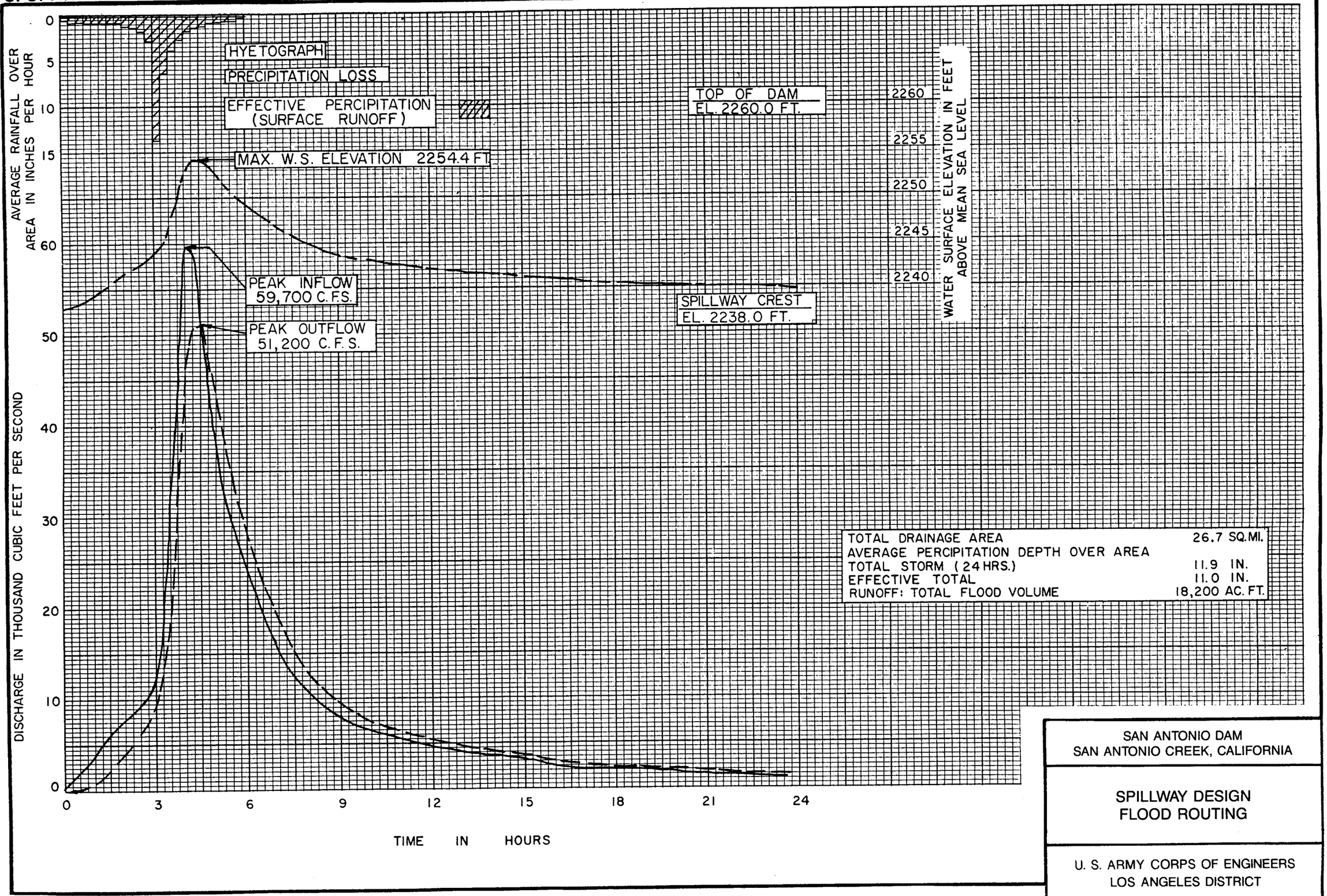
U. S. ARMY ENGINEER DISTRICT

CORPS OF ENGINEERS



TOTAL DRAINAGE AREA	26.7 SQ.MI.
AVERAGE PERCIPITATION DEPTH OVER AREA	
TOTAL STORM (24 HRS.)	11.9 IN.
EFFECTIVE TOTAL	11.0 IN.
RUNOFF: TOTAL FLOOD VOLUME	18,200 AC. FT.

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

SPILLWAY DESIGN
FLOOD ROUTING

U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SOURCE: Plate 1, Ref. **26**

PLATE 8-01

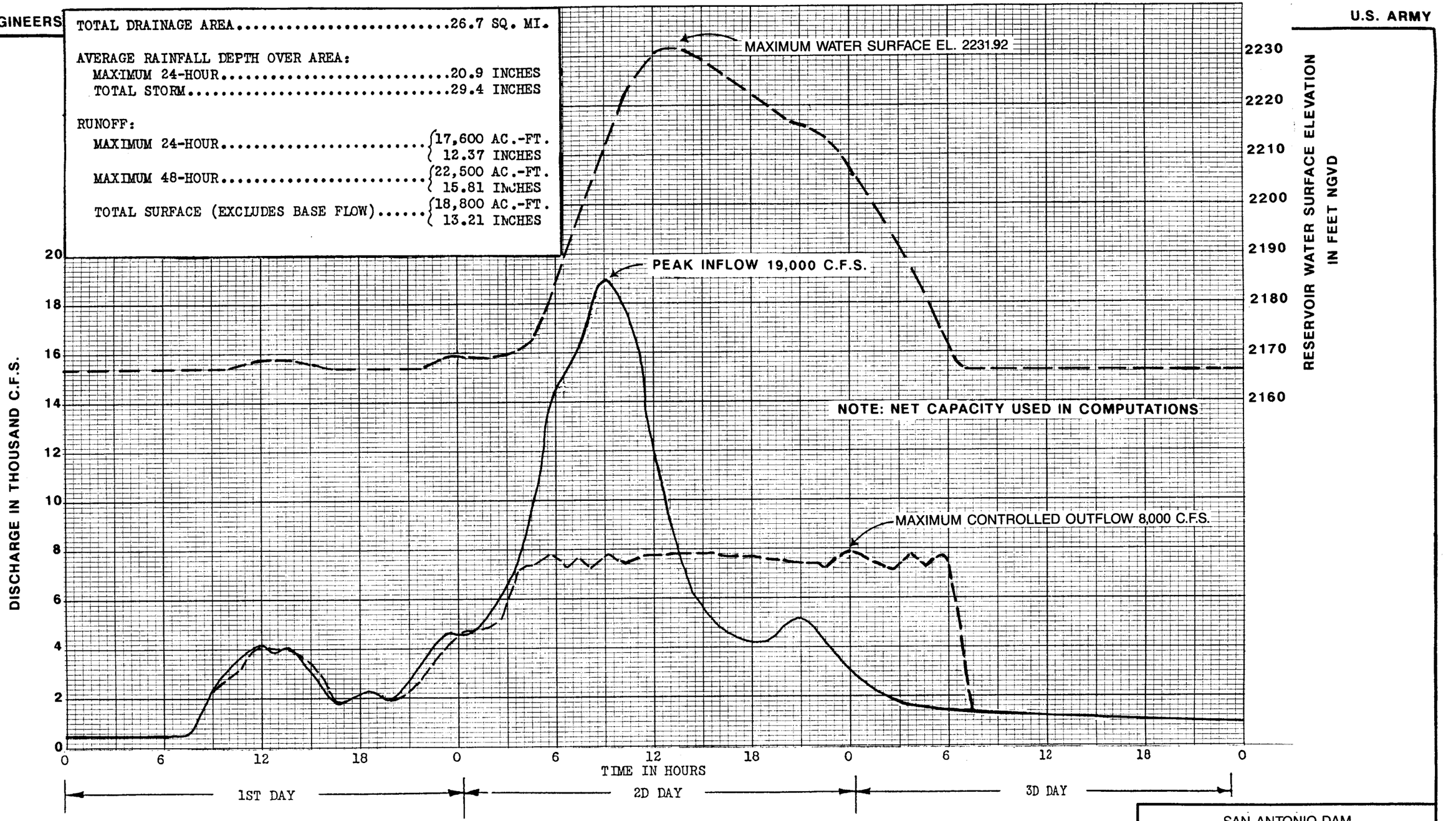
CORPS OF ENGINEERS

U.S. ARMY

TOTAL DRAINAGE AREA.....26.7 SQ. MI.

AVERAGE RAINFALL DEPTH OVER AREA:
- MAXIMUM 24-HOUR.....20.9 INCHES
- TOTAL STORM.....29.4 INCHES

RUNOFF:
- MAXIMUM 24-HOUR.....17,600 AC.-FT. / 12.37 INCHES
- MAXIMUM 48-HOUR.....22,500 AC.-FT. / 15.81 INCHES
- TOTAL SURFACE (EXCLUDES BASE FLOW).....18,800 AC.-FT. / 13.21 INCHES



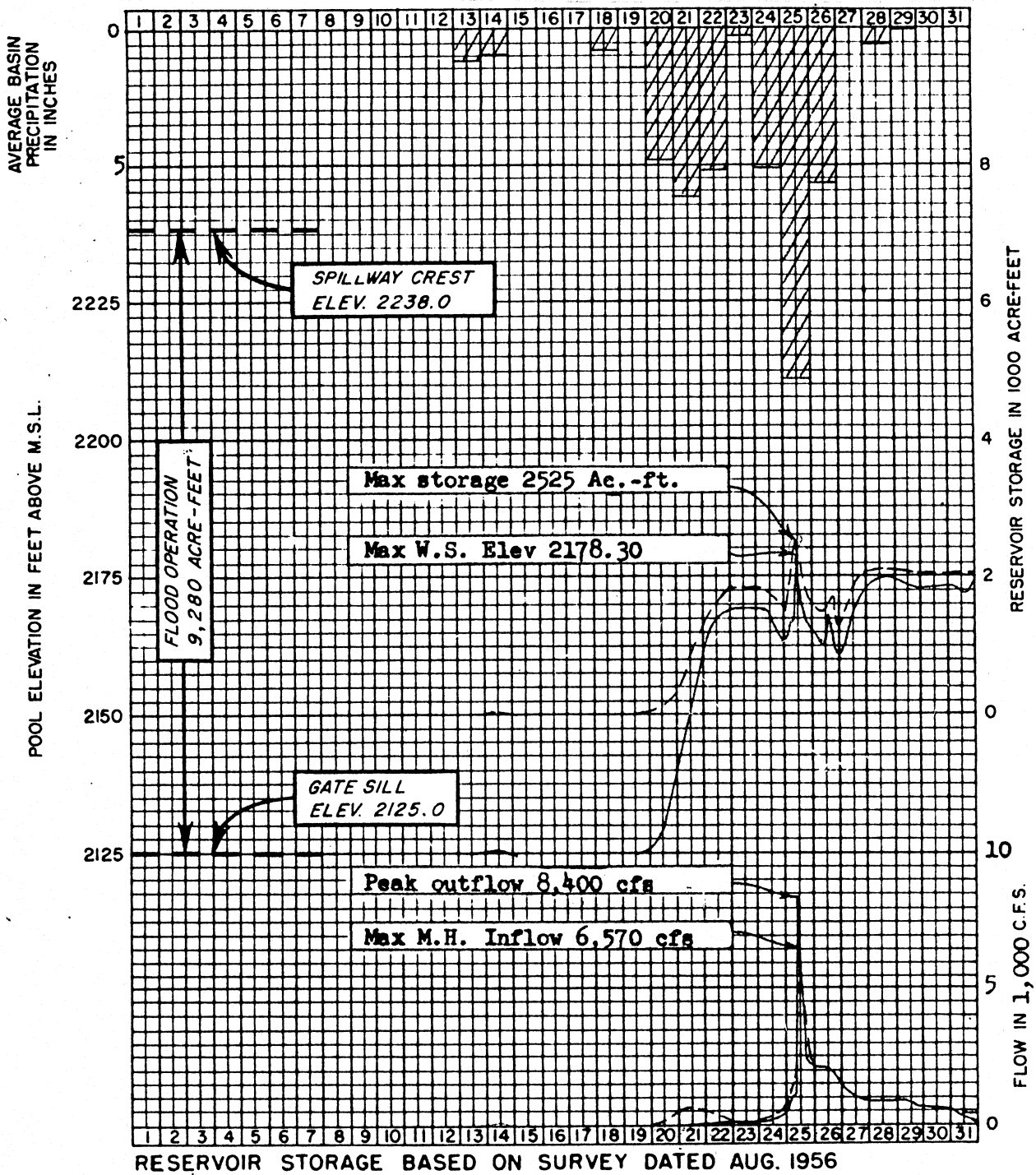
SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

SAN ANTONIO DAM
RESERVOIR DESIGN
STANDARD PROJECT FLOOD ROUTING

U. S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SOURCE: Plate 1, Ref. 25, Modified 1991

PLATE 8-02



MONTH OF Jan 19 69

MONTHLY RESERVOIR OPERATION

SAN ANTONIO FLOOD-CONTROL BASIN

	ELEV.	GROSS STORAGE (ACRE-FT.)
Conservation Pool		NONE
Full Pool	2,238	9,280

Outlet Capacity at Full Pool 11,800 c.f.s.

SANTA ANA RIVER BASIN
DRAINAGE AREA 26.7 SQ. MILES

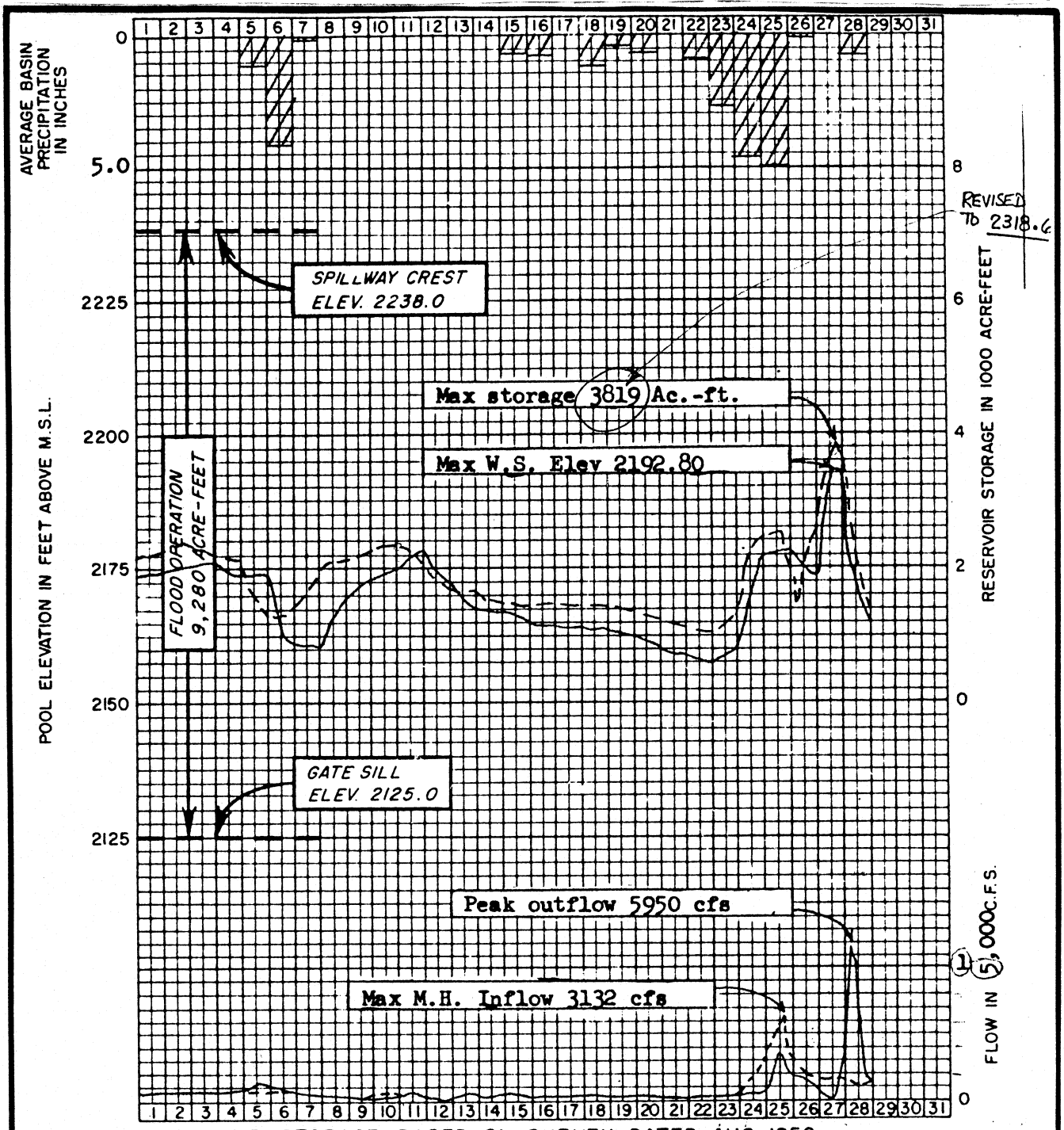
SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

OPERATION HYDROGRAPH
24-28 JANUARY 1969

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SOURCE: LAD, USACOE

PLATE 8-03



RESERVOIR STORAGE BASED ON SURVEY DATED AUG. 1956

MONTH OF FEB 19 69

MONTHLY RESERVOIR OPERATION

SAN ANTONIO FLOOD-CONTROL BASIN

	ELEV	GROSS STORAGE (ACRE-FT.)
Conservation Pool		NONE
Full Pool	2,238	9,280

Outlet Capacity at Full Pool 11,800 c f.s.

SANTA ANA RIVER BASIN
DRAINAGE AREA 26.7 SQ. MILES

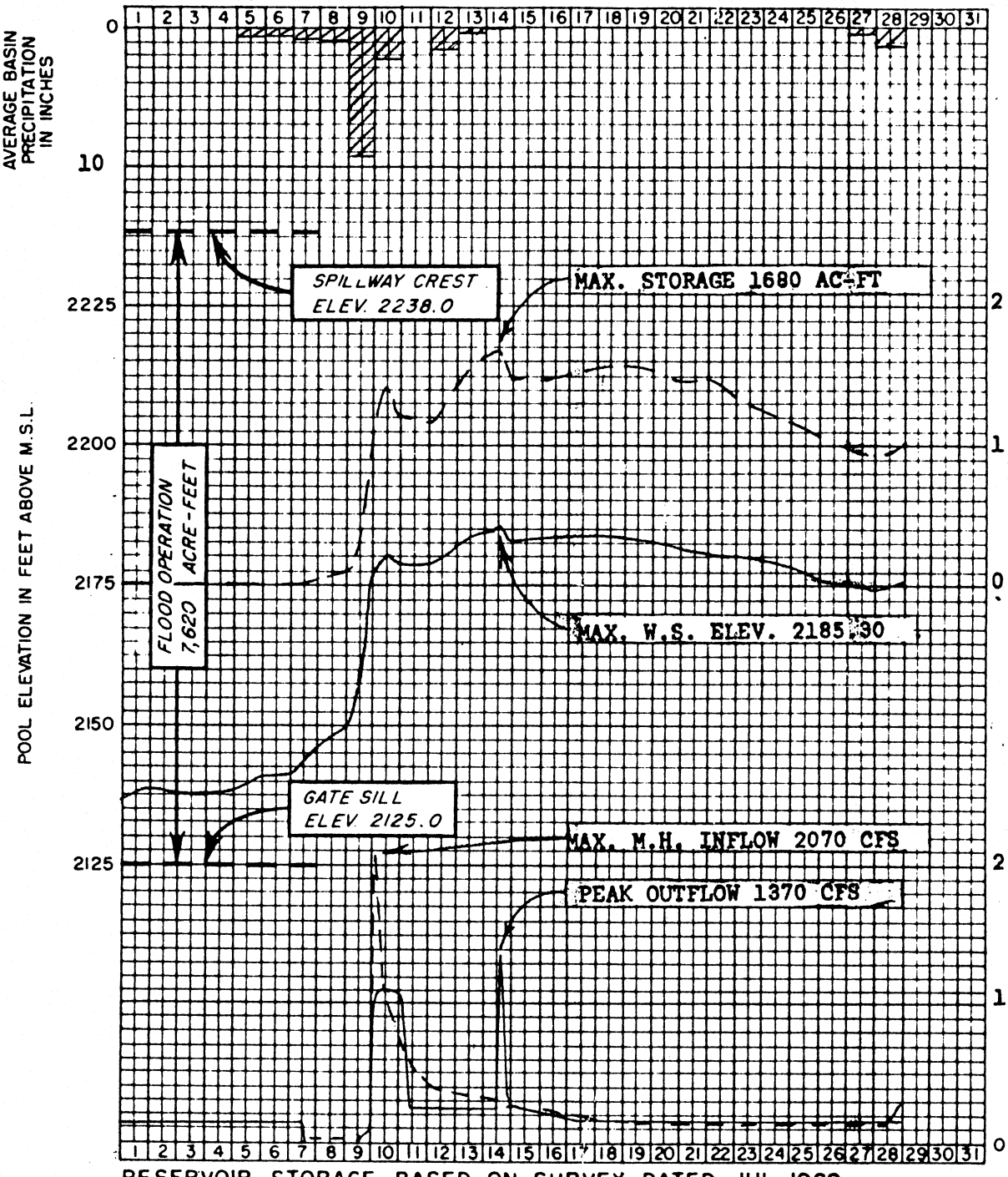
SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

OPERATION HYDROGRAPH
23-27 FEBRUARY 1969

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SOURCE: LAD, USACOE

PLATE 8-04



RESERVOIR STORAGE BASED ON SURVEY DATED JUL 1969

MONTH OF FEB 19 78

MONTHLY RESERVOIR OPERATION

SAN ANTONIO FLOOD-CONTROL BASIN

	ELEV	GROSS STORAGE (ACRE-FT.)
Conservation Pool		NONE
Flood Control Pool	2,238	7,620

Outlet Capacity at Full Pool 11,800 c.f.s.

SANTA ANA RIVER BASIN

DRAINAGE AREA 26.7 SQ. MILES

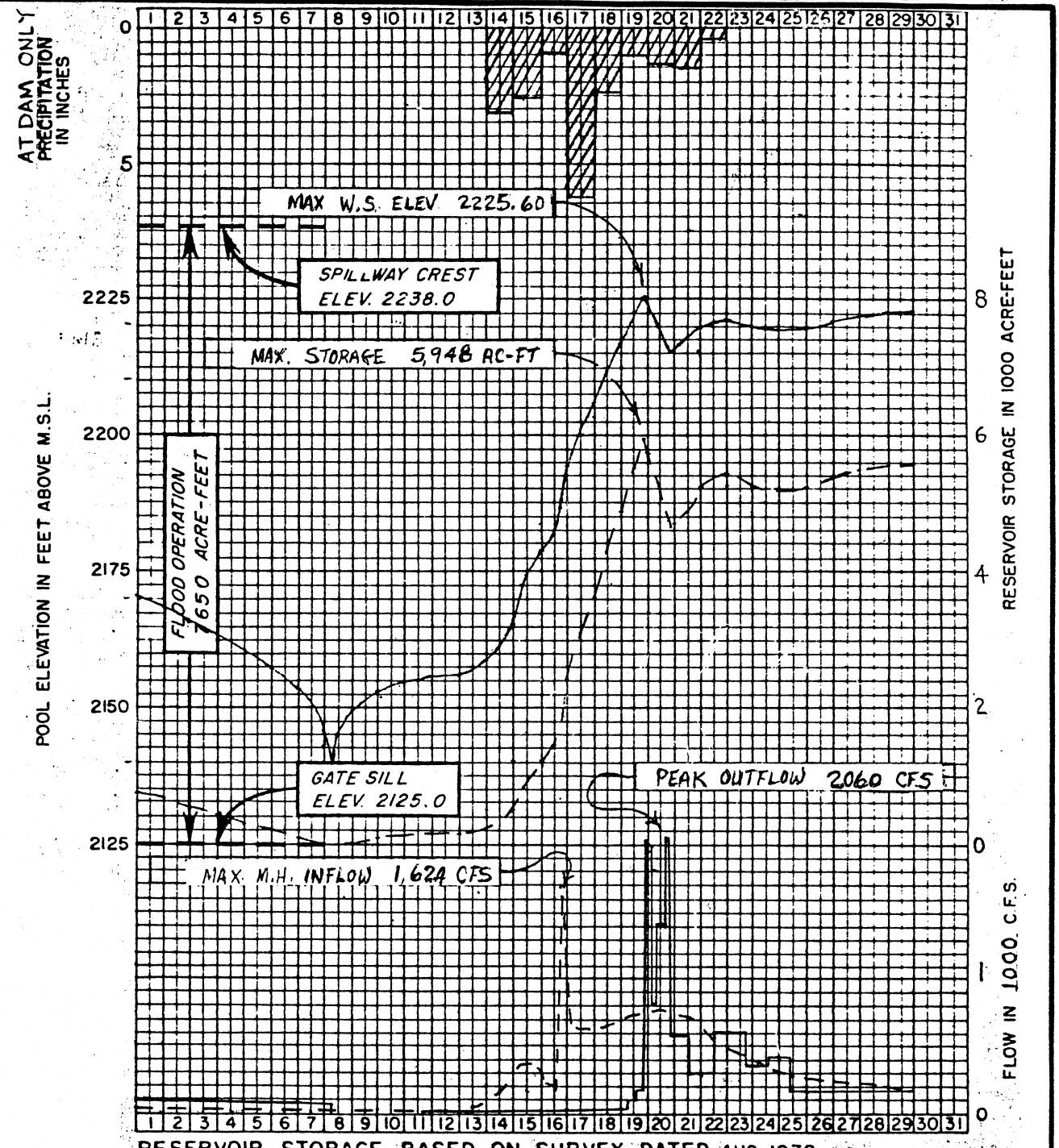
SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

OPERATION HYDROGRAPH
9-11 FEBRUARY 1978

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SOURCE: LAD, USACOE

PLATE 8-05



MONTH OF FEB 1980

	ELEV	GROSS STORAGE (ACRE-FT.)
Conservation Pool		NONE
Flood Control Pool	2,238	7650

Outlet Capacity at Full Pool 11,800 c.f.s.

SANTA ANA RIVER BASIN
DRAINAGE AREA 26.7 SQ. MILES

MONTHLY RESERVOIR OPERATION

SAN ANTONIO FLOOD-CONTROL BASIN

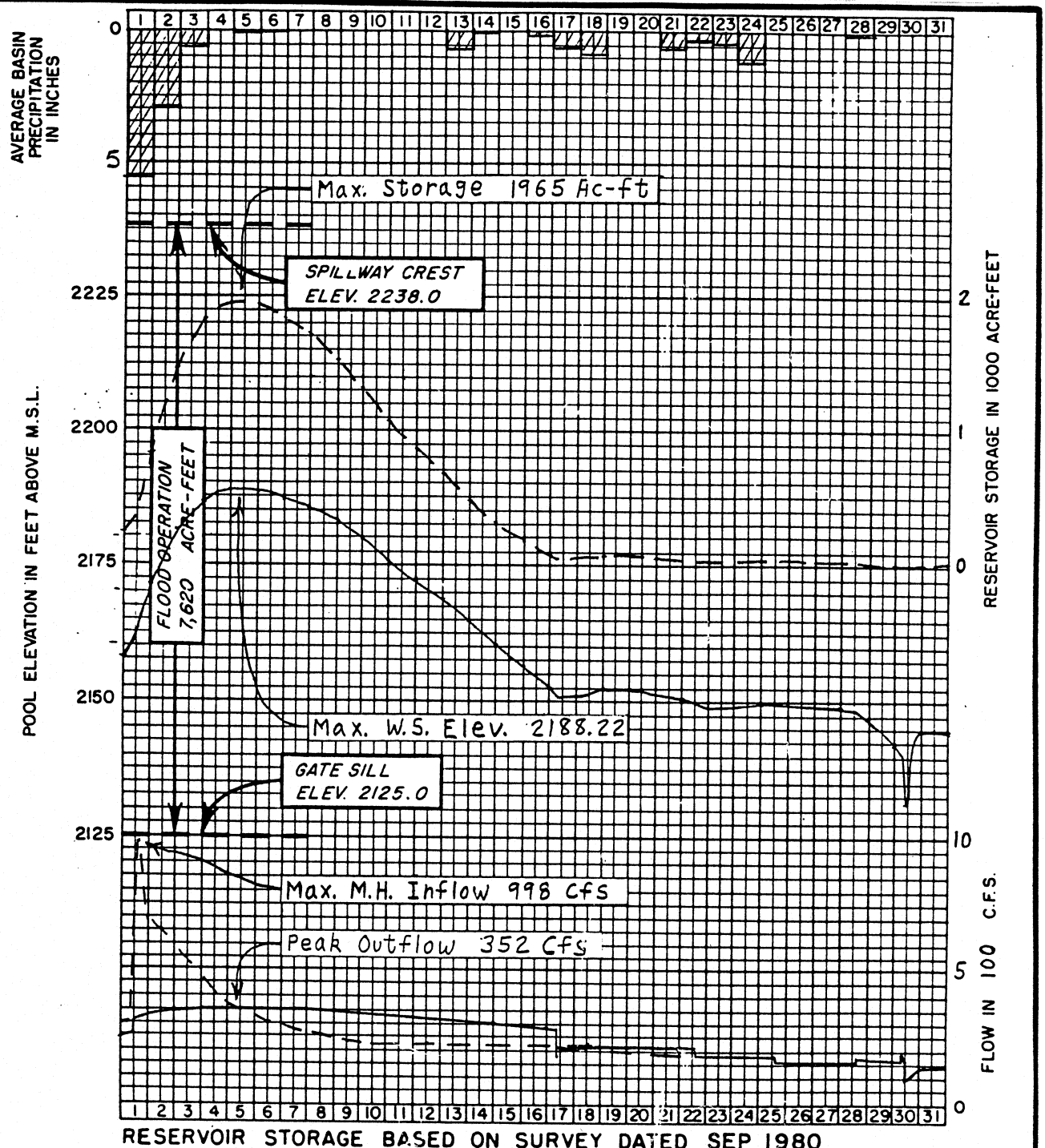
SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

OPERATION HYDROGRAPH
13-14 FEBRUARY 1980

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SOURCE: LAD, USACOE

PLATE 8-06



RESERVOIR STORAGE BASED ON SURVEY DATED SEP 1980

MONTH OF MAR 1983

MONTHLY RESERVOIR OPERATION

SAN ANTONIO FLOOD-CONTROL BASIN

	ELEV.	GROSS STORAGE (ACRE-FT.)
Conservation Pool		NONE
Flood Control Pool	2,238	7,700

Outlet Capacity at Full Pool 11,800 c.f.s.

SANTA ANA RIVER BASIN

DRAINAGE AREA 26.7 SQ. MILES

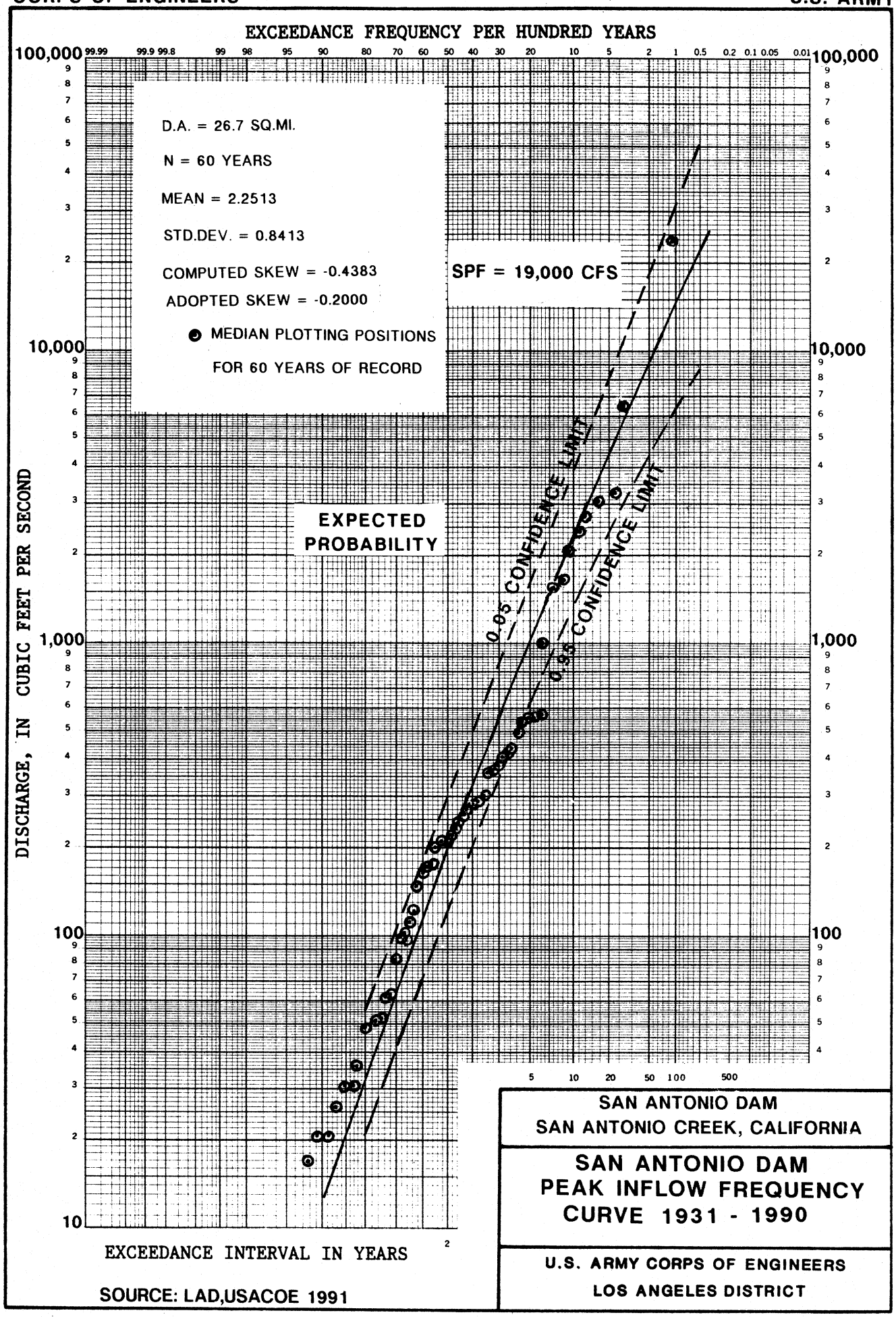
SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

OPERATION HYDROGRAPH
1-4 MARCH 1983

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SOURCE: LAD, USACOE

PLATE 8-07



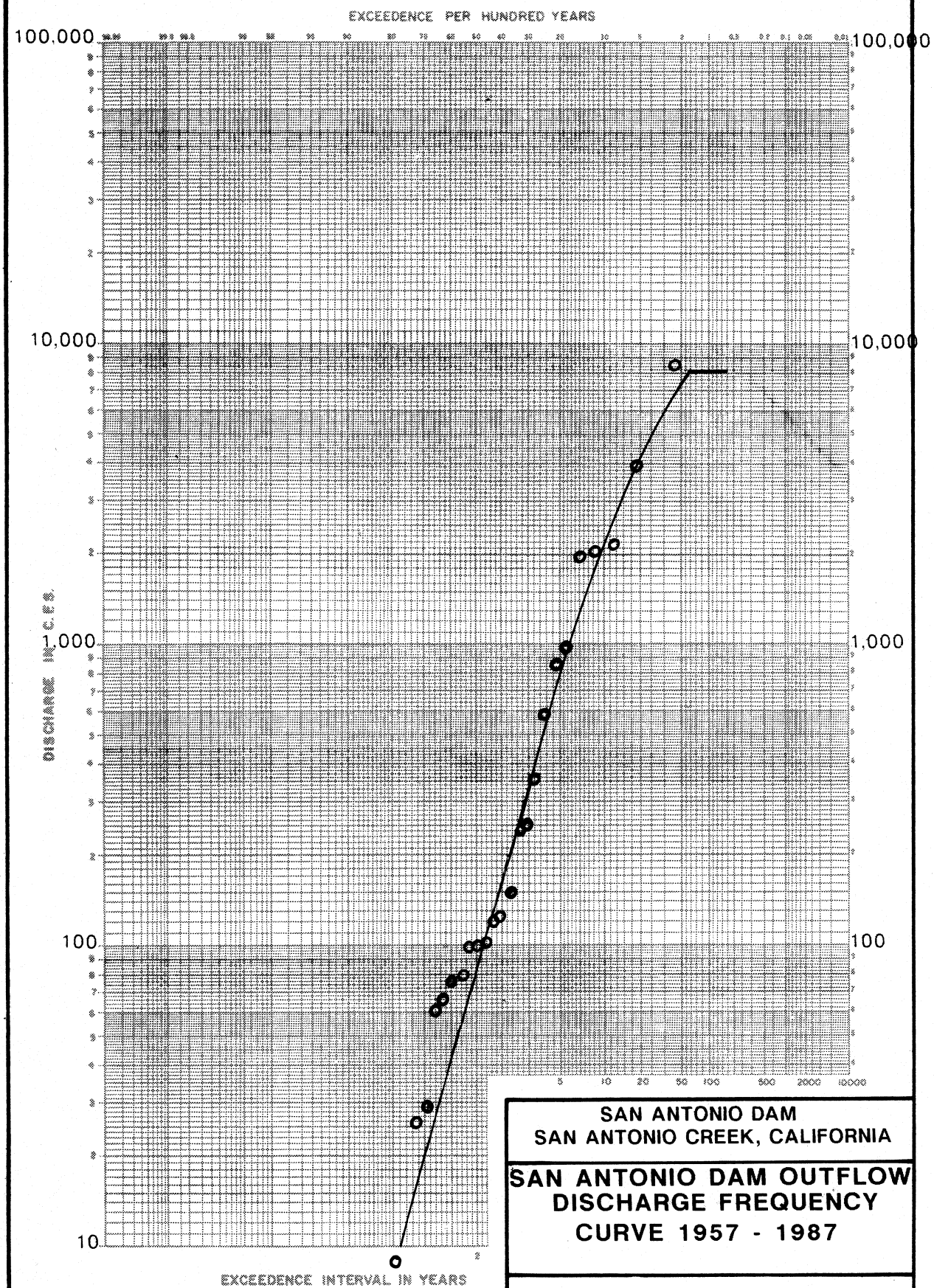
SOURCE: LAD,USACOE 1991

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

SAN ANTONIO DAM PEAK INFLOW FREQUENCY CURVE 1931 - 1990

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 8-08



MEDIAN PLOTTING POSITIONS N=31

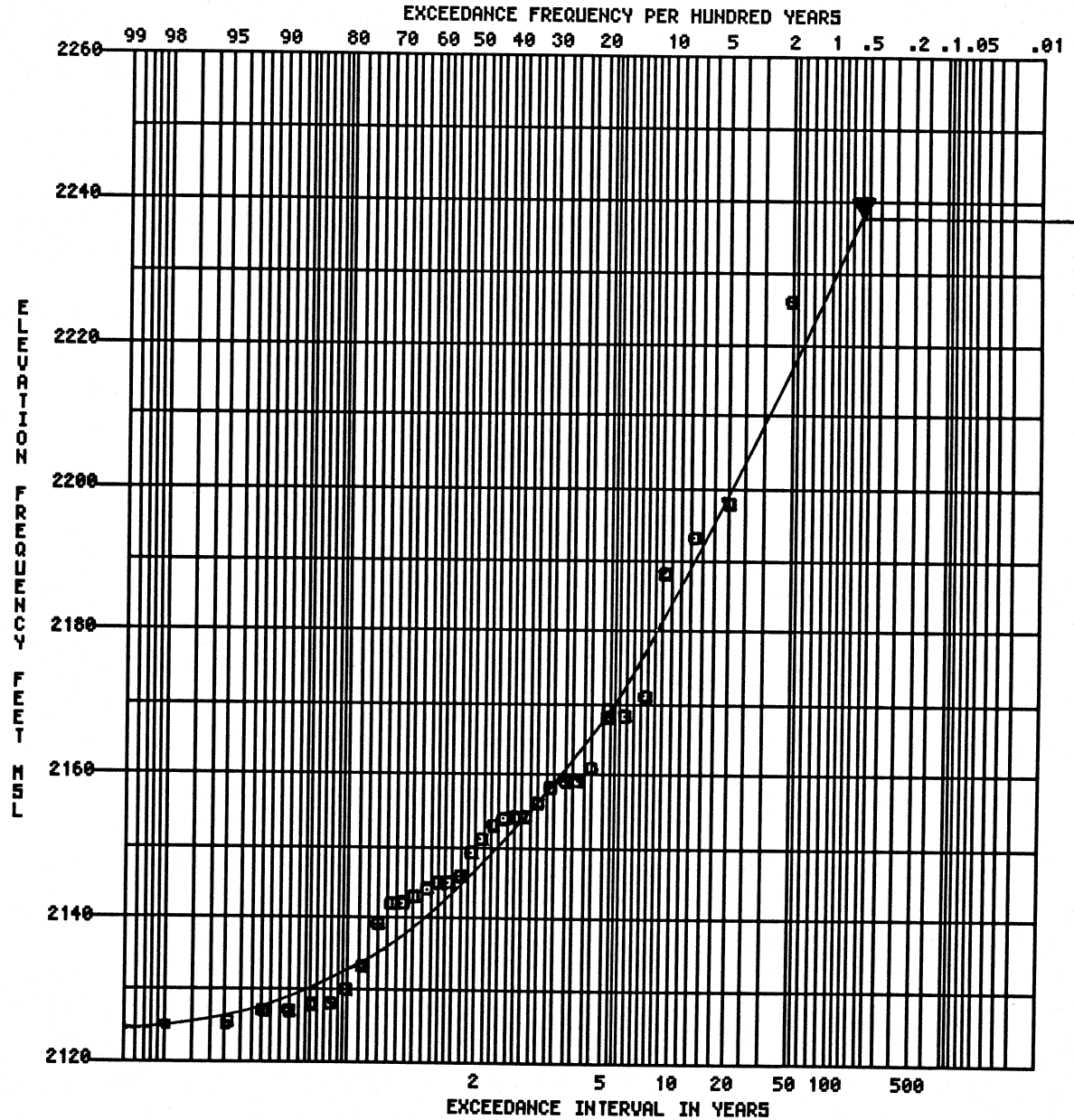
SOURCE: LAD, USACOE 1991

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

SAN ANTONIO DAM OUTFLOW DISCHARGE FREQUENCY CURVE 1957 - 1987

U S ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 8-09



2238 FEET SPILLWAY CREST ELEVATION

ANNUAL PEAK ELEVATION - 1956-1990
MEDIAN PLOTTING POSITIONS N=34

SOURCE: LAD, USACOE 1991

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

SAN ANTONIO DAM
FILLING FREQUENCY CURVE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 8-10

INFLOW, OUTFLOW, AND FILLING FREQUENCY VALUES FOR SAN ANTONIO RESERVOIR

RETURN PERIOD (YEARS)	2	5	10	20	50	100	200
PEAK INFLOW (FT3/S)	190	950	2150	4150	8500	14000	21700
PEAK OUTFLOW (FT3/S)	83	800	2300	4200	7400	8000	8000
PEAK ELEVATION (FT NGVD)	2146	2167	2184	2200	2216	2229	2238

NOTE: These values, representing data verified for San Antonio Reservoir, were obtained from the peak inflow and outflow analysis of plates 8-08 and 8-09, and from the elevation frequency curve of plates 8-10. The curves were drawn as best-fit lines through data points derived from actual data from San Antonio Canyon and San Antonio Reservoir.

SAN ANTONIO DAM
SAN ANTONIO CREEK, CALIFORNIA

INFLOW, OUTFLOW, AND FILLING FREQUENCY VALUES

U. S. ARMY ENGINEER DISTRICT
LOS ANGELES, CORPS OF ENGINEERS

SOURCE: LAD, USACOE 1990

PLATE 8-11