

IX - WATER CONTROL MANAGEMENT

9-01 Responsibilities and Organization

a. Corps of Engineers. San Antonio Dam is owned, operated, and maintained by the U.S. Army Corps of Engineers, LAD. The LAD has complete regulatory responsibility for the dam and reservoir lands. The Reservoir Regulation Section of the LAD is charged with the responsibility of directing reservoir operations. Plate 9-01 shows the organization and chain of command for regulatory decisions at San Antonio Dam.

The improved downstream San Antonio and Chino Channels are maintained by the U.S. Army Corps of Engineers, LAD. Maintenance activities within the channel are coordinated between the Construction Operations Branch and the ROC.

The LAD has a responsibility to notify the public of pending changes in reservoir release rates. Plate 9-02 contains the list of key agencies that are contacted by the LAD during flood operation at San Antonio Dam.

During operations, the Reservoir Regulation Section issues gate operation instructions to the dam tender. Instructions are communicated via the LAD radio network system. In the event that communications between the Reservoir Regulation Section and San Antonio Dam are interrupted, the dam tender has a set of Standing Instructions to follow until communication is reestablished. Exhibit A contains the Standing Instructions to be followed by the San Antonio Dam Tender. The dam tender is assigned to the Operations Branch of the Construction-Operations Division of the LAD. The overall duties of the Dam tender are listed in Table 9-01.

The Corps is responsible for maintenance of the downstream channel to Prado Reservoir.

Table 9-01. Duties of the Dam Tender.

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- Routine test operation and maintenance of the project.
 - Services all gages and recorders (winds the clocks, installs new record paper, etc.)
 - Operates the gates in accordance with instructions from the Reservoir Regulation Section.
 - Guards the project against vandalism, sabotage, and fires.
 - Guards against unsafe conditions in the project area.
 - Performs routine inspection and maintenance.
 - Reports on trespassing and encroachment of right-of-way.
 - Maintains the best possible relations with communities interested in the project.
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b. Other Federal A Agencies. The U.S. Army Corps of Engineers, LAD, is the only federal agency with water control responsibilities at San Antonio Dam.

c. State and County Agencies. No County of State agencies have regulatory responsibilities for flows passing through San Antonio Dam. The Corps does remain in close contact with the LACDPW and the SBCEPW during flood events, in order to assess downstream conditions. In this way the ROC can determine the appropriate regulation schedule for the existing conditions.

d. Private Organizations. There are no private organizations which have regulatory responsibilities for flows passing through San Antonio Dam. The Corps does maintain close contact with the PVPA, when water is available for water conservation. The PVPA is solely responsible for maintaining its diversion works and determining the quantity of water to be diverted by its diversion works.

9-02 Interagency Coordination. The U.S. Army Corps of Engineers, LAD, coordinates with other federal, state, county, and local organizations and informs the press concerning flood control activities at San Antonio Dam and Reservoir.

a. Local Press and Corps of Engineers Bulletins. The Public Affairs Office of the Corps of Engineer, LAD is responsible for notifying the press regarding operations at all District dams. This is accomplished through both interviews and the occasional issuance of press releases. The Corps of Engineers does not publicly issue flood watches or warnings, or other status reports or forecasts to the general public. These notifications are the responsibility of the National Weather Service (NWS).

b. National Weather Service. The Corps of Engineers, LAD, utilizes NWS data and forecasts to assist in the operation of San Antonio Dam. The LAD shares data with the NWS and other agencies both on a real-time basis and on a post-event basis.

c. U.S. Geological Survey. The Corps of Engineers receives streamflow data from the U.S. Geological Survey, primarily on a historical basis in southern California. The LAD coordinated data collection on San Antonio Creek just downstream of the Dam with the USGS through the Cooperative Stream Gaging Program. The gage (11073200) was taken out of operation in 1980.

d. Other Agencies. The Corps of Engineers, LAD, cooperates to the extent possible with the water conservation activities of Chino Basin Water Conservation District and the Pomona Valley Protective Association (PVPA). PVPA personnel are notified prior to releases from the reservoir so that they can adjust their gates and divert according to their needs at that time.

9-03 Interagency Agreements. There are no formal agreements in effect with any agency.

9-04 Commissions, River Authorities, Compacts and Committees.

a. Santa Ana Watermaster. On April 17, 1969, the Orange County Superior Court entered a Stipulated Judgment in Case No. 117628 involving the Orange County Water District vs. City of Chino et al. The judgment, which became effective on October 1, 1970, contained a declaration of rights of the entities in the Lower Area of the Santa Ana River basin (i.e., the Orange County Water District) as against those in the Upper Area (i.e., the San Bernardino Valley Municipal Water District, the Western Municipal Water District, and the Chino Basin Municipal Water District). The arrangement leaves to each of the major hydrologic units in the watershed the determination and regulation of individual rights therein and the development an implementation of its own basin management plans. A court appointed Watermaster, consisting of five persons, prepares an annual report of the Santa Ana Watermaster which documents and accounts for flows within the Santa Ana River. San Antonio and Chino Channels are tributary to the Santa Ana River and are therefore monitored by the Santa Ana Watermaster.

9-05 Reports. As required by ER 1110-2-240 "Water Control Management," the LAD prepares three types of reports for transmittal to the South Pacific Division Office concerning the operation of San Antonio Dam:

a. Annual Division Water Control Management Report (RCS DAEN-CWE-16 (R1)). This report covers significant activities of the previous water year and a description of project accomplishments planned for the current year.

b. Summary of Runoff Potential in Current Season (RCS DAEN-CWO-2). This report is generally submitted monthly during the storm season (October 15-April 15), and covers snow accumulation and runoff potential in the District. Supplemental reports are submitted in the event of severe situations.

c. Monthly Water Control Charts (RCS DAEN-CWE-6 (R1)). A monthly record of reservoir operations prepared in either a graphical or tabular format.

d. Forms used for reporting reservoir data are shown in figures 9-01 through 9-07.

Two reports that are produced for District use are:

a. Flood Control Basin Operation Report. A report of daily observations is made at the dam and this record, figure 9-01, is stored at the Water Control Data Unit of the Reservoir Regulation Section in the District's baseyard office.

b. Daily Reservoir Report. The daily observations from the data are entered into the RESCAL computer program which stores the record in a computer data base and produces a "Daily Reservoir Report" that is issued by the Reservoir Regulation Unit.

RESERVOIR - COMPUTATIONS

HOURLY DAILY

DAM								TIME OF READING (IF DAILY)			DATE		
COMPUTED BY					CHECKED BY			DATA SOURCE					
HR.	DA.	WATER SURFACE ELEV. FT.	STORAGE AC. FT.	GATE STEP NO.	INST. OUTFLOW			HRS.	STORAGE CHANGE		AV. OUTFLOW CFS	AV. INFLOW CFS	GATE SETTINGS FT.
					OUTLETS CFS	G. HT. FT.	FLOW CFS		ACRE- FEET	CFS			
PREVIOUS REPORT													
	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
	11												
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	28												
	29												
	30												
	31												
REMARKS								TOTAL					
								MEAN					

RESERVOIR OPERATION REPORT

RADIO CALL SIGN WUK		DAM		WATER SURFACE ELEVATION (FT. MSL)		DIGITAL RECORDER READINGS	RAINFALL			GATE SETTINGS <i>(Printed values show initial settings of gates prior to flood runoff)</i>		DATE	TIME	
							DIGITAL RECORDER	SINCE LAST REPORT (INCHES)	GLASS TUBE					
									STORM TOTAL (INCHES)					SEASON TOTAL (INCHES)
411	SEPULVEDA			WS GH						GATES OPEN 9.0 FT				
412	HANSEN			WS GH						GATES OPEN 8.0 FT.				
419	SANTA FE			WS GH						# 14 OPEN 0.5 FT.				
416	BREA			WS GH						GATES OPEN 2.0 FT.				
417	FULLERTON			WS GH						GATES OPEN 1.1 FT.				
418	CARBON CANYON			WS GH						# 1 OPEN 0.5 FT.				
421	PRADO			WS GH						GATES 1 & 6 OPEN 1.0 FT. REM. GATES CLOSED				
420	SAN ANTONIO			WS GH						GATES CLOSED				
415	WHITTIER NARROWS	W. PIT												
		E. PIT												
		COMB.												
		TELEMARK												
415	SAN GABRIEL POOL	W. STAFF												
		E. STAFF												
		COMB.												
429	PAINTED ROCK	RES: S												
		T												
437	ALAMO	B. PIT												
		RES: S												
437	ALAMO	T												
		RES: S												

REPLACES EDITION JUL 75, WHICH IS OBSOLETE.

RAINFALL RECORD

STATION					<input type="checkbox"/> HOURLY <input type="checkbox"/> DAILY		DATE
HR	DA	TIME OF READING	GAGE READING	STORM TOTAL	SEASON TOTAL	OBSERVER	REMARKS (SNOW, TEMP., ETC.)
0000	1						
0100	2						
0200	3						
0300	4						
0400	5						
0500	6						
0600	7						
0700	8						
0800	9						
0900	10						
1000	11						
1100	12						
1200	13						
1300	14						
1400	15						
1500	16						
1600	17						
1700	18						
1800	19						
1900	20						
2000	21						
2100	22						
2200	23						
2300	24						
2400	25						
	26						
	27						
	28						
	29						
	30						
	31						
TOTAL							

SPL FORM 31
OCT 65

PREV. ED. OF THIS FORM MAY BE USED
REPLACES SPL FORM 32 WHICH MAY BE USED

FIGURE 9-06

San Antonio Dam
Observation Well Data

Date: _____

Reservoir Elevation: _____

Observation Well Number	Station of Embankment	Elevation at top of Well (ft.)	Depth of Well (+) (ft.)	Depth to Water (ft.)
1	10+50	2093	45	---
2	16+00	2090	49	---
3	15+50	2075	46	---
4	11+50	2075	49	---
5	21+00	2115	48	---
6	29+00	2120	37	---
7	35+00	2117	54	---

+from top of casing.

1. Until data is obtained from the observation wells, when the pool is above elevation 2175, the performance of the toe drain and/or seepage at San Antonio Dam can not be evaluated.

2. The seven observation wells should be monitored and data collected whenever the pool behind San Antonio Dam is above elevation 2175. The data obtained should include (a) reservoir elevation, (b) depth to water in each observation well, (c) quantity of flow from the toe drain, and (d) notation of any seepage or boils observed.

The location of the toe drain and observation wells are shown in figures 5-01 through 5-10.