

V - DATA COLLECTION AND COMMUNICATION NETWORKS

5-01 HYDROMETEOROLOGICAL STATIONS

a. Facilities. Plate 3-2 shows the precipitation, reservoir, and stream gages in the watershed above Lopez Dam, plus the stream gage on Pacoima Diversion Channel at Branford Street. These gages, along with their latitudes, longitudes, and elevations, are listed in Table 5-1.

There is one precipitation gage (Pacoima Dam) within the Lopez Dam watershed and it is a Los Angeles telemetry system gage. The water level in Pacoima Reservoir and at the Pacoima Outlet channel gage is also reported by the telemetry system. The closest downstream channel gage is the "Pacoima Diversion Channel at Branford Street" gage operated by the LACDPW. The Branford Street gage is not on the telemetry system. A rating table for the gage is shown on Plate 5-1.

b. Reporting. Telemetry gages report in real-time. Data from the gages are either recorded locally onto charts or tapes (recording type gages) or are observed daily or more frequently (non-recording gages).

Of those which report via telemetry, there are two types:

(1) Interrogated Gages. The Los Angeles telemetry system gages, owned and operated by the COE are interrogated (usually once each hour or more frequently during storm conditions) by a radio located at the LAD Office in downtown Los Angeles. The data are compiled and processed by the LAD's Water Control Data System Computer for printout and for hydrologic forecasting.

(2) Event-Reporting Gages. The telemetry gages, installed by the LACDPW in cooperation with National Weather Service (NWS) report via Very High Frequency (VHF) radio on an event basis. Example events reported include incremental changes in accumulated rainfall depths or predetermined incremental changes in streamflow or reservoir gage heights. The greater the intensity of rainfall or the change in gage height, the more frequent the gage reports.

These gages form a part of a network, labeled by the NWS, as the ALERT (Automatic Local Evaluation in Real-Time) system. The LAD monitors these gages, along with its own interrogative telemetry gages.

c. Maintenance. Each operating agency is responsible for the maintenance of its own gages and/or telemetry radio equipment. In many cases, the gage is owned by the USGS, and the telemetry attachments are owned by the LAD or LACDPW.

5-02 WATER QUALITY STATIONS

There are no water quality stations in the watershed above Lopez Dam.

TABLE 5-1

HYDROMETEOROLOGICAL STATIONS

<u>Plate 3-2 Designation</u>	<u>Name</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Elevation</u>	<u>Description</u>
#1	Pacoima Dam	34, 20' 05"	118, 23' 51"	1650	Recording and nonrecording precipitation, temperature, reservoir stage, and reservoir discharge. Operated by LACDPW. On LAD telemetry system.
#2	Lopez Dam	34, 18' 15"	118, 24' 30"	1249	Recording reservoir stage. Operated by LAD. Not on LAD telemetry system.
#3	Pacoima Diversion Channel at Branford Street	34, 14' 07"	118, 25' 13"	855	Recording streamflow. Operated by LACDPW. Not on LAD telemetry system.

5-03 SEDIMENT STATIONS

There are no sediment stations in the watershed above Lopez Dam. There are no sediment ranges in Lopez Reservoir.

5-04 RECORDING HYDROLOGIC DATA

Each agency maintains records of its own data. The NWS data are placed in archives at the National Climatic Center in Asheville, North Carolina. Precipitation and other data are published monthly by the National Climatic Center in Climatological Data and Hourly Precipitation Data.

The State of California, Department of Water Resources, publishes the data from the ALERT telemetry gage network on a monthly basis. The LACDPW maintains their recording and non-recording data bases and furnish data to other agencies upon request. The LAD maintains a data base from its recording and telemetry gages and provides selected data to the NWS for publication. Real Time Reports received from the ALERT gages and the Los Angeles Telemetry System gages are stored in a database on the Water Control Data System Computer.

5-05 COMMUNICATION NETWORK

The LAD maintains a voice radio communication network for its entire operations activities. This routinely includes communications between the District Office and the various dam tenders, as well as vehicles in the field.

During periods of significant runoff, communications to the dam tenders becomes vital. The existing radio network, which has proven itself reliable, is backed up by a second radio network; and both of these are backed up by the local telephone system.

Power at the District Office is backed up by an emergency generator system; and if all fails at the District Office, there is a complete radio system at the LAD Base Yard. The Base Yard is located a few miles east of the District Office.

5-06 COMMUNICATION WITH PROJECT

a. Regulating Office with Project Office. During the flood season (15 November through 15 April), a routine radio call is made at least once each weekday from the LAD Office to the dam tender for Hansen Dam. The Hansen Dam operator is also the operator for Lopez Dam. This "Morning Report" is usually made at 0800 hours, Monday through Friday. Other routine or non-routine radio or telephone calls are made as needed. There are no telephone or electrical services at Lopez Dam. Direct communication with the operator while he is at Lopez Dam is possible by calling his Mobile Radio (WUK 4121).

In the event that all communications with the COE District Office, including the COE Base Yard, should be interrupted, a set of "Standing Instructions to Dam Tender" have been compiled for Lopez Dam and a copy of these instructions are included in this manual. The COE organization chart and important phone numbers for reservoir operations decisions at Lopez Dam are given in Plate 5-2.

b. Between Project Offices and Others. No routine communication exists between Lopez Dam and other agencies.

c. Between Regulating Office and Others. Before and during the earliest stages of any reservoir impoundment, the COE notifies offices of other agencies and selected private interests of the impending rises in the reservoir water surface elevation and corresponding outflow. A list of agencies to notify, with applicable office and home telephone numbers, is published annually in the LAD's Instructions for Reservoir Operations Center Personnel (the so-called "Orange Book"). During major runoff events, the LAD Reservoir Operations Center is in constant contact with the LACDPW Hydraulics Branch to fully coordinate the operations of both agencies. The LACDPW is directly tied into the LAD radio and telephone system. The LAD Reservoir Operations Center is also in direct radio contact with channel observer's dispatched to patrol the Los Angeles River during large floods.

5-07 PROJECT REPORTING INSTRUCTIONS

During periods of water operations, communications between the LAD Office and each affected dam tender are made on a frequent basis. Normal communications occur once each hour and more frequent communications are sometimes required. If a gate change is required, the Reservoir Operations Center (ROC) staff provide the radio operator at the LAD Office with the gate change instructions. These instructions are then broadcast to the dam tender. When the gate change is completed, the dam tender calls back to the District radio operator with information on the change. The radio operator then informs the ROC engineer who initiated the change. The dam tender records pertinent information associated with the gate change on the form shown on Figure 9-1. This report form is subsequently submitted to the LAD Office.

Other special instructions to dam tenders are conducted in a similar manner. This network of radio communications is also used by the dam tender to report any failure of machinery or other equipment or any other unusual conditions at the dam.

5-08 WARNINGS

The responsibility for issuing all weather watches and warnings and all flood and flash flood watches and warnings rests with the NWS. Local emergency officials of cities and counties are responsible for issuing any other public warnings including unusual overflows, evacuations, unsafe roads or bridges, and toxic spills. The COE is responsible for providing these officials with up-to-date information, and forecasts where possible, of water rises within Lopez Reservoir and release rates into the channel downstream of Lopez Dam. The LAD ROC should notify the Los Angeles Police Department (Foothill Division) to initiate evacuation if a dam break is imminent.