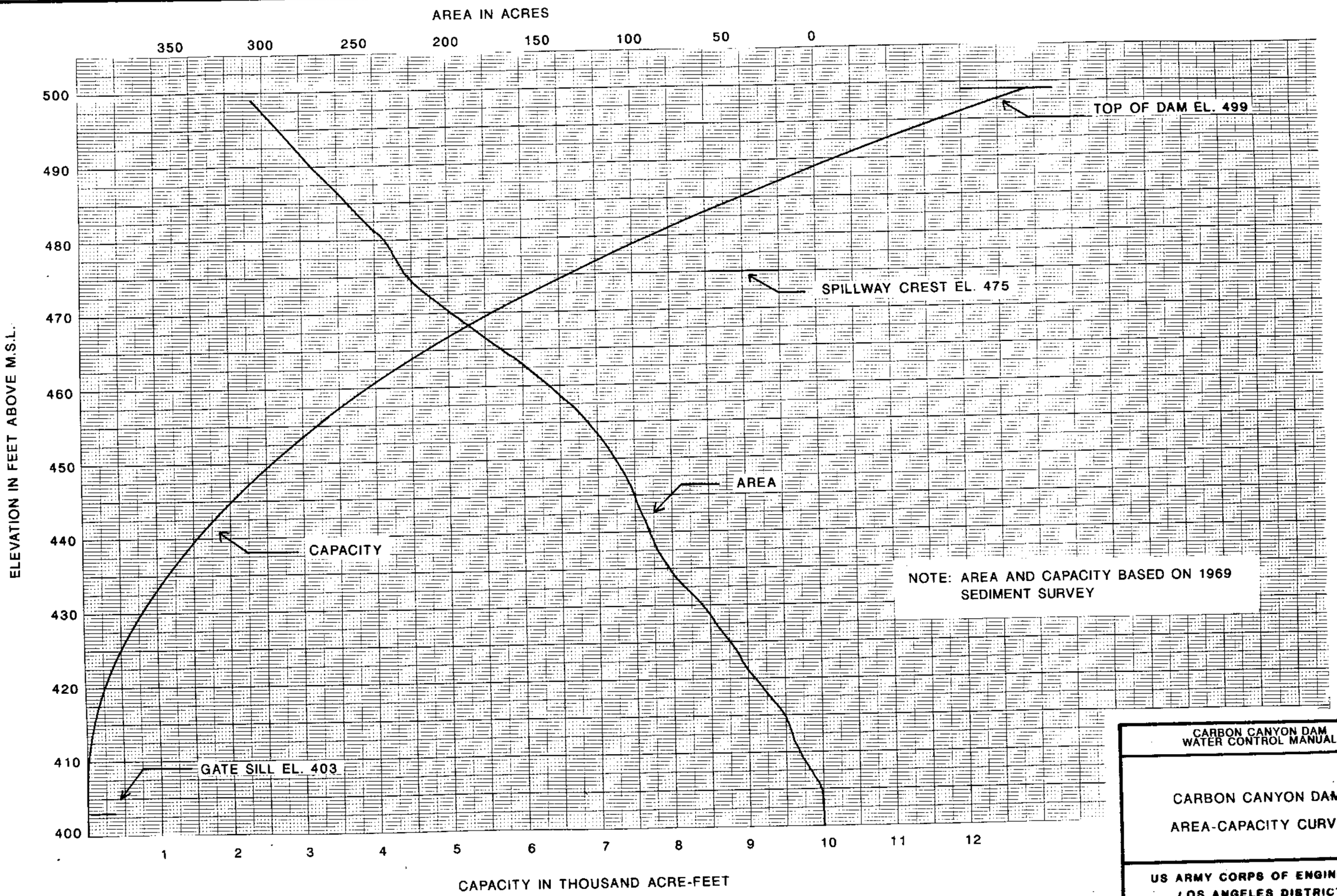
Drainage Area=19.30 sq mi
L=7.4 mi LCA=4.0 mi
S=115.0
Basin N Value=0.040
Average Fullerton - San Jose S-Graph

CARBON CANYON DAM
WATER CONTROL MANUAL

(15 MINUTE)

UNIT HYDROGRAPH

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



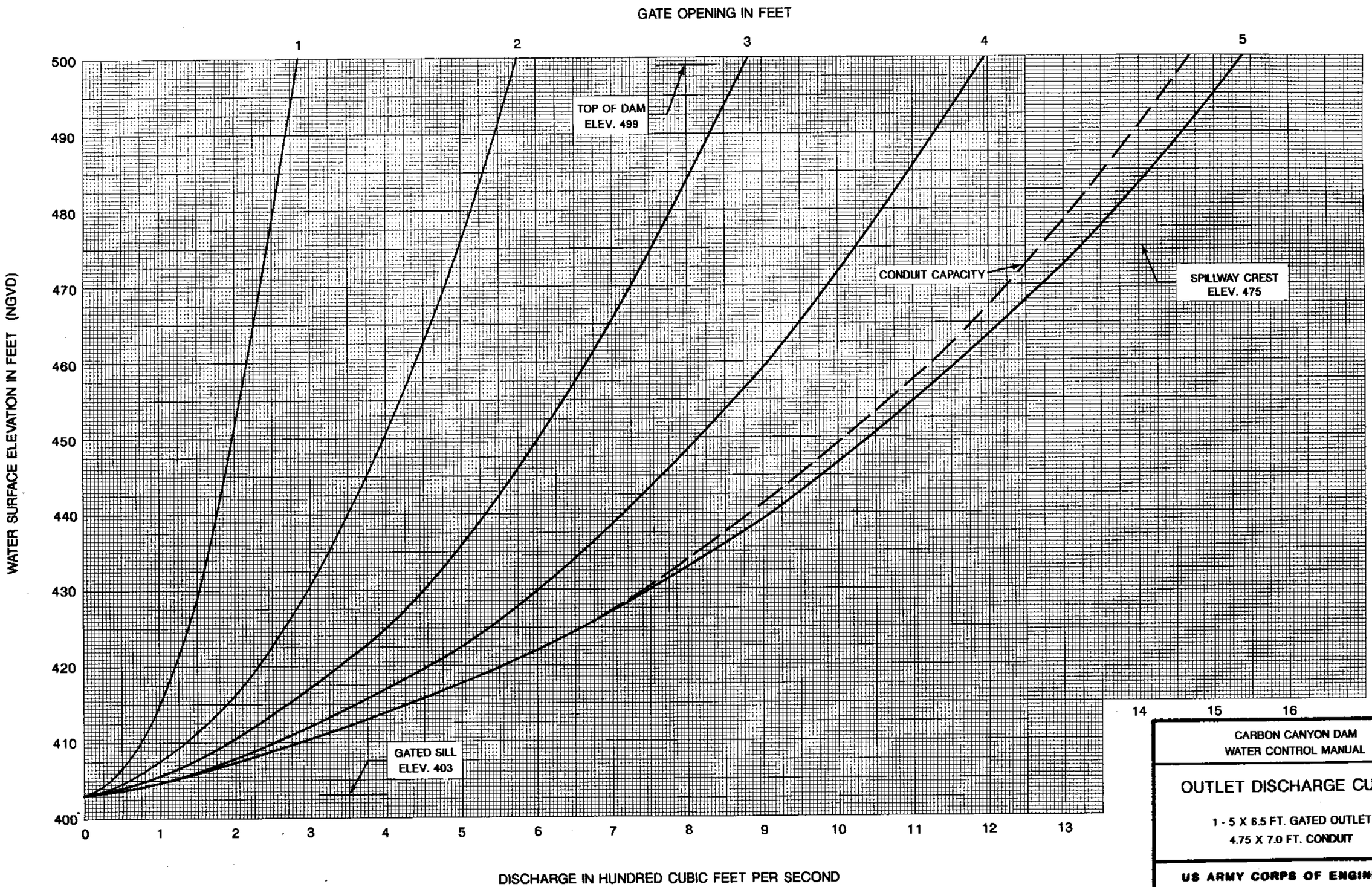
CARBON CANYON DAM
WATER CONTROL MANUAL

CARBON CANYON DAM

AREA-CAPACITY CURVE

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

NOTE: TO OBTAIN TOTAL OUTLET DISCHARGE, ADD THE DISCHARGE THROUGH EACH OF THE TWO IDENTICAL GATES. DISCHARGE IS NOT TO EXCEED CONDUIT CAPACITY INDICATED BY THE DASHED LINE.

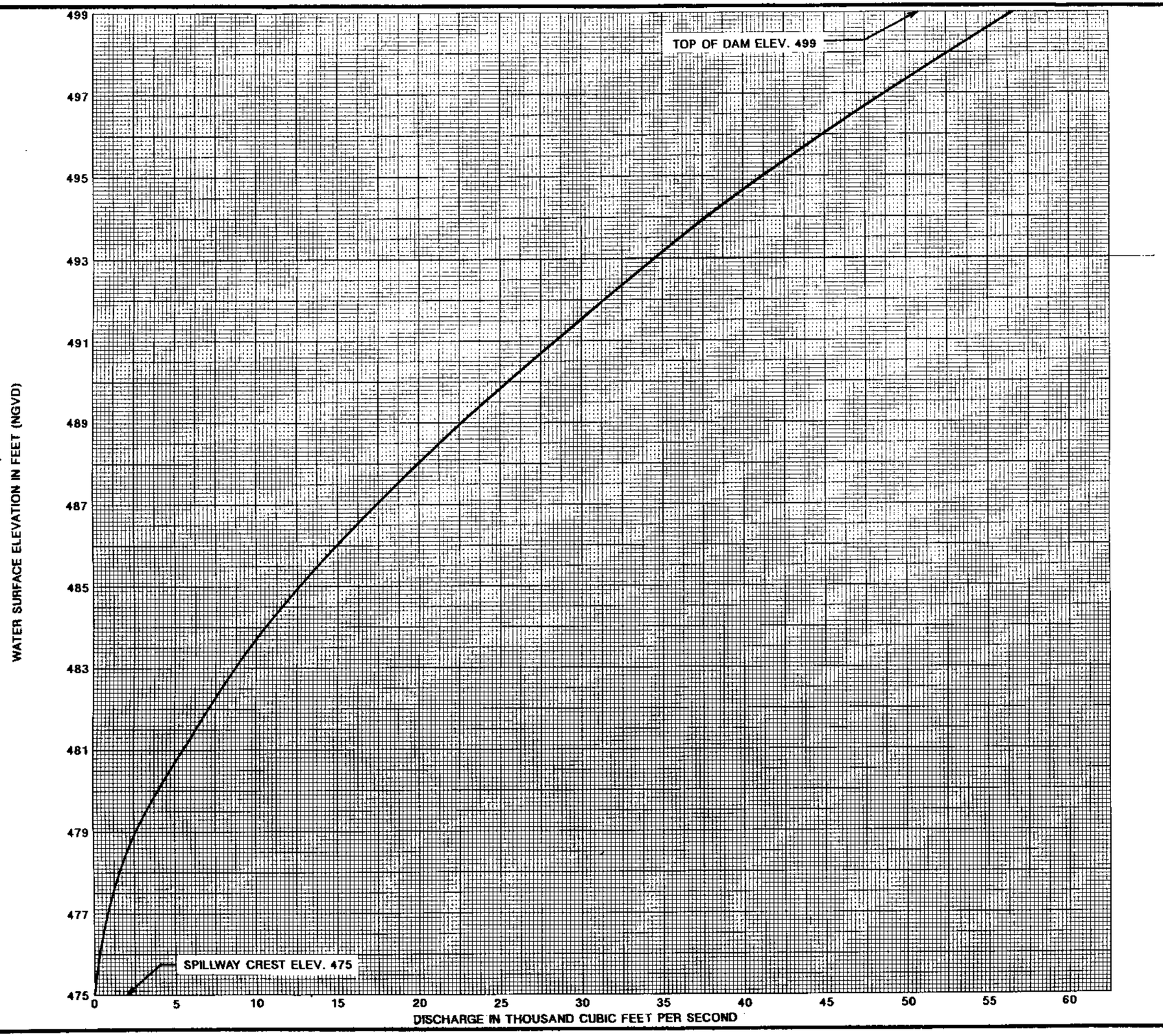


CARBON CANYON DAM
WATER CONTROL MANUAL

OUTLET DISCHARGE CURVE

1 - 5 X 6.5 FT. GATED OUTLET
4.75 X 7.0 FT. CONDUIT

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

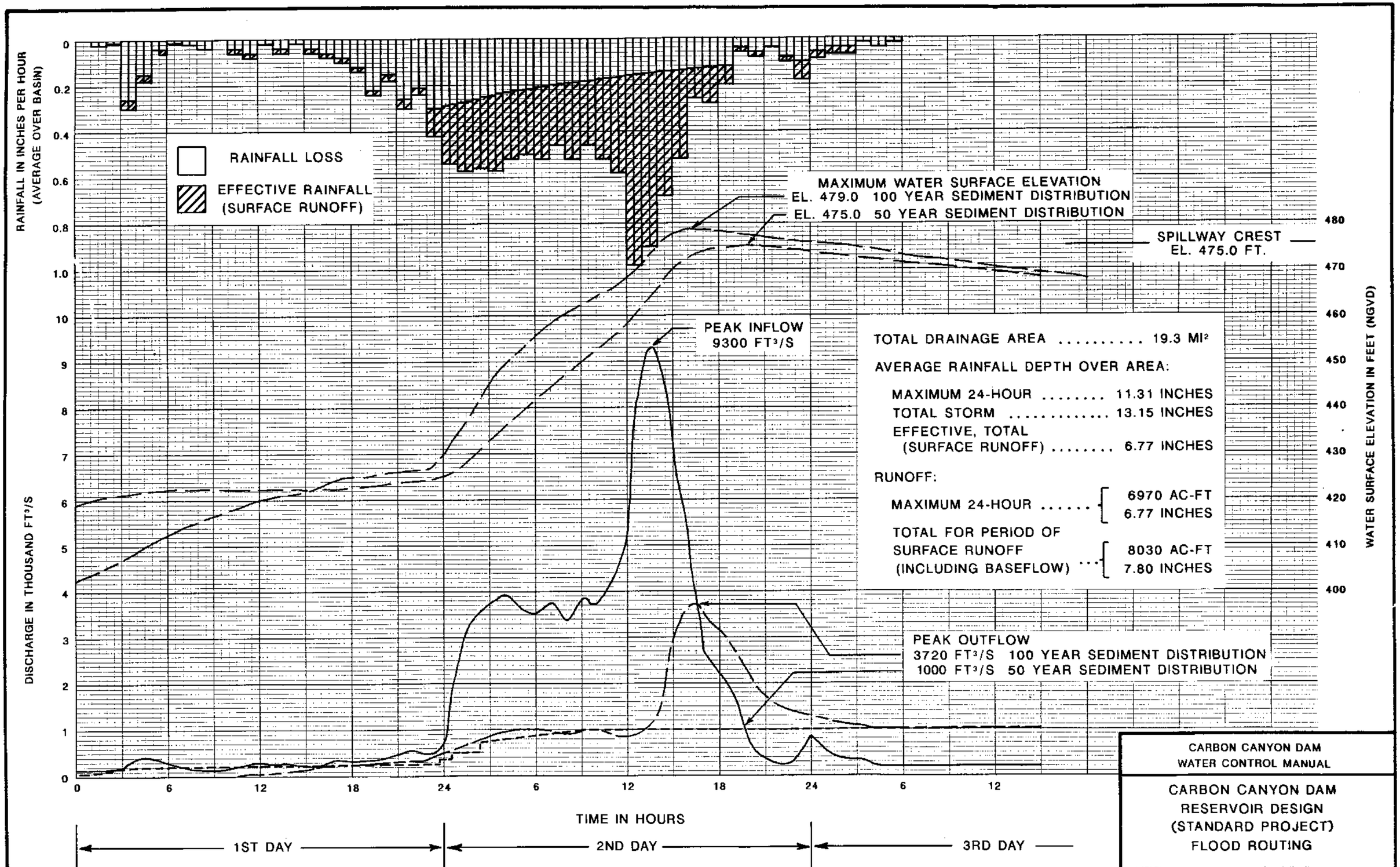


CARBON CANYON DAM
WATER CONTROL MANUAL

SPILLWAY DISCHARGE CURVE

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 7-3

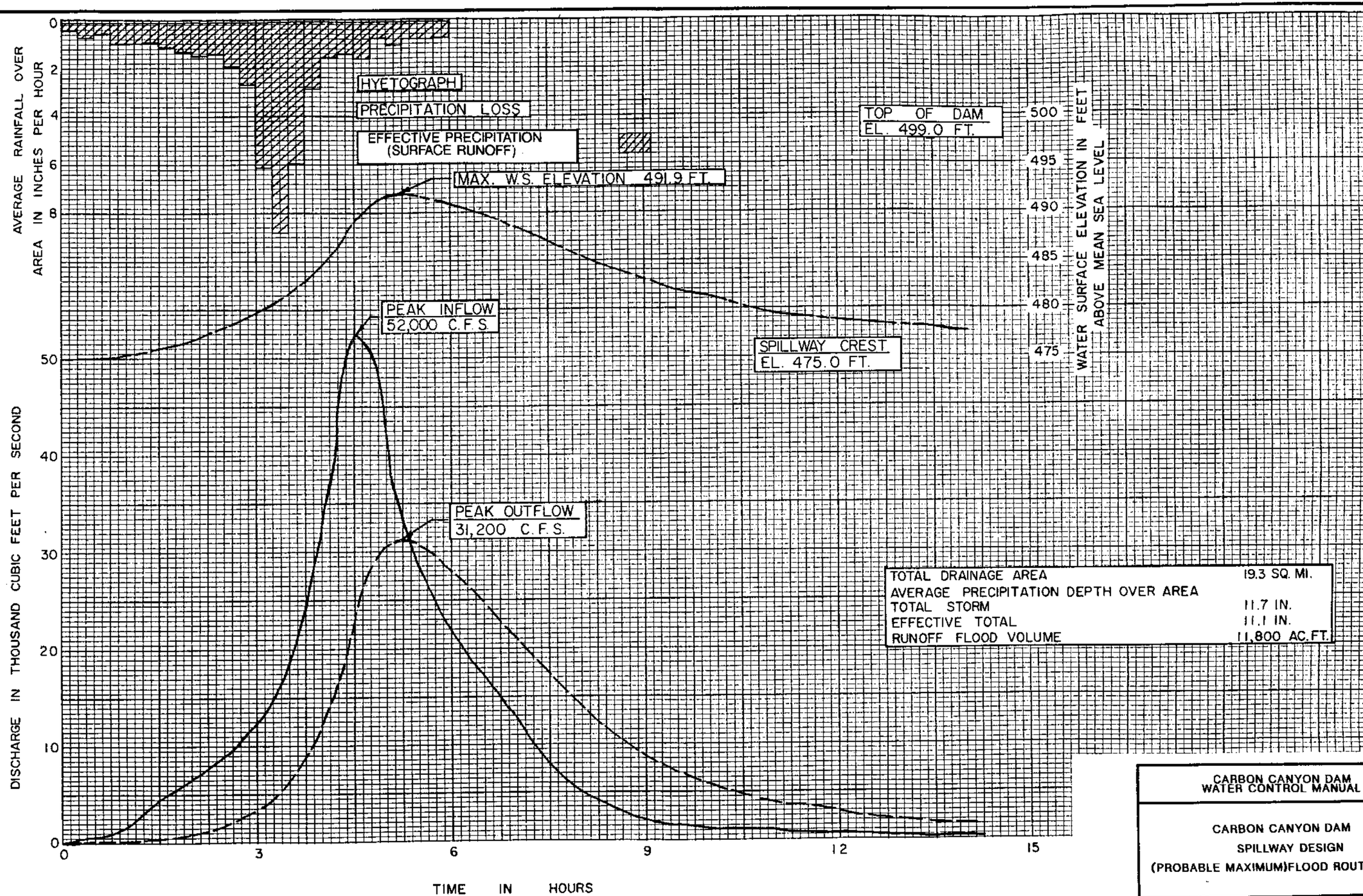


NOTE: NET CAPACITY USED IN COMPUTATIONS.

CARBON CANYON DAM
WATER CONTROL MANUAL

CARBON CANYON DAM
RESERVOIR DESIGN
(STANDARD PROJECT)
FLOOD ROUTING

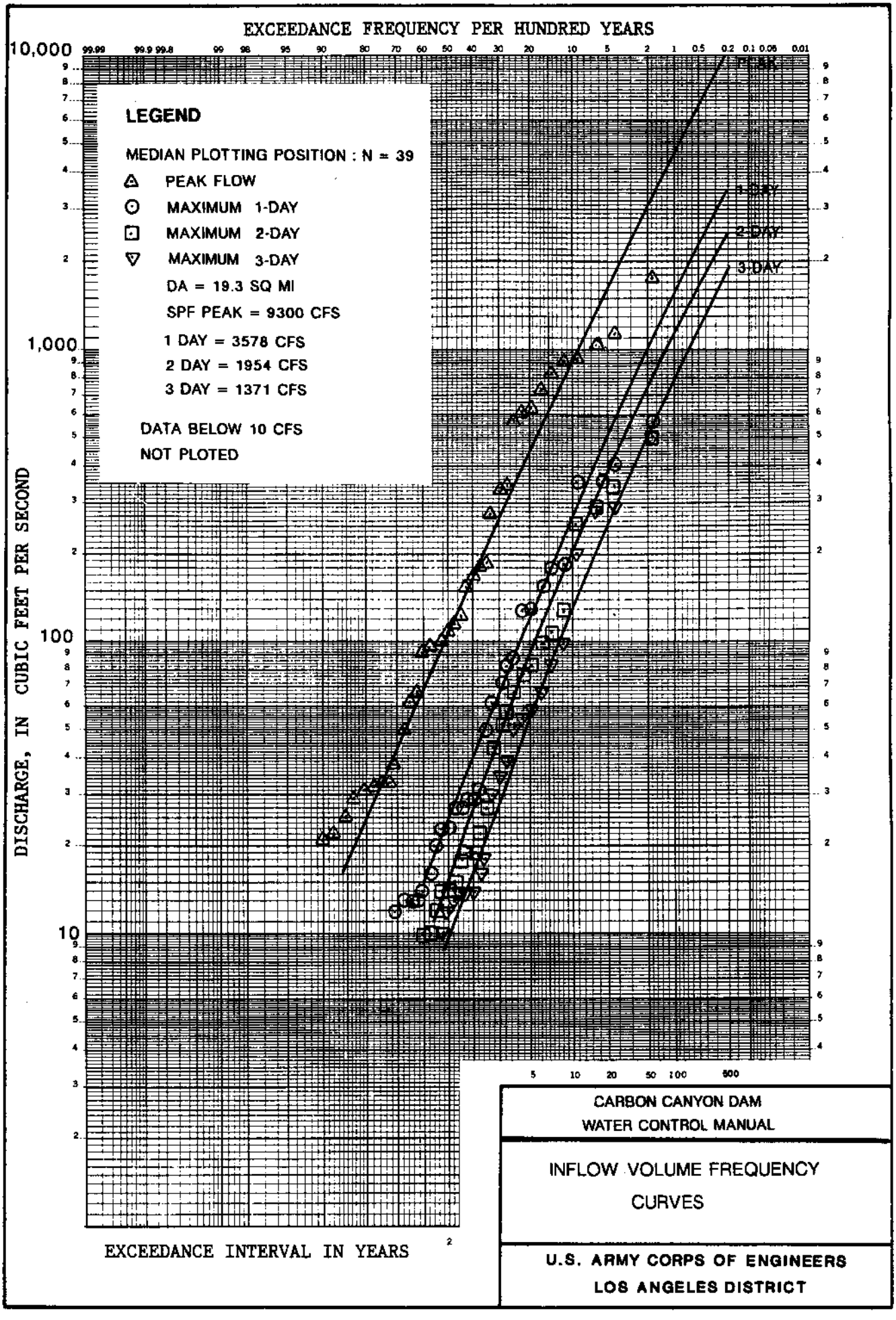
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



CARBON CANYON DAM
WATER CONTROL MANUAL

CARBON CANYON DAM
SPILLWAY DESIGN
(PROBABLE MAXIMUM)FLOOD ROUTING

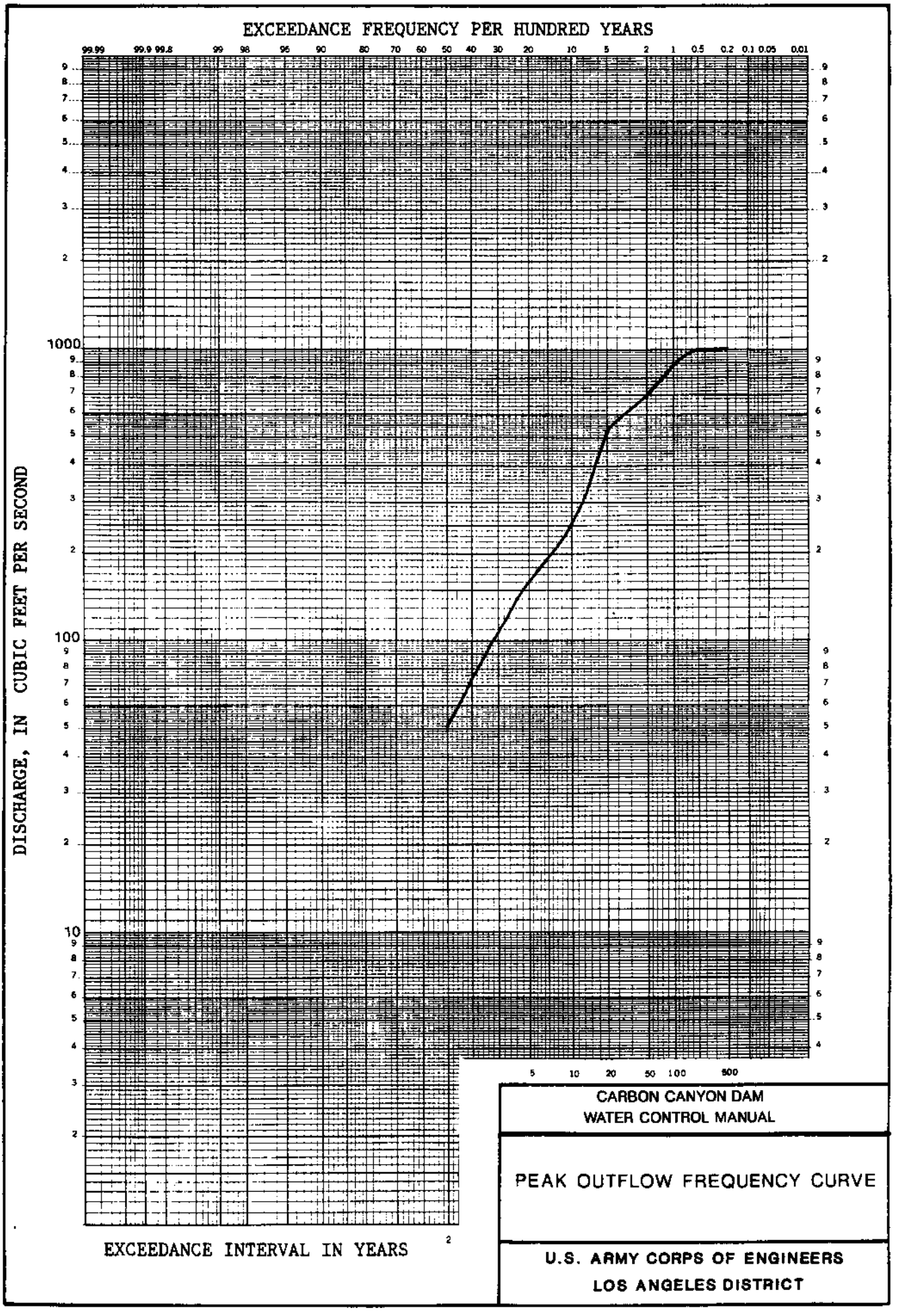
U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



CARBON CANYON DAM
WATER CONTROL MANUAL

INFLOW VOLUME FREQUENCY CURVES

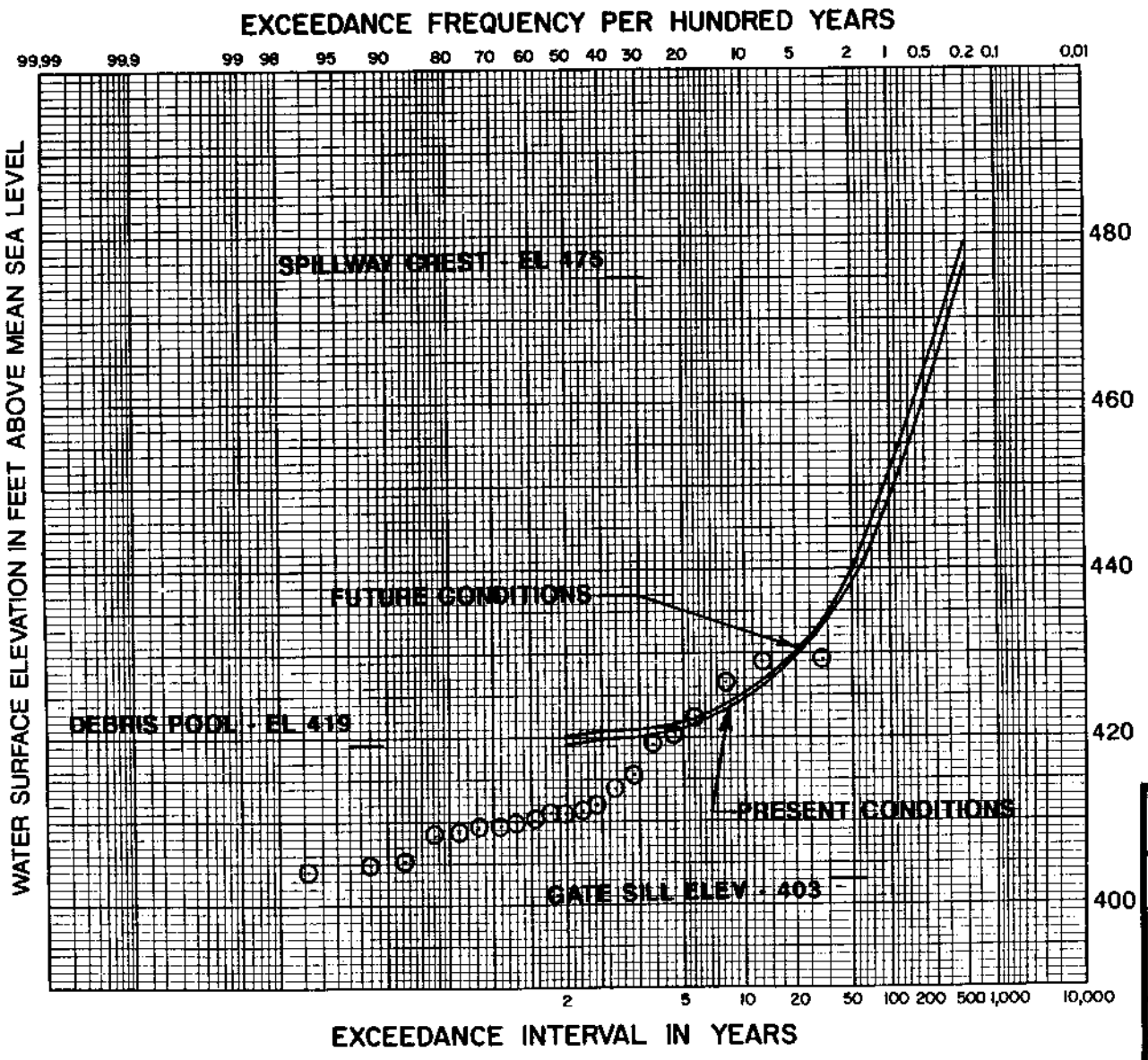
U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



CARBON CANYON DAM
WATER CONTROL MANUAL

PEAK OUTFLOW FREQUENCY CURVE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT



LEGEND

MEDIAN PLOTTING POSITIONS FOR PERIOD 1961-1981 (N=21)

NOTE:

1. SPF ELEVATION=471.1 FOR PRESENT CONDITIONS.
2. SPF ELEVATION=475.0 FOR FUTURE CONDITIONS.
3. DRAINAGE AREA=19.3 SQ. MI.
4. BALANCED HYDROGRAPH ELEVATIONS IN FEET MSL (CURVE GOES THROUGH THESE VALUES) ARE LISTED BELOW.

FREQUENCY	PRESENT	FUTURE
500 - YR	477.1*	N/A*
200 - YR	460.4	463.2
100 - YR	448.3	450.4
50 - YR	438.3	439.5
25 - YR	431.3	431.7
10 - YR	425.0	425.5
5 - YR	421.6	422.0
2 - YR	419.6	420.3

* BASED ON A MAXIMUM RELEASE OF 1000 FT³/S

CARBON CANYON DAM
WATER CONTROL MANUAL

ELEVATION FREQUENCY CURVE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
TO ACCOMPANY REPORT DATED: