



US Army Corps
of Engineers
Los Angeles District

HYDROLOGIC ENGINEERING
— SECTION —

WATER CONTROL MANUAL

SANTA FE DAM & RESERVOIR SAN GABRIEL RIVER, CALIFORNIA



HYDROLOGIC ENGINEERING
— SECTION —

APRIL 1991

**SANTA FE FLOOD CONTROL BASIN
PERTINENT DATA**

Construction completion date		January 1949
River system		San Gabriel River
Drainage area	mi ²	236
Sediment contributing drainage area	mi ²	20.54
Reservoir:		
Elevation		
Debris pool	ft, NGVD	456
Spillway crest	ft, NGVD	496
Spillway design surcharge level	ft, NGVD	508.4
Revised probable maximum flood surcharge level	ft, NGVD	508.2
Top of dam	ft, NGVD	513
Area (Survey of September 1982)		
Spillway crest	acres	1084
Revised probable maximum flood surcharge level	acres	1258
Top of dam	acres	1298
Capacity (Survey of September 1982)		
Spillway crest	ac-ft	32,109
Revised probable maximum flood surcharge level	ac-ft	46,712
Top of dam	ac-ft	53,088
50-year sediment allowance (revised)	ac-ft	8000
Dam:		
Type		Earthfill
Top elevation	ft, NGVD	513
Height above original streambed	ft	92
Top length	ft, approx.	23,800
Top width	ft	30
Spillway:		
Type		Overflow concrete ogee
Crest elevation	ft, NGVD	496
Crest length	ft	1200
Design surcharge on spillway crest	ft	12.4
Discharge at design surcharge	ft ³ /s	200,100
Outlets:		
Gates-type		Vertical lift
Number and size		16 - 6'W X 9'H
Gate sill elevation	ft, NGVD	421
Conduits:		
Number and size		16 - 7.33'W X 7.33'H
Length	ft	515
Maximum capacity at spillway crest	ft ³ /s	41,000
Regulated discharge at spillway crest	ft ³ /s	41,000
Reservoir design flood (original - 1940):		
Total volume (5-day)	ac-ft	129,300
Inflow peak	ft ³ /s	81,600
Spillway design flood:		
Volume (24-hour)	ac-ft	184,000
Inflow peak	ft ³ /s	238,000
Revised reservoir design flood (post-1961)		
Total volume (3.5-day)	ac-ft	171,400
Inflow peak	ft ³ /s	96,000
Revised spillway design flood:		
Total volume (4.5-day)	ac-ft	556,000
Inflow peak	ft ³ /s	222,000
Historic maximum:		
Maximum inflow (mean hourly)	ft ³ /s	26,400
Date		2-25-69
Maximum release	ft ³ /s	26,800
Date		1-26-69
Maximum water surface elevation	ft, NGVD	473.97
Date		12-19-66
Maximum storage	ac-ft	14,400
Date		12-19-66



DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT, CORPS OF ENGINEERS

P.O. BOX 2711

LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

CESPL-ED-HR (1110-2-240b)

30 April 1991

MEMORANDUM FOR Commander, South Pacific Division,
Attn: CESPD-ED-W

SUBJECT: Santa Fe Dam and Reservoir Water Control Manual

1. Enclosed are three copies of the Santa Fe Dam and Reservoir Water Control Manual prepared in accordance with ETL 1110-2-251. Approval of the manual is requested.
2. A Draft Environmental Assessment for this Water Control Manual is also enclosed for your information. We are currently in the process of finalizing the EA.
3. If there are any questions, please contact Melvin Meneses of the Reservoir Regulation Section at (213) 894-2989.

FOR THE COMMANDER:

Encls

ROBERT E. KOPLIN, PE
Chief, Engineering Division

CF (w/encl):

CESPL-ED
CESPL-ED-H
CESPL-ED-HE
CESPL-ED-HR (2)
CESPL-PD-R
CESPL-CO-O
CESPL-PD-W

KOPLIN
CESPL-ED

LEIFIELD
CESPL-ED

JOE
CESPL-PD

EVELYN
CESPL-ED-H

GRIGORIAN
CESPL-ED-HR

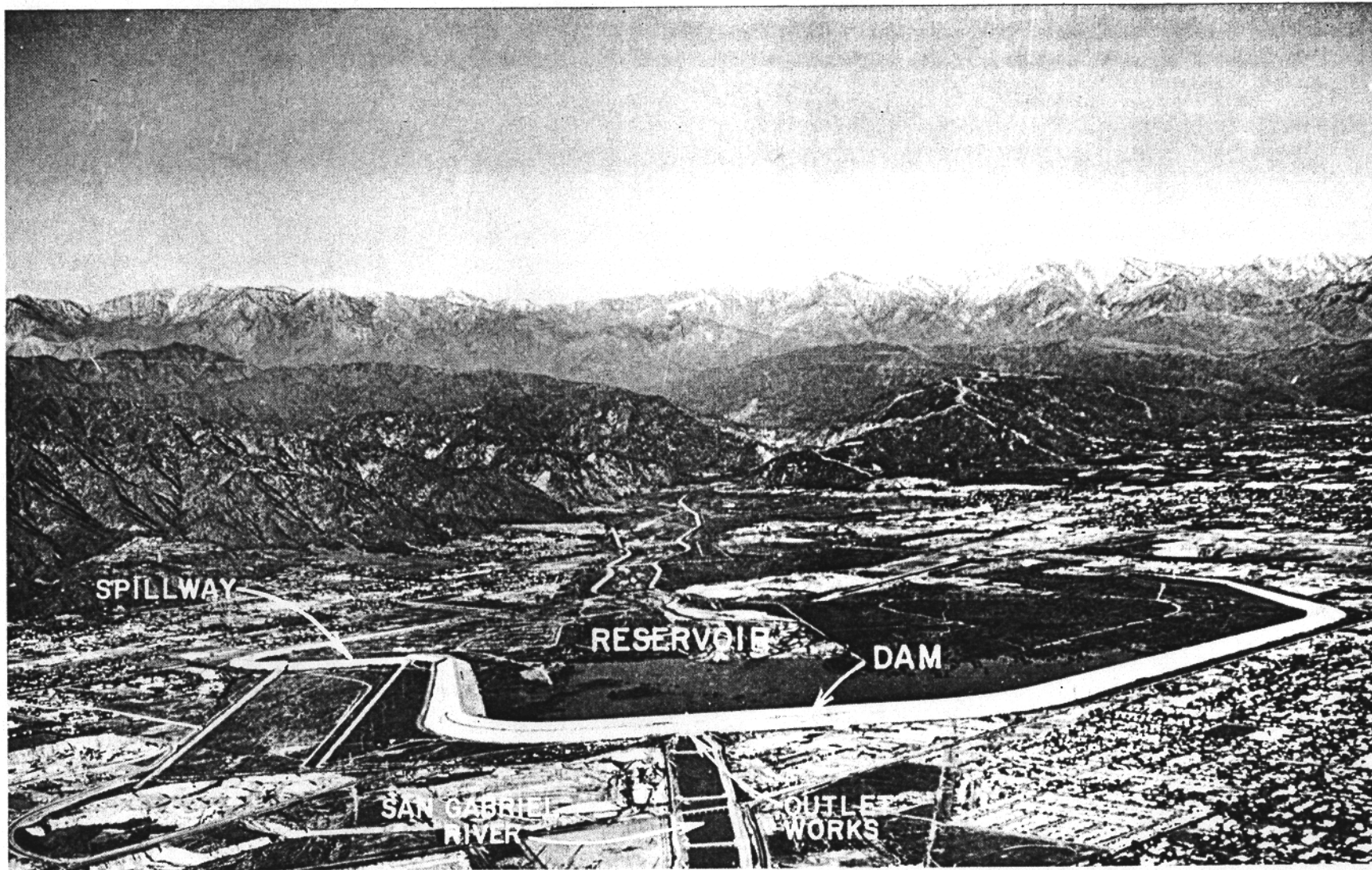
MENESES
CESPL-ED-HR
X2989

WATER CONTROL MANUAL

SANTA FE DAM AND RESERVOIR
SAN GABRIEL RIVER, LOS ANGELES COUNTY, CALIFORNIA

MARCH 1991

Prepared
by
U.S. Army Corps of Engineers
Los Angeles District
Reservoir Regulation Section



SANTA FE DAM AND RESERVOIR

NOTICE TO USERS OF THIS MANUAL

Regulations specify that this Water Control Manual be published in loose leaf form, and only those sections, or parts thereof, requiring changes will be revised and printed. Therefore, this copy should be preserved in good condition so that inserts can be made to keep the manual current.

EMERGENCY REGULATION ASSISTANCE PROCEDURES

In the event unusual conditions arise, the Reservoir Regulation Section, Los Angeles District Office can be contacted by telephone at 213-452-3527. See table 9-1 for other important telephone numbers for reservoir regulation assistance.

ORGANIZATION OF MANUAL

This manual is divided into chapters, indicated by Roman numerals. Within each chapter are numbered paragraphs, which are major topics discussed in the chapter. Tables and figures cited in the text of each chapter are presented at the end of that chapter. Plates cited are located in the back of the manual. Exhibits are included in the back as appendices.